

Fluorescent Lighting Fittings

Introduction

The lighting fittings illustrated in these pages cover an enormous range; there is a fitting for every purpose and to suit every pocket.

The leading position of these fittings is due to exceptional standards of design and production. Only the best materials are used, and all fittings are designed to please the eye. All fittings are initially subjected to rigorous photometric and physical tests, and periodic tests are also carried out.

1 Popular Pack (1:3 to 1:20) A range of inexpensive but well made and elegant fittings suitable for most commercial and industrial installations. A simple backspine forms the basis for a variety of diffusers and light controllers.

2 New Arrow-slim Minipack and Nomad (1:21 to 1:30) Slender backspines designed to take the smaller diameter and shorter fluorescent lamps. These fittings have a number of applications in the commercial field.

3 Invincible Range (1:31 to 1:45) Special purpose fittings designed to give satisfactory performance under arduous conditions. Flameproof, dust-tight, weatherproof and similar types.

4 Atlantic Range (1:46 to 1:63) A wide range of commercial and industrial fittings for situations where price is less important than elegant appearance, silent operation, rugged construction and fitness of purpose.

5 Polrized Panels (1:64 to 1:65)

6 Airlume and Special Fittings
(1:66 to 1:70)

7 Format Range (1:71 to 1:75) Modular fittings, both recessed and surface-mounted, designed to suit both metric and imperial modular ceilings. Diffusing and prismatic enclosures are securely held by simple yet effective methods.

8 Recessed Troffer Range (1:76 to 1:83)

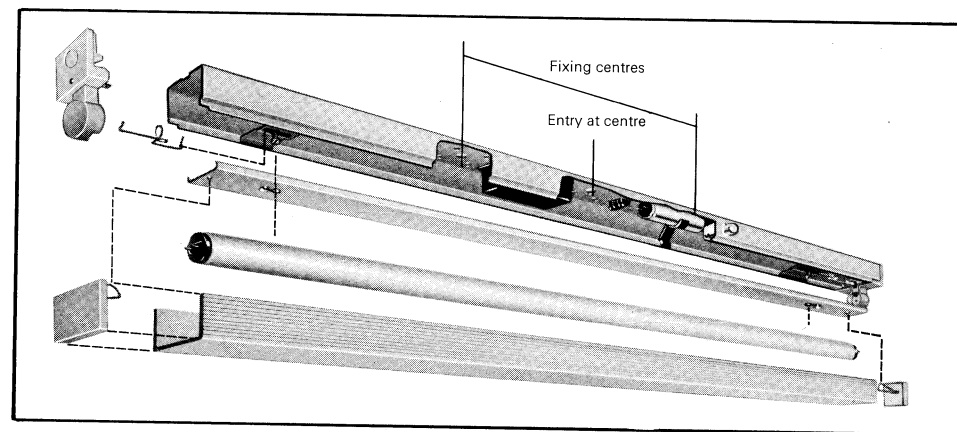
9 Emergency Lighting (1:84)

10 OF Hospital Fittings (1:85)

11 Isora Ceiling Systems (1:86 to 1:110)

12 Trunking Systems (1:111 to 1:120) Trakline, the most versatile busbar trunking system sold at the most economical price and the well tried and proved lightweight trunking. Liteline and Atlantic trunking systems.

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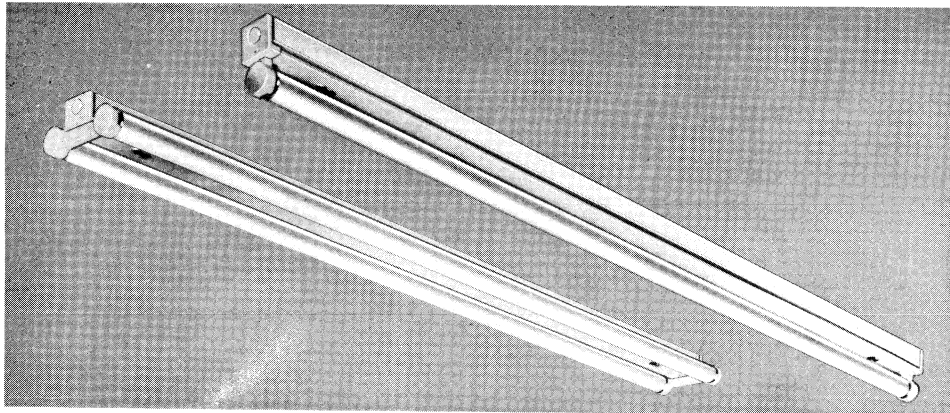
TOP TEN FEATURES

- 1 Extensive range of 2400mm/8ft, 1800mm/6ft, 1500mm/5ft, 1200mm/4ft and 600mm/2ft single and twin tube fittings finished in white stoved enamel.
- 2 All fittings completely wired and fully tested to ensure reliable performance and quality.
- 3 Supplied complete with high efficiency white tube(s).
- 4 Diffusers and prismatic controllers in light stabilized polystyrene with spring-mounted end plates.
- 5 Spring-mounted lampholders with knock-outs for end entry.
- 6 Control gear with long life and reliable operation.
- 7 Three-way mains terminal block.
- 8 Time and money saved by fast fixing features.
- 9 Slim twin types designed specifically for industrial use.
- 10 All fittings power factor corrected except the 600mm/2ft single. The 2400mm/8ft fittings operate at 0.66 leading power factor. The 1800mm/6ft 75W fittings operate at 0.55 leading power factor.

Five-year guarantee

Popular Pack fittings are guaranteed against defects which under proper use appear within five years after they have been delivered and which arise from faulty design, materials or workmanship. This guarantee excludes the starter switch and fluorescent tube which are subject to separate guarantees. In the event of the fitting, or any components thereof becoming faulty after installation and during the period of guarantee, the fitting or component (with the exception of the starter switch and fluorescent tube) will be repaired or replaced at the company's discretion at no charge, provided it has been used correctly and returned carriage paid and adequately packed to the nearest company depot.

Popular Pack batten fittings



The Popular Pack batten is available in 600mm/2ft, 1200mm/4ft, 1500mm/5ft, 1800mm/6ft and 2400mm/8ft single tube and twin tube fittings. The batten is packed complete with tube(s) in the same carton which effectively reduces handling costs. Spring-loaded lampholders are incorporated which embrace the lamp cap to prevent any strain on the lamp pins. Relamping from either end is possible even on 2400mm/8ft fittings. The batten totally encloses the control gear and the cover plate is speedily detached.

The starter switch is readily accessible through the side of the fitting. End conduit entry is through knock-outs in the ends of the lampholders and a bracket (Catalogue no. PP 4620) is available free of charge to secure the conduit into the fitting.

Through-wiring facilities are available using the end entries and accessory kit (Catalogue no. PP 4618).

For continuous mounting a space of 13mm/0.5in between battens and trough reflectors and 48mm/1.875in between diffusers is essential so that correct maintenance can be performed. Fittings are finished in white stoved enamel for maximum reflection and efficiency.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

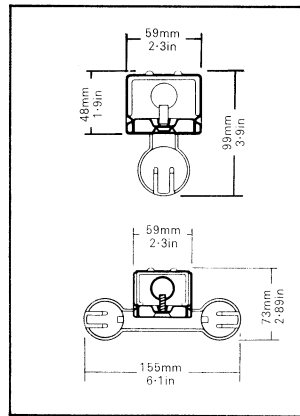
Standard fitting 230/240V 50Hz.

Fittings listed below can be supplied to order at the voltages shown at no extra charge:

20W 600mm/2ft } 200/210V, 220V
 40W 1200mm/4ft } and 250V/Hz.
 65W 1500mm/5ft }

PP 265

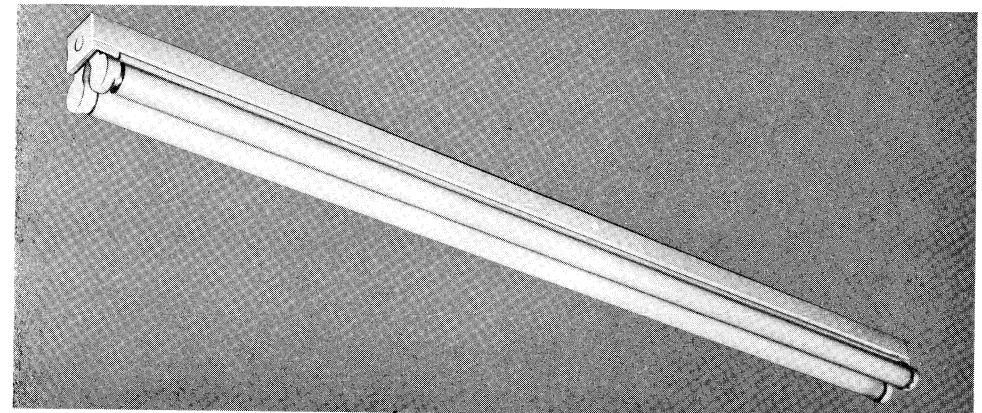
PP 65



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Batten Catalogue no.	Length		Weight (incl. tubes)		Fixing centres	
mm	ft				mm	in	kg	lb	mm	in
600	2	20W Single	Switchstart	PP 20	615	24.2	1.8	4	500	19.7
600	2	20W Twin	Switchstart	PP 220	615	24.2	2.16	2.16	500	19.7
1200	4	40W Single	Switchstart	PP 40	1224	48.2	2.6	5.75	595-615	24
1200	4	40W Single	Resonant Start	PPQ 40	1224	48.2	3.0	6.65	595-615	24
1200	4	40W Twin	Switchstart	PP 240	1224	48.2	4.1	9	595-615	24
1200	4	40W Twin	Resonant Start	PPQ 240	1224	48.2	4.9	10.75	595-615	24
1500	5	65W Single	Switchstart	PP 65	1525	60.1	3.4	7.5	595-615	24
1500	5	65W Single	Resonant Start	PPQ 65	1525	60.1	3.8	8.4	595-615	24
1500	5	65W Twin	Switchstart	PP 265	1525	60.1	5.45	12	595-615	24
1500	5	65W Twin	Resonant Start	PPQ 265	1525	60.1	6.25	13.75	595-615	24
1800	6	75W Single	Switchstart	PP 675	1788	70.4	3.7	8.14	595-615	24
1800	6	75W Twin	Switchstart	PP 2675	1788	70.4	6.12	13.46	595-615	24
1800	6	85W Single	Resonant Start	PPQ 685	1788	70.4	4.32	9.5	595-615	24
1800	6	85W Twin	Resonant Start	PPQ 2685	1788	70.4	6.7	14.75	595-615	24
2400	8	125W Single	Switchstart	PP 125	2398	94.4	5.23	11.5	1200-1220	48
2400	8	125W Twin	Switchstart	PP 2125	2398	94.4	7.95	17.5	1200-1220	48

Popular Pack slim twin batten fittings



XPP 265

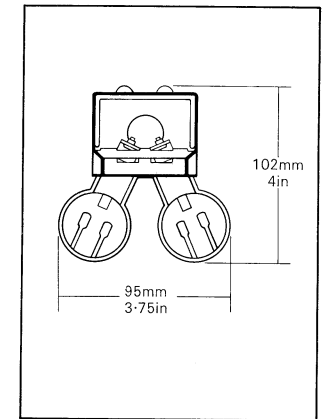
This twin batten is designed with closely spaced lampholders and is the basis of a number of reflector fittings in the Popular Pack range. Since it is intended for industrial use, the ends of the fitting are provided with knock-outs permitting direct end-to-end mounting. Battens are made of sheet steel, bonderized and finished white.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

Standard fitting 230/240V 50Hz.

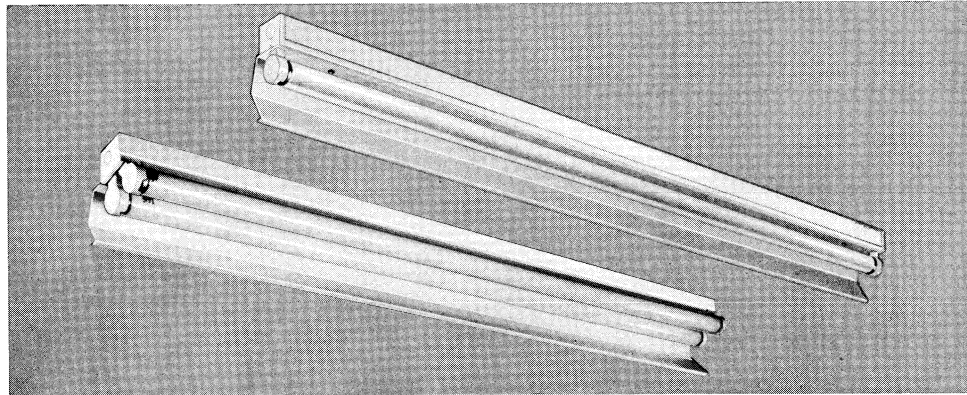
Fittings listed below can be supplied to order at the voltages shown at no extra charge:
 40W 1200mm/4ft } 200/210, 220
 65W 1500mm/5ft } and 250V 50Hz.



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Batten Catalogue no.	Length		Weight (incl. tubes)		Fixing centres	
mm	ft				mm	in	kg	lb	mm	in
1200	4	40W Twin	Switchstart	XPP 240	1241	48.8	4.1	9	595-615	24
1200	4	40W Twin	Resonant Start	XPPQ 240	1241	48.8	4.9	10.75	595-615	24
1500	5	65W Twin	Switchstart	XPP 265	1545	60.8	5.45	12	595-615	24
1500	5	65W Twin	Resonant Start	XPPQ 265	1545	60.8	6.25	13.75	595-615	24
1800	6	75W Twin	Switchstart	XPP 2675	1806	71.1	6.12	13.46	595-615	24
1800	6	85W Twin	Resonant Start	XPPQ 2685	1806	71.1	6.7	14.75	595-615	24
2400	8	125W Twin	Switchstart	XPP 2125	2416	95.1	7.94	17.5	1200-1220	48

Popular Pack PPA and PPTA angle reflector fittings



PPTA/265

PPA/65

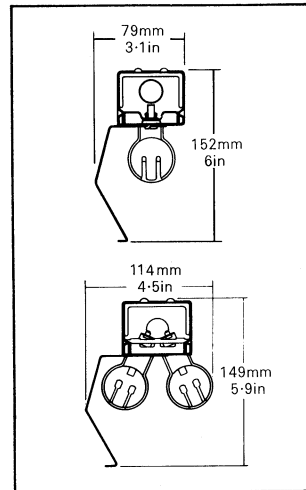
These are asymmetrical metal reflectors attached to the Popular Pack batten by means of screws fitted into slideable spring nuts retained in the batten. These screws engage into keyhole slots in the reflectors.

Applications include blackboards, wall charts, shop window lighting, etc. Reflectors are finished in white stoved enamel for maximum reflection and fittings may be close ceiling or conduit mounted.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

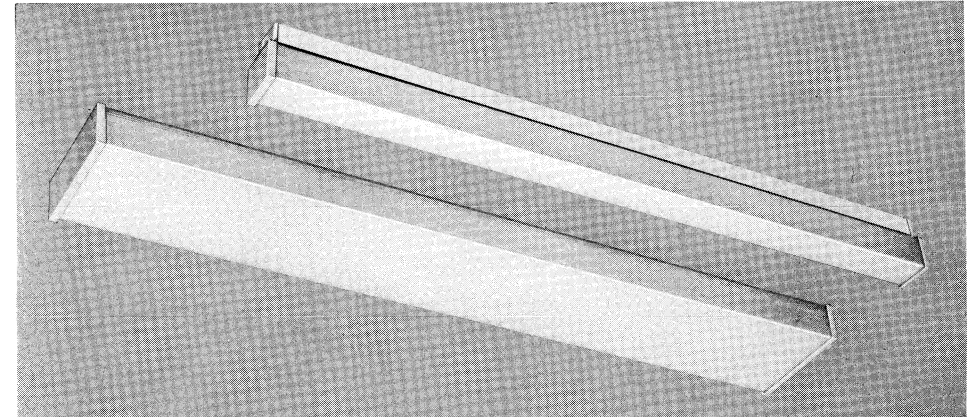
Standard fitting 230/240V 50Hz.
Fittings listed below can be supplied to order at the voltages shown at no extra charge:
40W 1200mm/4ft | 200/210V, 220V
65W 1500mm/5ft | and 250V 50Hz



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Reflector Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
1200	4	40W Single	SS	PPA/40	1224	48.2	3.97	8.75	595-615	24	PPA 4	PP 40
1200	4	40W Single	SRS	PPA/Q40	1224	48.2	4.37	9.65	595-615	24	PPA 4	PPQ 40
1200	4	40W Twin	SS	PPTA/240	1241	48.8	5	11	595-615	24	PPA 24	XPP 240
1200	4	40W Twin	SRS	PPTA/Q240	1241	48.8	5.8	12.75	595-615	24	PPA 24	XPPQ 240
1500	5	65W Single	SS	PPA/65	1525	60.1	5.1	11.25	595-615	24	PPA 5	PP 65
1500	5	65W Single	SRS	PPA/Q65	1525	60.1	5.5	12.15	595-615	24	PPA 5	PPQ 65
1500	5	65W Twin	SS	PPTA/265	1545	60.8	6.3	13.7	595-615	24	PPA 25	XPP 265
1500	5	65W Twin	SRS	PPTA/Q265	1545	60.8	7.1	15.60	595-615	24	PPA 25	XPPQ 265
1800	6	75W Single	SS	PPA/675	1788	70.4	5.4	11.9	595-615	24	PPA 6	PP 675
1800	6	75W Twin	SS	PPTA/2675	1866	71.1	6.92	15.2	595-615	24	PPA 26	XPP 2675
1800	6	85W Single	SRS	PPA/Q685	1788	70.4	6	13.25	595-615	24	PPA 6	PPQ 685
1800	6	85W Twin	SRS	PPTA/Q2685	1806	71.1	7.5	16.5	595-615	24	PPA 26	XPPQ 2685
2400	8	125W Single	SS	PPA/125	2398	94.4	7.85	17.25	1200-1220	48	PPA 8	PP 125
2400	8	125W Twin	SS	PPTA/2125	2416	95.1	10	22	1200-1220	48	PPA 28	XPP 2125

Popular Pack PPC prismatic controller fittings



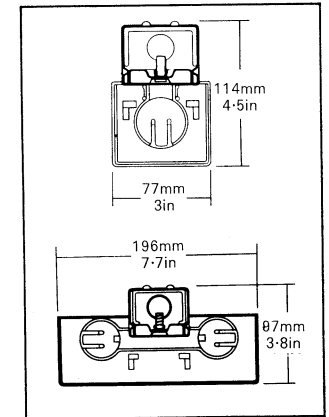
PPC/265

PPC/65

These attachments are made of transparent extruded plastic with side prisms, the base being embossed with a fine prismatic pattern. They are quickly attached or detached from the batten by the clip-on action of the end caps. These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

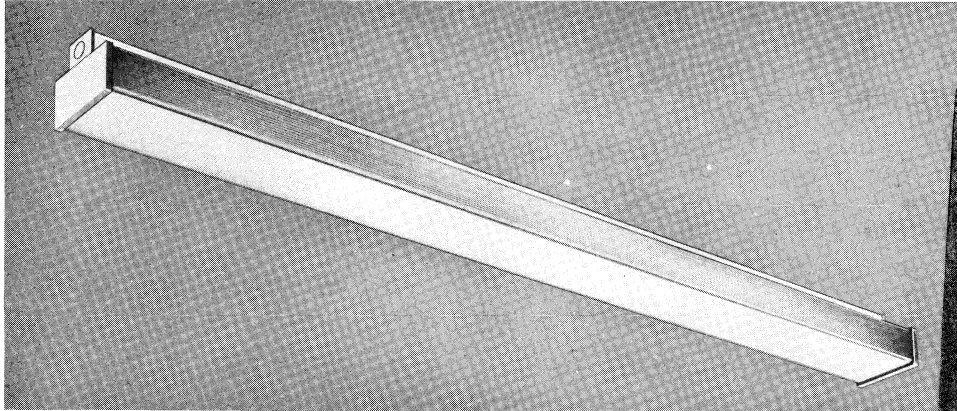
Standard fitting 230/240V 50Hz.
Fittings listed below can be supplied to order at the voltages shown at no extra charge:
20W 600mm/2ft | 200/210V,
40W 1200mm/4ft | 220V and 250V
65W 1500mm/5ft | 50Hz.



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Diffuser Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
600	2	20W Single	SS	PPC/20	638	25.1	2.1	4.64	500	19.7	PPC 2	PP 20
600	2	20W Twin	SS	PPC/220	638	25.1	2.84	6.25	500	19.7	PPC 22	PP 220
1200	4	40W Single	SS	PPC/40	1248	49.1	3.2	7	595-615	24	PPC 24	PP 40
1200	4	40W Single	SRS	PPC/Q40	1248	49.1	3.6	7.9	595-615	24	PPC 4	PPQ 40
1200	4	40W Twin	SS	PPC/240	1248	49.1	5.23	11.5	595-615	24	PPC 24	PP 240
1200	4	40W Twin	SRS	PPC/Q240	1248	49.1	6.03	13.25	595-615	24	PPC 24	PPQ 240
1500	5	65W Single	SS	PPC/65	1550	61	4.2	9.2	595-615	24	PPC 5	PP 65
1500	5	65W Single	SRS	PPC/Q65	1550	61	4.6	10.1	595-615	24	PPC 5	PPQ 65
1500	5	65W Twin	SS	PPC/265	1550	61	6.2	13.5	595-615	24	PPC 25	PP 265
1500	5	65W Twin	SRS	PPC/Q265	1550	61	7.0	15.40	595-615	24	PPC 25	PPQ 265
1800	6	75W Single	SS	PPC/675	1818	71.4	3.9	8.6	595-615	24	PPC 6	PP 675
1800	6	75W Twin	SS	PPC/2675	1818	71.4	5.9	12.98	595-615	24	PPC 26	PP 2675
1800	6	85W Single	SRS	PPC/Q685	1818	71.4	4.5	10	595-615	24	PPC 6	PPQ 685
1800	6	85W Twin	SRS	PPC/Q2685	1818	71.4	6.49	14.3	595-615	24	PPC 26	PPQ 2685
2400	8	125W Single	SS	PPC/125	2428	95.4	6.53	14.4	1200-1220	48	PPC 8	PP 125
2400	8	125W Twin	SS	PPC/2125	2428	95.4	9.8	21.5	1200-1220	48	PPC 28	PP 2125

Popular Pack PPL prismatic controller fittings



PPL/Q685

This prismatic controller for single tube fittings is a larger version of the single PPC type described on the previous page.

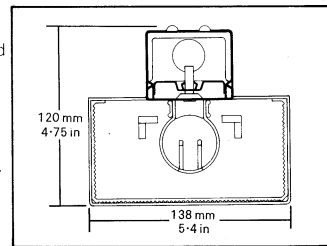
The increased size makes possible a higher degree of light control and the attachment is designed to provide lower brightness lighting in situations where glare could present problems.

These diffusers are quickly attachable or detachable from the batten by the clip-on action of the end caps.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

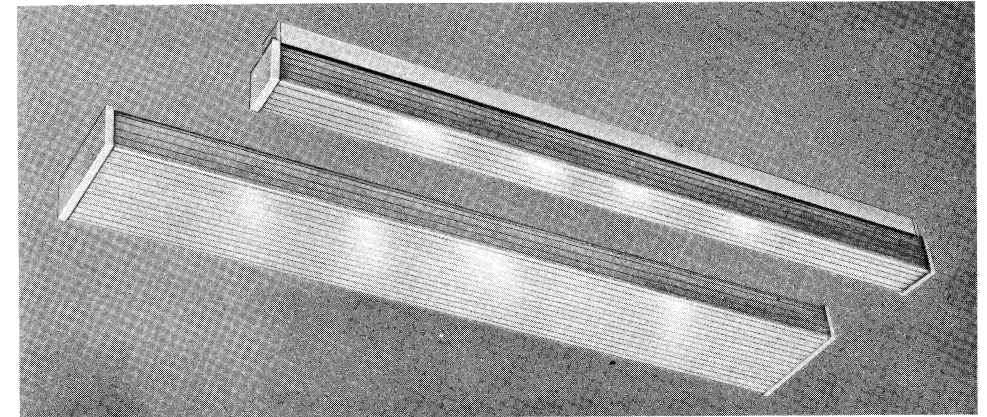
Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:
40W 1200mm/4ft } 200/210V, 220V
65W 1500mm/5ft } and 250V 50Hz.



RANGE: Packed complete with White tube

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Reflector Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
1200	4	40W Single	SS	PPL/40	1248	49.1	3.6	8	595-615	24	PPL 4	PP 40
1200	4	40W Single	SRS	PPL/Q40	1248	49.1	4.0	8.8	595-615	24	PPL 4	PPQ 40
1500	5	65W Single	SS	PPL/65	1550	61	4.7	10.25	595-615	24	PPL 5	PP 65
1500	5	65W Single	SRS	PPL/Q65	1550	61	5.1	11.20	595-615	24	PPL 5	PPQ 65
1800	6	75W Single	SS	PPL/675	1818	71.4	5.2	11.4	595-615	24	PPI 6	PP 675
1800	6	85W Single	SRS	PPL/Q685	1818	71.4	5.8	12.75	595-615	24	PPL 6	PPQ 685
2400	8	125W Single	SS	PPL/125	2428	95.4	7	15.5	1200-1220	48	PPL 8	PP 125

Popular Pack PPD plastic diffuser fittings



PPD/265

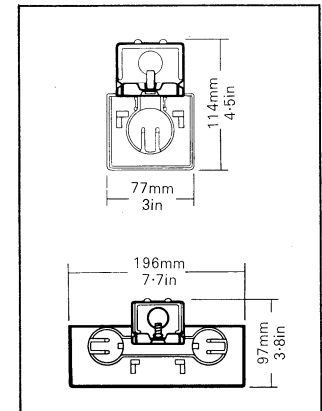
PPD/65

This white opal diffuser in extruded plastic with external reeding provides an extremely attractive and efficient fitting designed for general commercial use. The white plastic end plates are simply fitted to the batten and enable the diffuser to be quickly and easily removed for cleaning and general maintenance.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

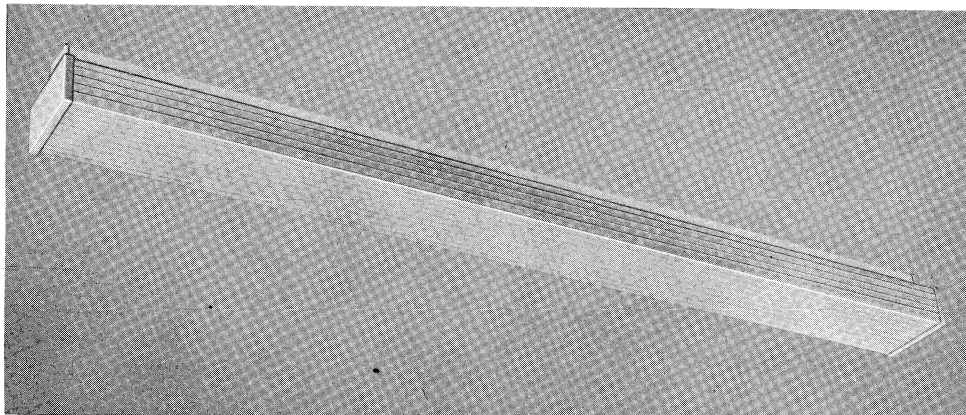
Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:
20W 600mm/2ft } 200/210V,
40W 1200mm/4ft } 220V and 250V
65W 1500mm/5ft } 50Hz.



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Diffuser Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
600	2	20W Single	SS	PPD/20	638	25.1	2	4.5	500	19.7	PPD 2	PP 20
600	2	20W Twin	SS	PPD 220	638	25.1	2.6	5.75	500	19.7	PPD 22	PP 220
1200	4	40W Single	SS	PPD/40	1248	49.1	3	6.75	595-615	24	PPD 4	PP 40
1200	4	40W Single	SRS	PPD/Q40	1248	49.1	3.4	7.50	595-615	24	PPD 4	PPQ 40
1200	4	40W Twin	SS	PPD/240	1248	49.1	5	11	595-615	24	PPD 24	PP 240
1200	4	40W Twin	SRS	PPD/Q240	1248	49.1	5.8	12.75	595-615	24	PPD 24	PPQ 240
1500	5	65W Single	SS	PPD/65	1550	61	4	8.75	595-615	24	PPD 5	PP 65
1500	5	65W Single	SRS	PPD/Q65	1550	61	4.4	9.65	595-615	24	PPD 5	PPQ 65
1500	5	65W Twin	SS	PPD/265	1550	61	6.6	14.5	595-615	24	PPD 25	PP 265
1500	5	65W Twin	SRS	PPD/Q265	1550	61	7.4	16.25	595-615	24	PPD 25	PPQ 265
1800	6	75W Single	SS	PPD/675	1818	71.4	4.3	9.5	595-615	24	PPD 6	PP 675
1800	6	75W Twin	SS	PPD/2675	1818	71.4	7.2	15.8	595-615	24	PPD 26	PP 2675
1800	6	85W Single	SRS	PPD/Q685	1818	71.4	4.9	10.75	595-615	24	PPD 6	PPQ 685
1800	6	85W Twin	SRS	PPD/Q2685	1818	71.4	7.8	17.25	595-615	24	PPD 26	PPQ 2685
2400	8	125W Single	SS	PPD/125	2428	95.4	5.9	13	1200-1220	48	PPD 8	PP 125
2400	8	125W Twin	SS	PPD/2125	2428	95.4	9.6	21.25	1200-1220	48	PPD 28	PP 2125

Popular Pack PPM plastic diffuser fittings



PPM/65

These attachments for single tube fittings are a larger version of the PPD type, but have a lower BZ rating, making them suitable in situations where such a fitting is specified.

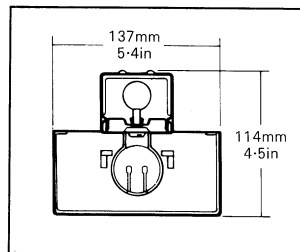
They are quickly attached and detached from the batten by the clip-on action of the end caps.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:

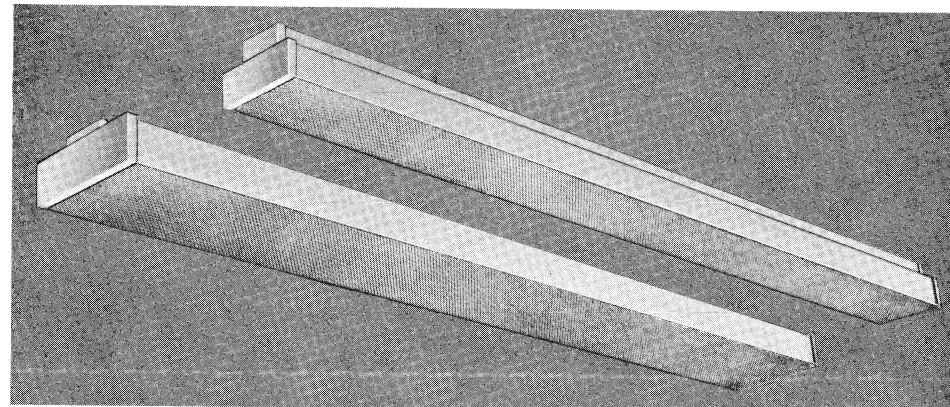
40W 1200mm/4ft } 200/210V, 220V
65W 1500mm/5ft } and 250V 50Hz.



RANGE: Packed complete with White tube

Nominal length	mm	ft	Rating	Circuit	Fitting Catalogue no.	Length	mm	in	Weight	kg	lb	Fixing centres	mm	in	Reflector Catalogue no.	Batten Catalogue no.
1200	4	40W Single	SS	PPM/40	1248	49.1	3.4	7.5	595-615	24	PPM 4	PP 40				
1200	4	40W Single	SRS	PPM/Q40	1248	49.1	3.8	8.4	595-615	24	PPM 4	PPQ 40				
1500	5	65W Single	SS	PPM/65	1550	61	4.3	9.5	595-615	24	PPM 5	PP 65				
1500	5	65W Single	SRS	PPM/Q65	1550	61	4.7	10.4	595-615	24	PPM 5	PPQ 65				
1800	6	75W Single	SS	PPM/675	1818	71.4	4.9	10.8	595-615	24	PPM 6	PP 675				
1800	6	85W Single	SRS	PPM/Q685	1818	71.4	5.5	12	595-615	24	PPM 6	PPQ 685				
2400	8	125W Single	SS	PPM/125	2428	95.4	6.7	14.75	1200-1220	48	PPM 8	PP 125				

Popular Pack PPE opal sided prismatic controller fittings



PPE/265

PPE/65

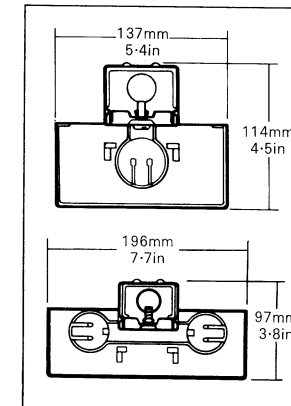
These attachments are for use in situations where visual comfort is of primary importance. The sides have an opal finish and the base is embossed with a fine prismatic pattern.

They are quickly and easily attached or detached from the batten by the clip-on action of the end caps.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

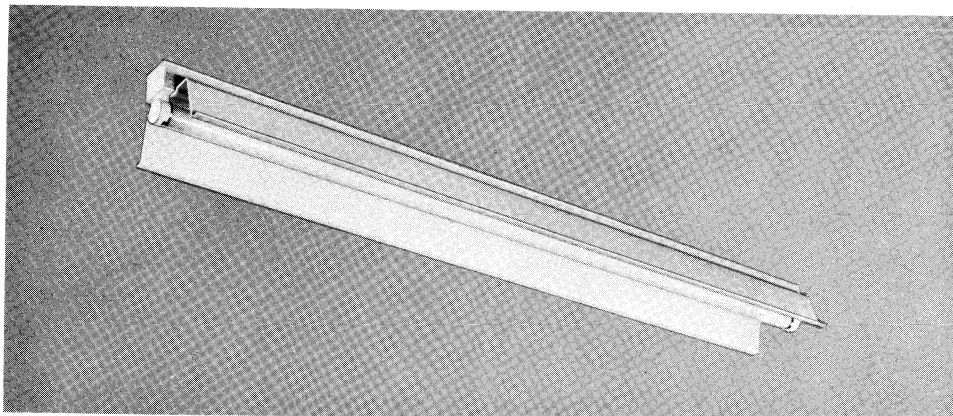
Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:
40W 1200mm/4ft } 200/210, 220
65W 1500mm/5ft } and 250V 50Hz.



RANGE: Packed complete with White tube(s)

Nominal length	mm	ft	Rating	Circuit	Fitting Catalogue no.	Length	mm	in	Weight	Kg	lb	Fixing centres	mm	in	Diffuser Catalogue no.	Batten Catalogue no.
1200	4	40W Single	SS	PPE/40	1248	49.1	3.4	7.5	595-615	24	PPE 4	PP 40				
1200	4	40W Single	SRS	PPE/Q40	1248	49.1	3.8	8.4	595-615	24	PPE 4	PPQ 40				
1200	4	40W Twin	SS	PPE/240	1248	49.1	5.23	11.5	595-615	24	PPE 24	PP 240				
1200	4	40W Twin	SRS	PPE/Q240	1248	49.1	6.03	13.25	595-615	24	PPE 24	PPQ 240				
1500	5	65W Single	SS	PPE/65	1550	61	4.42	9.75	595-615	24	PPE 5	PP 65				
1500	5	65W Single	SRS	PPE/Q65	1550	61	4.82	10.65	595-615	24	PPE 5	PPQ 65				
1500	5	65W Twin	SS	PPE/265	1550	61	6.2	13.5	595-615	24	PPE 25	PP 265				
1500	5	65W Twin	SRS	PPE/Q265	1550	61	7.0	15.25	595-615	24	PPE 25	PPQ 265				
1800	6	75W Single	SS	PPE/675	1818	71.4	5.0	11.0	595-615	24	PPE 6	PP 675				
1800	6	75W Twin	SS	PPE/2675	1818	71.4	6.9	15.2	595-615	24	PPE 26	PP 2675				
1800	6	85W Single	SRS	PPE/Q685	1818	71.4	5.67	12.25	595-615	24	PPE 6	PPQ 685				
1800	6	85W Twin	SRS	PPE/Q2685	1818	71.4	7.5	16.53	595-615	24	PPE 26	PPQ 2685				
2400	8	125W Single	SS	PPE/125	2428	95.4	6.8	15	1200-1220	48	PPE 8	PP 125				
2400	8	125W Twin	SS	PPE/2125	2428	95.4	9.8	21.5	1200-1220	48	PPE 28	PP 2125				

Popular Pack PPO plastic reflector fittings



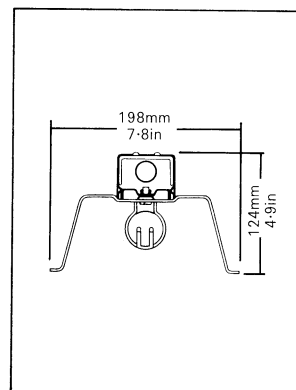
PPO/65

This opal plastic trough reflector provides generous upward light and an even spread of light in the downward plane. The plastic material is strong and sufficiently light-fast to maintain its efficiency with adequate maintenance throughout the life of the fitting. The reflector is easily attached to the batten by two screws retained by slideable spring nuts.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

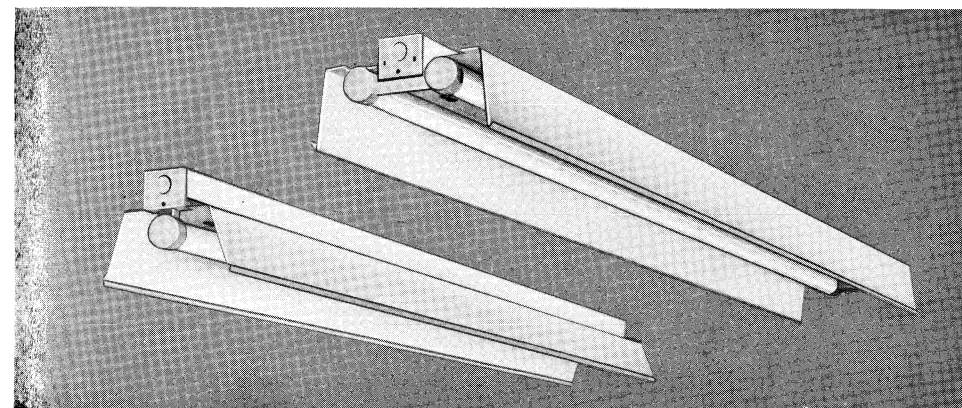
Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:
40W 1200mm/4ft | 200/210V, 220V
65W 1500mm/5ft | and 250V 50Hz.



RANGE: Packed complete with White tube

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Reflector Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
1200	4	40W Single	SS	PPO/40	1224	48-2	3-5	7-7	595-615	24	PPO 4	PP 40
1200	4	40W Single	SRS	PPO/Q40	1224	48-2	3-9	8-6	595-615	24	PPO 4	PPQ 40
1500	5	65W Single	SS	PPO/65	1525	60-1	4-6	10-1	595-615	24	PPO 5	PP 65
1500	5	65W Single	SRS	PPO/Q65	1525	60-1	5	11	595-615	24	PPO 5	PPQ 65
1800	6	75W Single	SS	PPO/675	1788	70-4	5-1	11-4	595-615	24	PPO 6	PP 675
1800	6	85W Single	SRS	PPO/Q685	1788	70-4	5-7	12-5	595-615	24	PPO 6	PPQ 685
2400	8	125W Single	SS	PPO/125	2398	94-4	7-1	15-5	1200-1220	48	PPO 8	PP 125

Popular Pack PPR metal reflector fittings



PPR/65

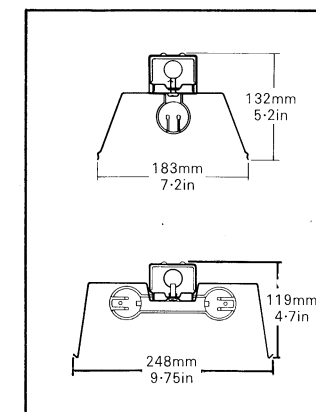
PPR/265

These open-ended slotted metal trough reflectors give generous upward lighting. Finished in white stoved enamel, they are easily fitted by means of sliding captive screws, providing extremely attractive and efficient attachments. These reflectors are suitable for many industrial applications where high efficiency and easy maintenance are important features.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage

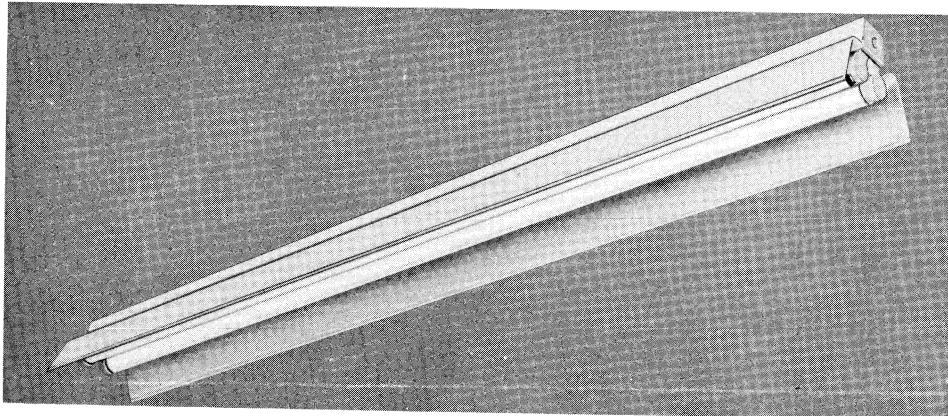
Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge:
40W 1200mm/4ft | 200/210V, 220V
65W 1500mm/5ft | and 250V 50Hz.



RANGE: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Reflector Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
1200	4	40W Single	SS	PPR/40	1224	48-2	4-8	10-5	595-615	24	PPR 4	PP 40
1200	4	40W Single	SRS	PPR/Q40	1224	48-2	5-2	11-4	595-615	24	PPR 4	PPQ 40
1200	4	40W Twin	SS	PPR/240	1224	48-2	6-8	15	595-615	24	PPR 24	PP 240
1200	4	40W Twin	SRS	PPR/Q240	1224	48-2	7-6	16-75	595-615	24	PPR 24	PPQ 240
1500	5	65W Single	SS	PPR/65	1525	60-1	6-3	13-75	595-615	24	PPR 5	PP 65
1500	5	65W Single	SRS	PPR/Q65	1525	60-1	6-7	14-65	595-615	24	PPR 5	PPQ 65
1500	5	65W Twin	SS	PPR/265	1525	60-1	8-3	18-3	595-615	24	PPR 25	PP 265
1500	5	65W Twin	SRS	PPR/Q265	1525	60-1	9-1	20-0	595-615	24	PPR 25	PPQ 265
1800	6	75W Single	SS	PPR/675	1788	70-4	6-9	15-2	595-615	24	PPR 6	PP 675
1800	6	75W Twin	SS	PPR/2675	1788	70-4	9-6	20-2	595-615	24	PPR 26	PP 2675
1800	6	85W Single	SRS	PPR/Q685	1788	70-4	7-5	16-5	595-615	24	PPR 6	PPQ 685
1800	6	85W Twin	SRS	PPR/Q2685	1788	70-4	10-2	22-5	595-615	24	PPR 26	PPQ 2685
2400	8	125W Single	SS	PPR/125	2398	94-4	9-2	20-25	1200-1220	48	PPR 8	PP 125
2400	8	125W Twin	SS	PPR/2125	2398	94-4	14-0	30-8	1200-1220	48	PPR 28	PP 2125

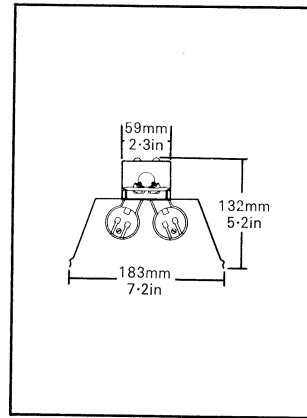
Popular Pack PPT Twindustrial twin reflector fittings



PPT/Q2685

These twin, open-ended slotted metal reflector fittings incorporate all the well-proven design features of the existing Popular Pack types plus a number of additional features of maximum advantage in a fitting for industrial use. Metal end plates incorporating knock-outs are used and the tube spacing enables a smaller reflector to be employed.

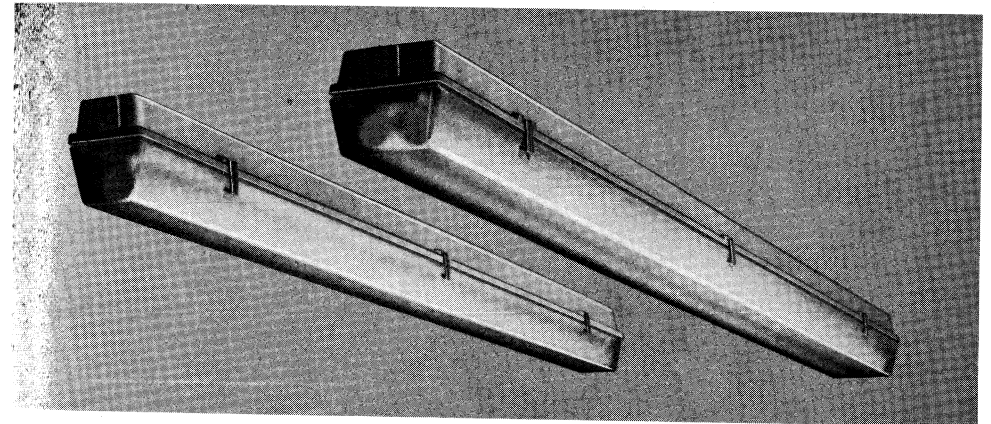
These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C. **Supply voltage** Standard fitting 230/240V 50Hz. Fittings listed below can be supplied to order at the voltages shown at no extra charge: 40W 1200mm/4ft, 200/210V, 220V 65W 1500mm/5ft and 250V 50Hz



RANGE: Packed complete with White tubes

Nominal length		Rating	Circuit	Fitting Catalogue no.	Length		Weight		Fixing centres		Reflector Catalogue no.	Batten Catalogue no.
mm	ft				mm	in	kg	lb	mm	in		
1200	4	40W Twin	SS	PPT/240	1241	48.8	5.9	13	595-615	24	PPT 24	XPP 240
1200	4	40W Twin	SRS	PPT/Q240	1241	48.8	6.7	14.75	595-615	24	PPT 24	XPPQ 240
1500	5	65W Twin	SS	PPT/265	1545	60.8	7.2	16.2	595-615	24	PPT 25	XPP 265
1500	5	65W Twin	SRS	PPT/Q265	1545	60.8	8.0	17.95	595-615	24	PPT 25	XPPQ 265
1800	6	75W Twin	SS	PPT/2675	1806	71.1	8.2	18	595-615	24	PPT 26	XPP 2675
1800	6	85W Twin	SRS	PPT/Q2685	1806	71.1	8.8	19.25	595-615	24	PPT 26	XPPQ 2685
2400	8	125W Twin	SS	PPT/2125	2416	95.1	11.8	26	1200-1220	48	PPT 28	XPP 2125

Popular Pack PPU Sentinel fittings



PPUQ 685 PPUQ 2685

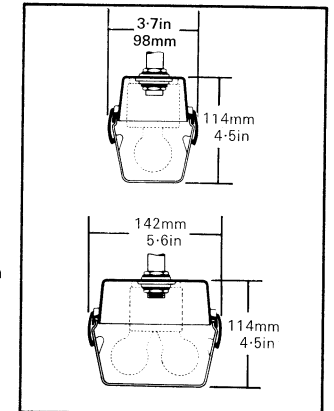
Sentinel enclosures combined with 1800mm/6ft Popular Pack fittings fulfil the protection needs for many under-canopy, open building and corrosive situations. The construction is a simple but effective two-piece structure, formed by the combination of a grey glass fibre canopy and an acrylic lower moulding. Six captive clips provide easy, positive fastening and soft gaskets seal the enclosures from external environmental conditions. The Sentinel is available in single and twin forms. Battens, tubes and enclosures are supplied complete in one pack.

Comparable fittings generally employ 1500mm/5ft tubes as the accepted size but with the 1800mm/6ft 85W tube the Sentinel supplies

some 25% more light, which is particularly important in situations for which this product is employed. Although functional in design the grey glass fibre canopy and clear stippled lower enclosure form a combination which is attractive in appearance and tough in use. It is important to ensure that the entry points into these fittings are adequately sealed against the ingress of water.

These fittings are rainproof, dustproof, and are suitable for use outdoors and in chemically corrosive atmospheres.

Supply Voltage
Standard fitting 230/240V 50Hz.

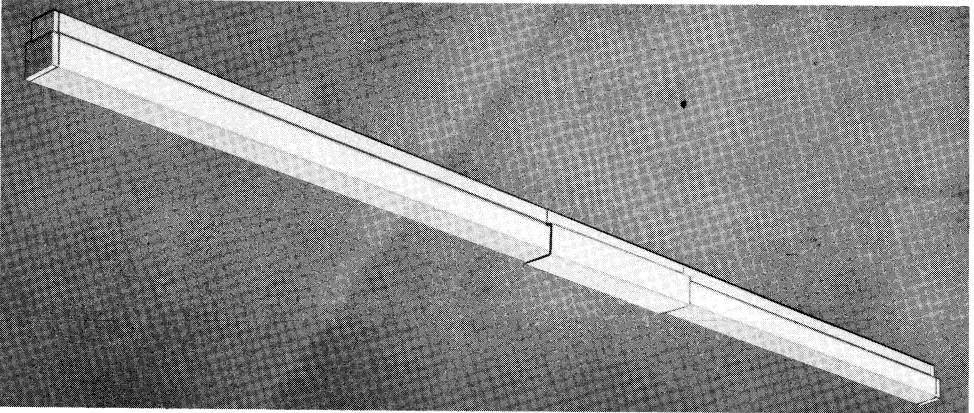


Range: Packed complete with White tube(s)

Nominal length		Rating	Circuit	Catalogue no.	Description	Length		Fixing centres		Weight	
mm	ft					mm	in	mm	in	kg	lb
1800	6	85W Single	SRS	PPUQ 685	Single Sentinel fitting	1850	72.8	610	24	5.95	13
1800	6	85W Twin	SRS	PPUQ 2685	Twin Sentinel fitting	1850	72.8	610	24	9.1	20

Single clip PP 4609, single tube acrylic enclosure PP 4611 and twin-tube acrylic enclosure PP 4615 are available as replacement items.

Popular Pack One-Plus-One attachment



PP 4621

The One-Plus-One fitting is formed from a combination of a central box housing and two individual Pop Pack fittings in tandem, an arrangement that can be extended to give a continuous structure. This is particularly suitable for schools, supermarkets, shops and all indoor establishments where a good general level of illumination is required.

The One-Plus-One can be used to form combinations of various sizes, dependent only on the type of Pop Pack employed, with a choice of opal diffuser (PPD) or prismatic controller (PPC) single tube attachments.

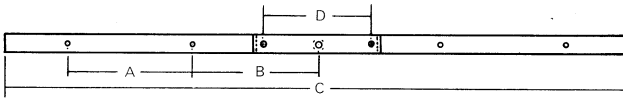
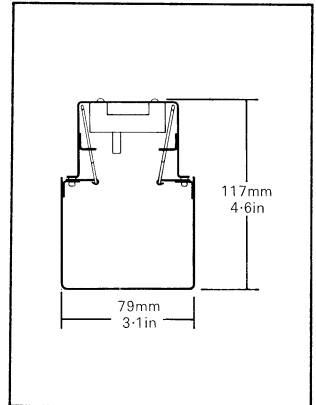
Details of single tube fittings for use with the One-Plus-One attachment are given on pages 1:7 and 1:9.

It should be noted that the One-Plus-One is suitable for ceiling mounting only.

These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C, when used in conjunction with Popular Pack fittings mentioned.

Arrangement data

Dimensions shown include various size fittings combined with the One-Plus-One attachment.

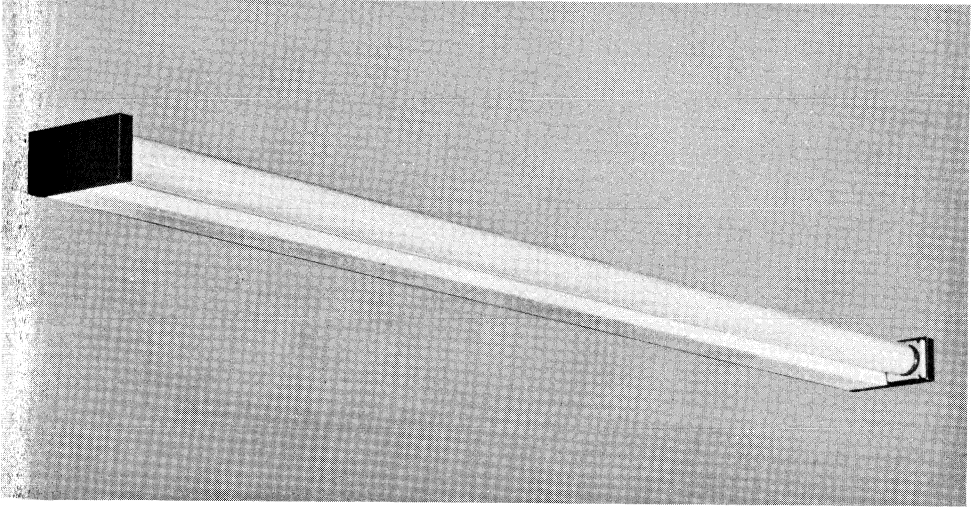


Catalogue no.	Length		Weight		Fixing centres	
	mm	in	kg	lb	mm	in
PP 4621	610	24	1.5	3.25	457	18

and centre BS box piercing

Nominal fitting size	A		B		C		D		
	mm	ft	mm	in	mm	in	mm	in	
600	2	500	19.7	357	14.06	1852	72.93	457	18
1200	4	595-615	24	607	23.91	3070	120.93	457	18
1500	5	595-615	24	758	29.86	3656	144.73	457	18
1800	6	595-615	24	889	35.01	4199	165.33	457	18
2400	8	1200-1220	48	889	35.01	5118	213.33	457	18

New Arrow-slim AS batten fittings



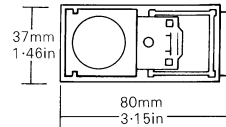
AS single batten fitting

The New Arrow-slim basic batten, with its three-position twist lampholder, can be used in any location where an unshielded fluorescent tube is acceptable.

These batten fittings are available in 900mm/3ft 30W and 1500mm/5ft 50W sizes and are supplied ready packed complete with 26mm/1in diameter Warm White tubes.

Supply voltage

Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application. In exceptionally quiet locations the small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.



AS 30
ASQ 50

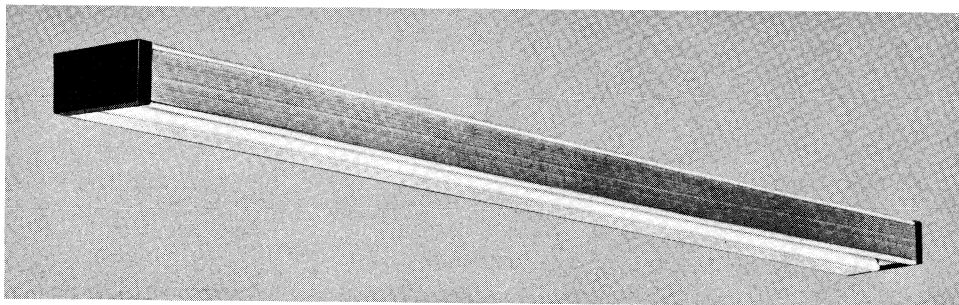
RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting		Weight		Fixing centres	
		Catalogue no.	Length mm in	kg	lb	mm	in
30W Single	Switchstart	AS 30	914 36	1.82	4	600-610	23.6-24
50W Single	Resonant start	ASQ 50	1519 59.8	2.64	5.8	600-610	23.6-24

Push Switch

A push switch (Catalogue No. AS 4601) is available for wall-mounted fittings.

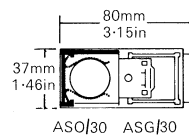
New Arrow-slim ASG, ASO and ASC attachments



ASG (Gold) and ASO (Orange) attachments

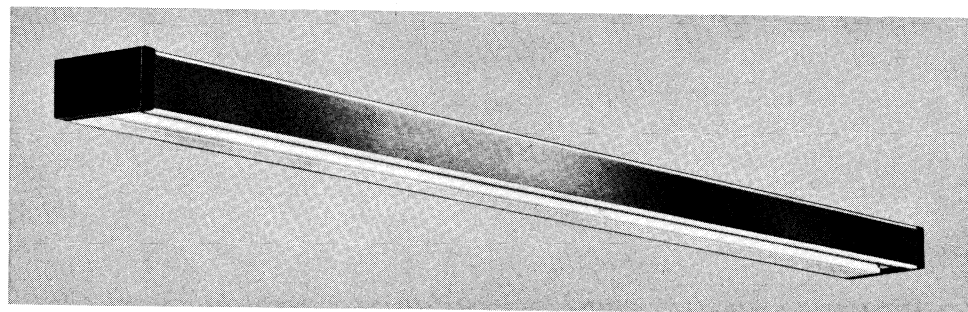
These attachments are slim acrylic extrusions to which is applied a plastic trim with a gold or orange fabric appearance.

The attachments are retained in position on the wall-mounted fitting by engagement with the lampholders.



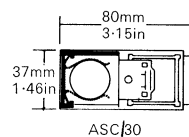
RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting Catalogue no.	Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.	Trim Colour
30W Single	Switchstart	ASG/30	914 36	2 4-4	600-610 23-6-24	ASG 3	AS 30	Gold
30W Single	Switchstart	ASO/30	914 36	2 4-4	600-610 23-6-24	ASO 3	AS 30	Orange



ASC attachment

This attachment is similar in construction to those above except that the front trim has the appearance of brushed copper.



RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting Catalogue no.	Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
30W Single	Switchstart	ASC/30	914 36	2 4-4	600-610 23-6-24	ASC 3	AS 30

Supply voltage

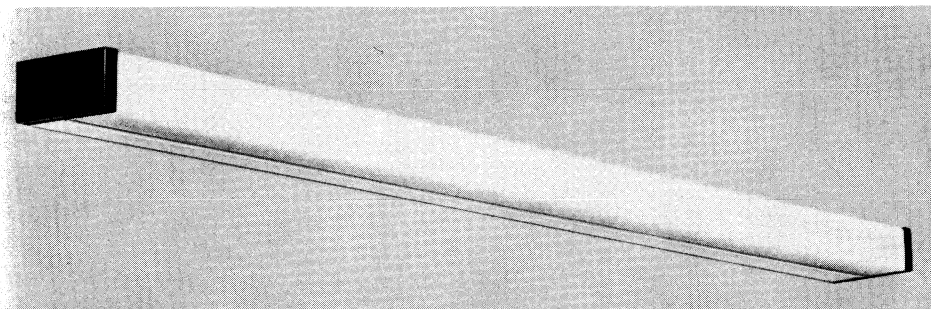
Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application. In exceptionally quiet locations

the small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.

Push Switch

A push switch (Catalogue no. AS 4601) is available for wall-mounted fittings

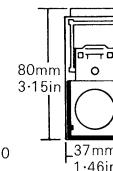
New Arrow-slim ASU and ASF attachments



ASU attachment

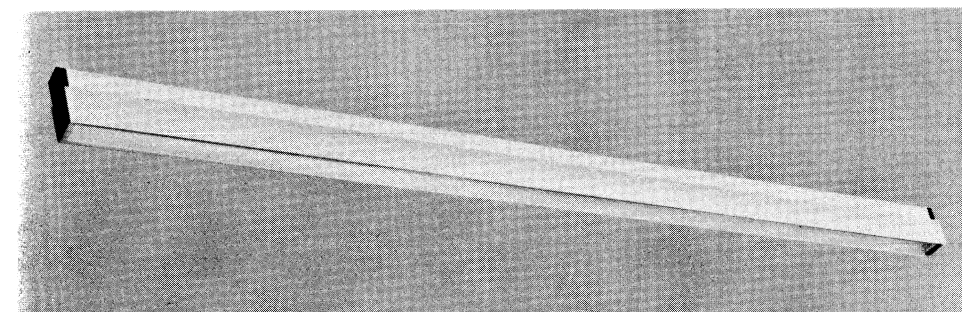
A closely fitting acrylic extrusion forming, in conjunction with the 900mm/3ft batten, an extremely slim diffuser fitting for many lighting

purposes. The attachment is fixed to the basic fitting by engagement with the lampholders.



RANGE: Fittings are packed complete with Warm White tube

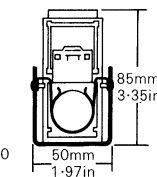
Rating	Circuit	Complete Fitting Catalogue no.	Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
30W Single	Switchstart	ASU/30	914 36	2-03 4-46	600-610 23-6-24	ASU 3	AS 30



ASF two-tone diffuser

Extruded plastic diffuser with clear fine reeded base and opal sides which gives an even downward distribution of light, yet cuts fitting brightness to the minimum.

Fixing is by means of spring clips fitted to the end of the diffuser.



RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting Catalogue no.	Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
50W Single	Resonant start	ASF/50	1519 59-8	3-1 6-8	600-610 23-6-24	ASF 5	ASQ 50

A set of two clips and plastic studs for ASF attachments (Catalogue no. AS 4610) is available as a replacement item

Supply voltage

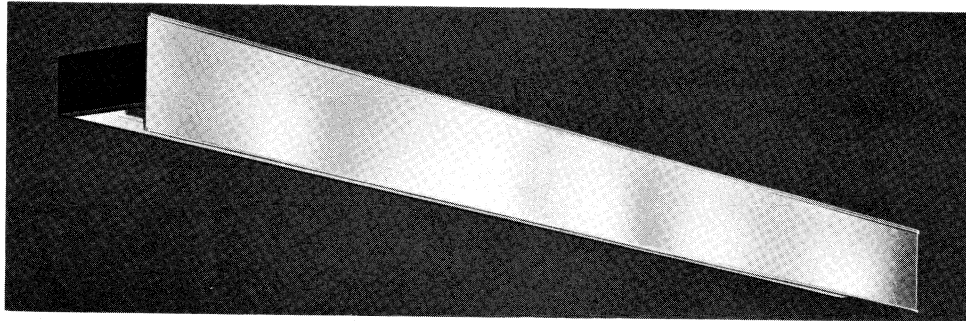
Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application. In exceptionally quiet locations the

small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.

Push Switch

A push switch (Catalogue no. AS 4601) is available for wall-mounted fittings.

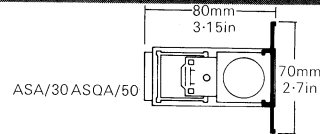
New Arrow-slim ASA, ASB and ASR attachments



ASA attachments

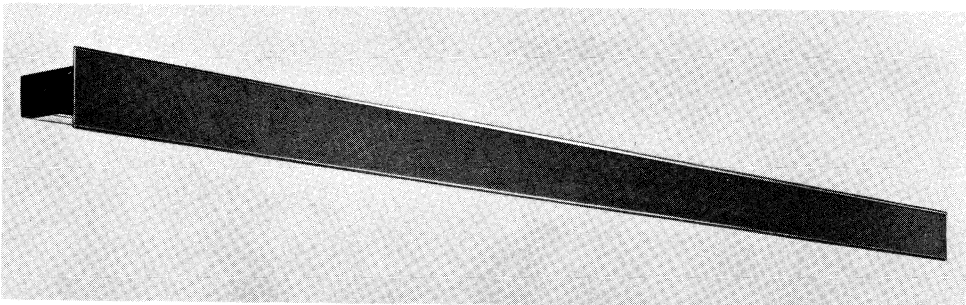
Satin etched front baffles in extruded aluminium for upward and downward lighting and a sophisticated decorative appearance.

These attachments are retained in position on the wall-mounted fittings by engagement with the lampholders.



RANGE: Fittings are packed complete with Warm White tube

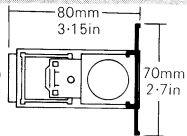
Rating	Circuit	Complete Fitting		Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
		Catalogue no.	ASA/30					
30W Single	Switchstart	ASA/30	914 36	2.21 4.86	600-610 23.6-24	ASA 3	AS 30	
50W Single	Resonant start	ASQA/50	1519 59.8	3.28 7.24	600-610 23.6-24	ASA 5	ASQ 50	



ASB (Beige) and ASR (Red) attachments

Aluminium front baffles to which trims having the appearance of beige or red leather are applied.

These attachments are retained in position on the wall-mounted fittings by engagement with the lampholders.



RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting		Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
		Catalogue no.	ASB/30					
30W Single	Switchstart	ASB/30	914 36	2.24 4.93	600-610 23.6-24	ASB 3	AS 30	
50W Single	Resonant start	ASQB/50	1519 59.8	3.35 7.37	600-610 23.6-24	ASB 5	ASQ 50	
30W Single	Switchstart	ASR/30	914 36	2.24 4.93	600-610 23.6-24	ASR 3	AS 30	
50W Single	Resonant start	ASQR/50	1519 59.8	3.35 7.37	600-610 23.6-24	ASR 5	ASQ 50	

Supply voltage

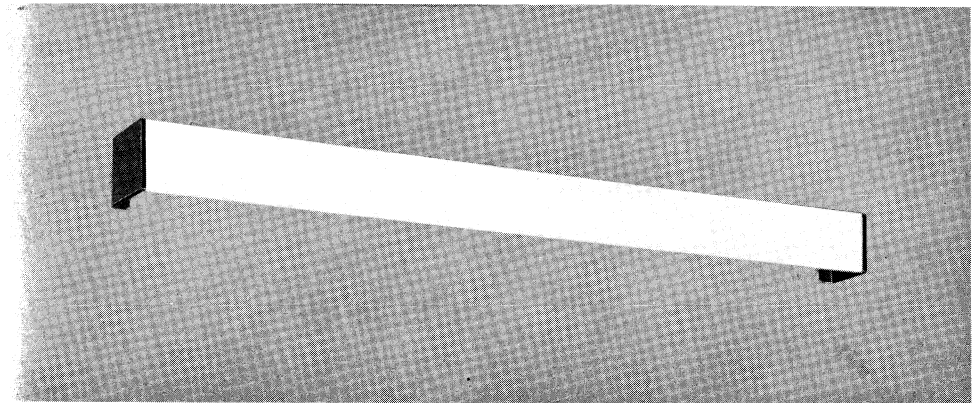
Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application.

Push Switch

A push switch (Catalogue no. AS4601) is available for wall-mounted fittings. In exceptionally quiet locations the

small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.

New Arrow-slim ASK attachment

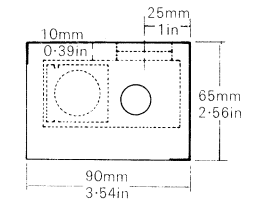


ASK attachment

This is a baffle in white stoved enamel steel designed for use under wall-mounted cabinets in kitchens to provide light over working surfaces. The ends of the baffle are closed by black plastic end plates to give an attractive and streamlined appearance and to conceal the batten fitting within the baffle.

Supply voltage

Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application. In exceptionally quiet locations the small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.

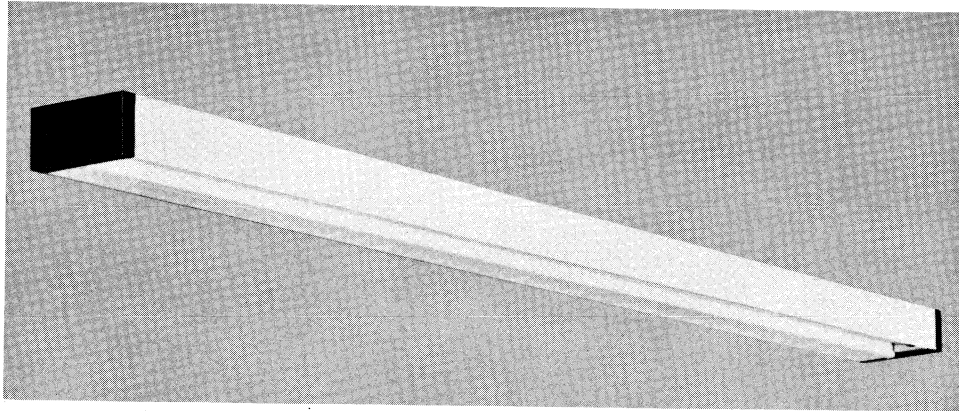


KITCHEN BAFFLE ASK/30

RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting		Length mm in	Weight kg lb	Fixing centres mm in	Attachment Catalogue no.	Batten Catalogue no.
		Catalogue no.	ASK/30					
30W Single	Switchstart	ASK/30	1000 39.4	2.73 6	605 23.8	ASK 3	AS 30	

New Arrow-slim ASD diffuser



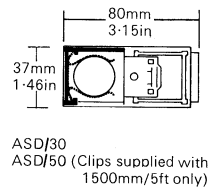
This diffuser is extruded from opal acrylic and is easily attached to the fitting. The diffuser may be used with a wall-mounted batten fitting to give unobstructed downward light and general diffused upward light.

Push Switch

A push switch (Catalogue no. AS4601) is available for wall-mounted fittings.

Supply Voltage

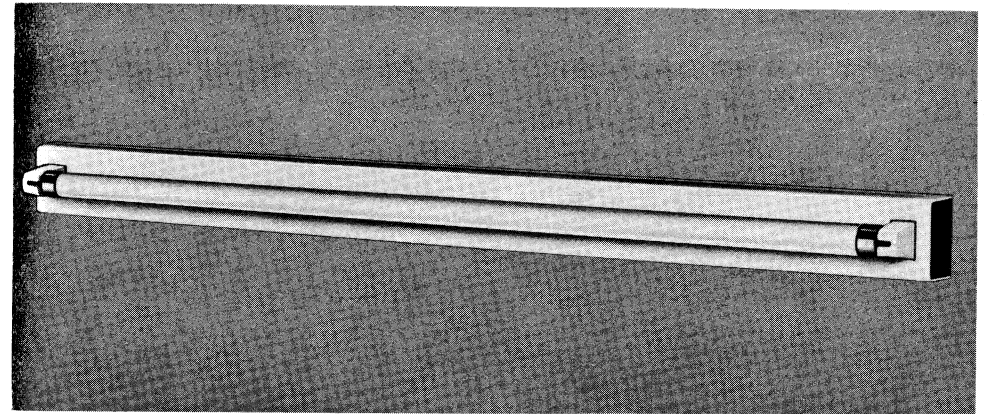
Standard fitting 230/240V 50Hz. Details of fittings for other supplies are available on application. In exceptionally quiet locations the small amount of noise emitted by these fittings should be considered. Noise can be limited by the use of rubber grommets to 'soften' the mounting.



RANGE: Fittings are packed complete with Warm White tube

Rating	Circuit	Complete Fitting		Length		Weight		Fixing centres		Diffuser Catalogue no.	Batten Catalogue no.
		Catalogue no.	mm	in	kg	lb	mm	in			
30W Single	Switchstart	ASD/30	914	36	2	4.4	600-610	23.6-24	ASD 3	AS 30	
50W Single	Resonant start	ASQD/50	1519	59.8	2.9	6.4	600-610	23.6-24	ASD 5	ASQ 50	

LJ Series Minipack fittings



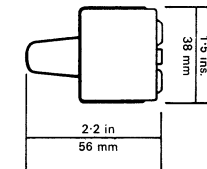
LJS1013

The Minipacks are the smallest fluorescent fittings offered for everyday use. They provide miniature fluorescent lighting for many purposes, including display cabinets, public notice signs and hotel mirrors. The range of attachments (see next page) broadens the application even further. The 324mm/12.75in long version gives more light than a 40W tungsten lamp. Especially impressive, the 552mm/21.75in model gives a better output than

three 30W tungsten striplights. The body assembly has two-tone colouring: the channel cover is white and the channel and end plates are grey. To gain access to the control gear, the white moulded lampholders are rocked slightly forward to release the cover which can be completely removed for installation and servicing. PULL SWITCH, Catalogue no. LJ 4600. A pull switch is an added convenience and is available for all models.

SHELF CLIPS, Catalogue no. LJ 4601. An elegant form of accent lighting is to use this fitting to illuminate objects on shelves. For this purpose two single clips are available which locate inside the batten and securely onto the shelf, accommodating shelf thickness up to 26mm/1in. These fittings are suitable for use in ordinary indoor atmospheres, where ambient temperature does not exceed 25°C.

Supply voltage
Standard fitting 230/250V 50Hz. Details of fittings for other supplies are available on application.



RANGE: Packed complete with Warm White tube

Rating	Circuit	Batten Fitting		Length		Weight		Fixing centres	
		Catalogue no.	mm	in	kg	lb	mm	in	
8W Single	Switchstart	LJ S1008.H	324	12.75	.85	2	279	11	
13W Single	Switchstart	LJ S1013.H	552	21.75	1.1	2.5	457	18	

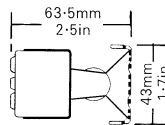
LJA, LJN Minipack attachments

Minipacks offer a choice of attractive attachments suitable for domestic and commercial situations.



LJA Raffia attachment

This woven natural raffia attachment is easily clipped on to the tube by a spring clip mounted at each end of the attachment.



RANGE

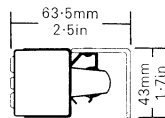
Attachments only

Type	Length		Catalogue no.
	mm	in	
Raffia	305	12	LJA 112
Raffia	533	LJA 121	



LJN Opal plastic diffuser

This attractive white opal diffuser is designed for more general use, and is attached easily and quickly by spring clips.



RANGE

Attachments only

Type	Length		Catalogue no.
	mm	in	
Opal plastic	305	12	LJN 112
Opal plastic	533	21	LJN 121

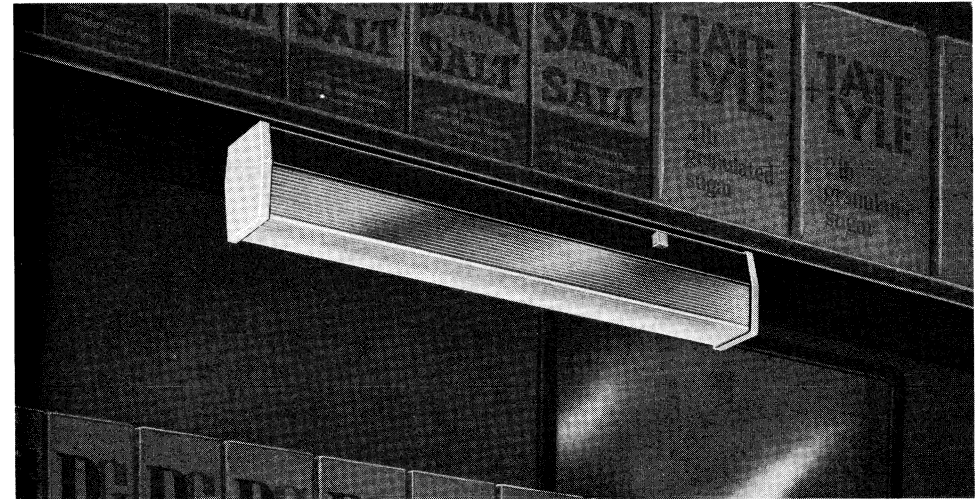
Nomad

This range of transistorised fluorescent fittings is designed to provide efficient battery operated lighting, independent of a mains supply. The olive green body and clear reeded prismatic controller are made of high impact and light stabilised polystyrene. An integral

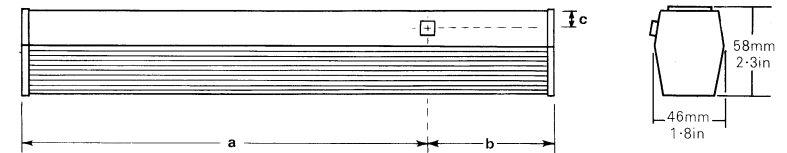
push switch controls the fitting. The control gear operates the fluorescent tube at a high frequency so that the fitting is inaudible in use. Protection against accidental polarity reversal is incorporated within the fitting. 12V versions may be used in

conjunction with the AME R2463 emergency lighting unit.

Registered design numbers:
NOM 1008 - 943061
NOM 1013 - 943063
These fittings are Class II items.



13W fitting in mobile shop



Range: Packed complete with Warm White tube

Rating	Volts (d.c. only)		Length		Weight		Fixing centres	
	mm	in	mm	in	kg	lb	mm	in
8W Single	12	NOM 1008.12	343	13.5	0.34	0.75	318	12.5
13W Single	12	NOM 1013.12	569	22.4	0.49	1.1	551	21.7
8W Single	24	NOM 1008.24	343	13.5	0.34	0.75	318	12.5
13W Single	24	NOM 1013.24	569	22.4	0.49	1.1	551	21.7

*Other voltages: Transistorised fluorescent fittings suitable for operation on 6 volt supplies are also available. Details can be obtained on application.
Prismatic controller extrusions NOM 4600 (8W), NOM 4601 (13W) and end plate NOM 4602 are available as replacement items.

Dimensions

Rating	a		b		c	
	mm	in	mm	in	mm	in
8W	262	10.3	79	3.1	10	0.4
13W	490	19.3	79	3.1	10	0.4

Battery Information

Rating	Supply current (amps)	Battery rating (amp/hours)			
		38	42	60	
8W	12V	0.7	50	56	80
13W	12V	1.1	31	34	49
8W	24V	0.3	114	126	180
13W	24V	0.5	68	75	108

*Assuming the efficiency of the battery to be 90%.

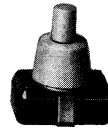
New Arrow-slim, Minipack & Nomad Accessories



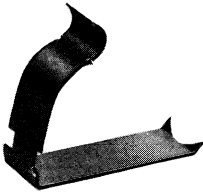
GB 1586 New Arrow Slim bi-pin lampholder. Black/white plastic.



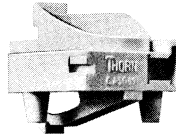
AS 4611 New Arrow Slim lampholder tension spring.



AS 4601 New Arrow Slim push switch for wall mounted fittings.



AS 4612 New Arrow Slim capacitor clip.



G A5089 LOOP Starter socket for New Arrow Slim 3ft and Mini-pack fittings.

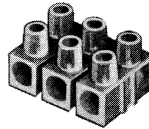


LJ 4600 Pull switch for wall mounted Mini-pack fittings.

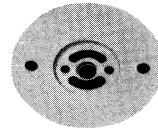


GB 1556/3X Lampholder for Mini-pack fittings

GB 1556/1 Lampholder for Nomad fittings



G T1281/3
Three way terminal block. Each way will accept one 2.5sq mm cable or two 1.5sq mm cables together.



AS 4600 Pattress block cover for ceiling mounted New Arrow Slim fittings.

Replacement control gear for 240V 50Hz supply

Tube size	Fitting	Choke	Capacitor	Starter Switch
8W 12in	Minipack	1—CD8	—	1—155/100
13W 21in	Minipack	1—CD13	—	1—155/100
30W 3ft	New Arrow Slim AS 30	1—CJ30	—	1—155/400
50W 5ft	New Arrow Slim AS 50	1—CJ50	1—G C2229	1—155/501
50W 5ft	New Arrow Slim ASQ50	1—BJ50	1—G C2368	—

Invincible range is the name given to a selection of fittings each of which has been carefully designed to ensure satisfactory performance under certain arduous service conditions. The range comprises the following fittings:

LU Series 1:33

This diffuser fitting is resistant to numerous adverse conditions. Suitable applications would be certain chemical laboratories, pickle factories and food factories. It is completely enclosed with a GRP canopy and a plastic enclosure which is simply clipped into position.

LV Series 1:34

A vapourproof fitting, resistant to corrosion by water vapour, highly humid conditions, certain chemicals, etc., and suitable for use in food factories, storage bays and general conditions where frequent washing is required. (This fitting is not jetproof.) The relamping features are of extreme importance. Completely enclosed single or twin tube opal enclosure.

LW Series 1:35

This design has been fully tested to international specifications for corrosion resistant, rainproof and dustproof fittings. When used in conjunction with the plastic cylinders a stronger fitting results, resisting mechanical damage. These cylinders also enable the fitting (coupled with the necessary low temperature control gear) to be used in temperatures down to -30°C (-22°F).

Suitable applications for this fitting would be certain chemical laboratories, plating shops, pickle factories, food factories, cold stores and general indoor and outdoor applications.

Flameproof 1:36/37

In addition to being certified as suitable for use in all Division 1 areas, having flammable atmospheres falling within the General Industrial Groups II and III, the fitting is also dust-tight and rainproof so it may be used in areas containing explosive dusts or outside e.g. on an oil loading jetty.

Dust-Tight 1:38

This fitting has been designed in accordance with the following requirements:

- a) British Standard Specification No. BS.20:1964 Class 1 construction for Outdoor Pendant use.
- b) Jetproof to BS.3820 Clause 18 (iii)
- c) Dust-tight to BS.3820 Clause 18 (iv)

Suitable applications for these fittings would be flour mills, certain laboratories, food factories and areas which are frequently hosed down. It may also be pressurised.

Food Factory 1:39

Suitable for applications where hygiene is of the utmost importance. There are no crevices to harbour dirt or dust and the enclosing acrylic prevents any possible danger in the event of a lamp breaking.

For damp and sometimes humid places such as abattoirs and bottling plants, paper mills and laundries. The fitting is sealed by a neoprene gasket to prevent the ingress of steam or moisture and its easily-wiped surfaces make it most suitable for use in awkward, out-of-the-way places.

Directional Floodlight 1:40

This is a versatile fluorescent floodlight for interior use or in protected situations outside. It is available for single- or twin-tube operation with clear or opal laminated glass cover. The fitting is *not* flameproof but could be used for floodlighting garage workshop areas, greasing bays, canopied loading bays, etc.

Under Canopy 1:41

Single or twin-tube fittings for use in sheltered outdoor positions such as multi-storey car parks or shopping precincts.

It will withstand normal humid atmospheres such as fog, but is not non-corrosive and will not withstand conditions such as heavily salt-laden atmospheres indefinitely.

Glendale 1:42

A range of totally enclosed, rainproof, dust-tight, corrosion resistant BASEEFA certified Division 2 fittings (Certificate of Approval No. 72064). All external parts are acrylic, neoprene and stainless steel. 2ft and 5ft single or twin lamp versions are available.

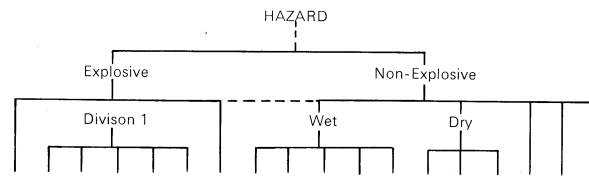
Ribble 1:43

A range of rainproof, dust-tight, corrosion resistant, BASEEFA certified Division 2 fittings (Certificate of Approval No. 72036). Bodies are constructed from P V C coated sheet steel and the tubes are enclosed in plastic cylinders and are held by special centre twist lampholders. 2ft, 4ft and 5ft single or twin lamp versions are available.

Invincible range of lighting equipment

On this page will be found, in tabulated form, an easy guide to the choice of an Invincible Range Fitting for use in most hazardous situations.

This table also indicates fittings which can be easily modified either by the user or by Thorn Lighting Ltd., by negotiation, for use in conditions other than that for which they were designed.



Fitting	Division 0	Group I	Group II	Group IIIa	Group IIIb	Group IV	Division 2	Drip-Proof	Rain-Proof	Jet-Proof	Water-tight	Submersible	Dust-excluding	Dust-Proof	Dust-tight	Corrosive	Temperature	Abuse
FP Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Glendale-Range	B	B	B	B	B	B	•	•	•	•	•	•	•	•	•	D	•	•
LW Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	E
Ribble Range	B	B	B	B	B	B	•	•	•	•	•	•	•	•	•	D	•	•
DT Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	F
Dreadnought Range	A	A	A	A	A	A	•	•	•	•	•	•	•	•	•	D	H	•
Renown Range	A	A	A	A	A	A	•	•	•	•	•	•	•	•	•	D	H	•
Grenville Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	•
M25 J Range (see also Exterior Catalogue)	•	•	•	•	•	•	G	•	•	•	•	•	•	•	•	•	D	•
Bulkhead Range (see also Exterior Catalogue)	A	A	A	A	A	A	•	•	•	•	•	•	•	•	•	D	•	•
LU	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	GE	•
LV Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	•	•
FF Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	F	•	•
UC Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	GE	•
DF Range	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MCF Bulkhead (see Exterior Catalogue)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	•	•
GLS Bulkhead (see Exterior Catalogue)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	•	•
GLS Wellglass (see Exterior Catalogue)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	D	•	•
Submersible (G) (Special)	A	A	A	A	A	A	•	•	•	•	•	C	•	•	•	D	•	•

- A When pressurised
- B With small modifications to make suitable for pressurisation
- C To agreed depths
- D Dependent on corrosive agent
- E Available for use down to -30°C (-22°F)
- F Special finishes can be supplied by negotiation
- G To special order
- H Cold temperature or with GLS lamps up to 50°C

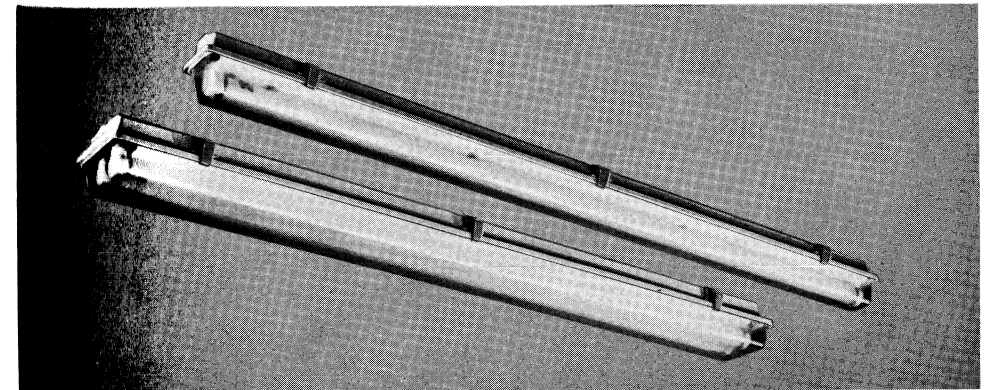
Invincible LU corrosion-resistant fittings

This corrosion-resistant GRP fitting is suitable for any application where excessive humidity is present, such as swimming baths, slaughter houses, breweries, or where corrosive elements are involved, such as some plating shops, dye works, chemical works or where fittings are used outdoors. The GRP body has bushes moulded in the back to receive the gear tray. The components, and brackets are

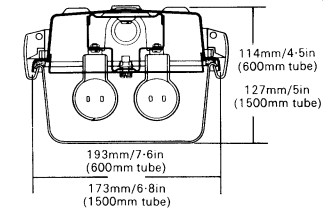
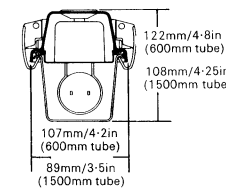
provided at each end to support the lampholders. These same brackets provide fixing for a metal reflector to enclose the gear. The lamps are enclosed with a vacuum-formed plastic cover which is supported from the GRP canopy by means of injection moulded brackets secured against the edge of the canopy. A gasket is positioned between the canopy and cover to form an effective seal. The plastic cover is held firmly against the gasket by six

plastic toggles (four on the 600mm/2ft) which engage under the lip of the plastic cover. These toggles are captive on the canopy. All fittings are for 240V 50Hz. Details of fittings for other supplies are available on application.

These fittings comply fully with BS.3820:1964 for categories Class IIA, rainproof, dustproof, outdoors and chemically corrosive (except for 600mm/2ft which are not dustproof).



LUD R2065 LUD R1065



RANGE

Complete fitting				Components		Dimensions					
Nominal length	Rating	No. of tubes	Circuit	Catalogue no.	Enclosure Catalogue no.	Length mm	in	Weight (incl. tubes) kg	lb	Fixing centres* mm	in
600	20W	One	QS	LUD Q1020	LUD 12	711	28	3.4	7.5	500	19.7
600	20W	Two	QS	LUD Q2020	LUD 22	711	28	4.4	9.7	500	19.7
1500	65W	One	RS	LUD R1065	LUD 15	1594	62.8	6.9	15.3	610	24
1500	65W	Two	RS	LUD R2065	LUD 25	1594	62.8	9.8	21.7	610	24

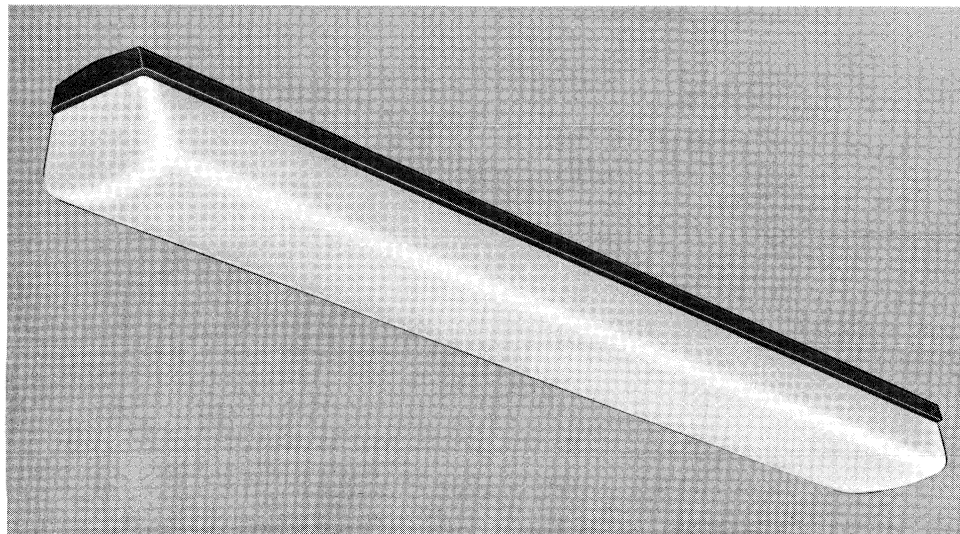
*Fixing holes: 600mm/2ft fitting, 6.4mm/0.25 in dia, clear
1500mm/5ft fitting, 25mm/1 in dia, clear fitted with grommet to take 20mm/0.75 in conduit

Invincible LV corrosion-resistant fittings

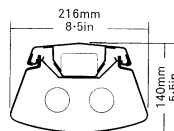
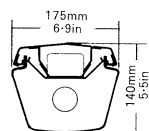
This fitting is designed for use in the many adverse atmospheric conditions where corrosive fumes and water vapour prevent the use of conventional fittings. The fitting is sealed against these extraneous conditions by a wiper gasket between the plastic-coated steel canopy and the opal plastic enclosure. A concealed quick release catch is used to attach the enclosure to the canopy, the wiper gasket eliminating any need to clamp these two items together, thus relieving the enclosure of all strain.

The lamps are fitted into the enclosure bowl, minimising any possibility of broken glass falling from the fitting in the event of lamps being broken during maintenance. All internal metal parts, including the removable control gear tray, are specially coated to withstand these adverse conditions. Eye bolts are provided on the back of the channel to receive a male hook attached to either a 19mm/0.75in rod or chain with consumer hooks. Chain or rod suspension only is recommended for this fitting.

Mains entry is via a cable gland in back of fitting using three-core cable. Suspensions must be a minimum of 76mm/3in long to obtain access to the enclosure release mechanism on the back of the fitting. All fittings are for 240V 50Hz. Details of fittings for other supplies are available on application. These fittings comply fully with BS.3820:1964 for categories Class I, drip-proof, dustproof, indoors, high humidity and chemically corrosive.



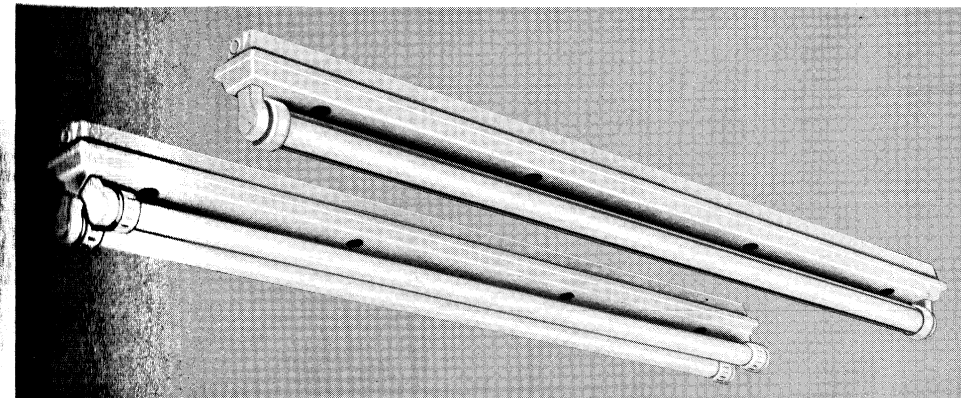
LVD/R2065



RANGE

Complete fitting				Components		Dimensions		
Nominal length		Rating		Enclosure Catalogue no.	Batten Catalogue no.	Length	Weight (incl. tubes)	Fixing centres
mm	ft	Rating	Circuit	no.	no.	mm	kg	mm
1500	5	65W Single	RS	LVD/R1065	LVD 15	LV R1065	13.3 29.3	610 24
1500	5	65W Twin	RS	LVD/R2065	LVD 25	LV R2065	17 37.6	610 24

Invincible LW corrosion-resistant fittings



LWM/R2065 and LWC/R1065

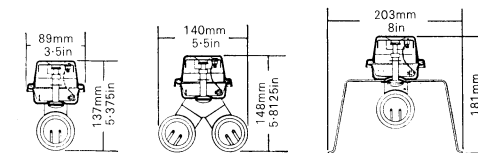
Fixing centres are by 20mm/0.75 in dia. conduit hook, etc., into the top elliptical grommeted holes for either imperial or metric suspension centres. Suitable washers and nuts must be used on both sides of the grommet to achieve an adequate seal.

This range of fittings is designed to combat the most arduous atmospheres. Some fittings in this range are designed to withstand conditions of high humidity and temperatures down to -30°C (-22°F) special low temperature control gear is used for operation at these temperatures and a double walled cylinder, LWD 15, is necessary. The body is moulded in two halves from glass reinforced plastic, each half screwed together against a neoprene gasket with four nylon screws to form a joint which is proof against most hostile atmospheres.

The lamps are fitted into special sealed lampholders which either

grip the glass of the fluorescent tube (LWM types) or grip the outside of a LWC 15 plastic cylinder to maintain a completely weatherproof fitting. Cable entry is achieved via 25mm/1 in dia. grommeted holes in the top or a 20mm/0.75 in dia. grommeted hole at one end of the fitting. The LWC15 plastic cylinder attachment can be provided to give complete mechanical protection to the fluorescent tube. All internal metal parts, including the removable control gear tray, are coated to withstand these adverse conditions during maintenance.

A plastic trough reflector, LWU25, is available to give added protection to the tube and to concentrate the light in the downward plane. All fittings are for 240V 50Hz. Details of fittings for other supplies are available on application. Fully Rainproof, Dustproof and Corrosion-resistant to BS.3820:1964.



RANGE

Complete fitting				Components		Dimensions			
Nominal length		Rating		Circuit	Plastic cylinder or lampholder ring assembly Catalogue no.	Batten (less lampholder ring) Catalogue no.	Length	Weight (incl. tubes)	Fixing centres
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	kg	mm
1500	5	65W Single	RS	LWM/R1065	AME M6116	LW R1065	1587 62.5	8.1 17.8	610 24
1500	5	65W Twin	RS	LWM/R2065	AME M6116 x 2	LW R2065	1587 62.5	10.8 23.7	610 24
1500	5	65W Single	RS	LWC/R1065	LWC 15	LW R1065	1587 62.5	9 19.8	610 24
1500	5	65W Twin	RS	LWC/R2065	LWC 15 x 2	LW R2065	1587 62.5	12.5 27.7	610 24
1500	5	65W Single	SS	LWM/S1080†	AME M6116	LW S1080	1587 62.5	8.1 17.8	610 24
1500	5	65W Single	SS	LWC/S1080*	LWC 15	LW S1080	1587 62.5	9 19.8	610 24
1500	5	65W Single	SS	LWD/S1080‡	LWD 15	LW S1080	1587 62.5	10.1 22.3	610 24

† Suitable for temperatures ranging between 5°C (41°F) and -5°C (23°F) at 240V only [15°C (59°F) for short periods].

‡ Suitable for temperatures ranging between 5°C (41°F) and -10°C (14°F) at 240V only [15°C (59°F) for short periods].

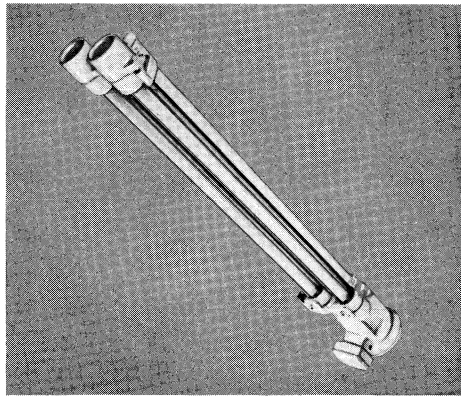
§ Suitable for temperatures ranging between 5°C (41°F) and -30°C (-22°F) at 240V only [15°C (59°F) for short periods].

¶ Suitable for use in an ambient temperature up to 40°C (104°F).

†† The (single) glass tubes (MCAIU) are recommended for use with these fittings.

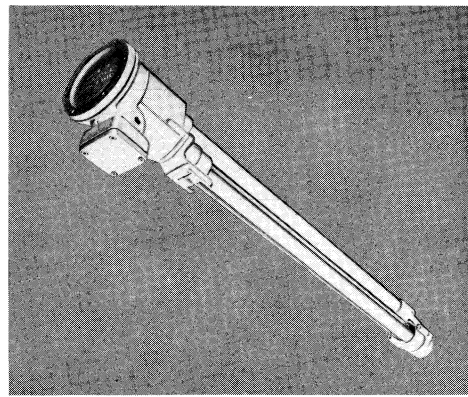
‡‡ LW fittings incorporating a plastic cylinder (LWC 15) have been approved by H.M. Factory Inspectorate for use in Division 2 areas.

§§ The trough reflector, Catalogue no. LWU 25, is available for above fittings, single and twin tube.



MoP Certificate no. 6055, for groups II, III

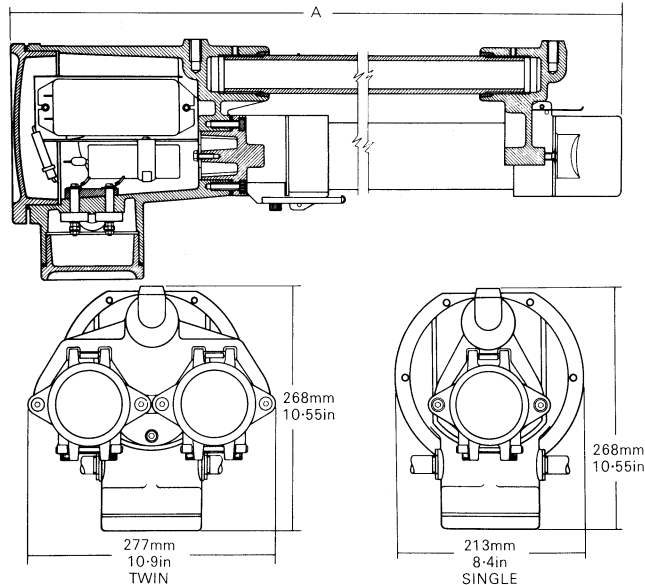
Temperature range Z at ambient temperature specified on fitting. The design comprises cast aluminium end boxes rigidly supported by a steel connecting tube. The main casting incorporates switchless control gear, on a removable tray, for either single or twin tube operation and also an underslung mains cable entry to facilitate installation. The remote end casting is removable, yet fully captive, for relamping purposes.



FP 2685

All visible joints are gasketed as necessary to ensure that the fitting is dust-tight and weatherproof. All external screws are in stainless steel and have socket heads. Maintenance of the fitting for relamping is either from one end or below and, if required, the glass tube assembly or gear tray can be removed completely without disturbing the incoming mains supply. 2 x 20mm entries are standard but

alternative entries can be supplied to special order. An all white exterior finish is applied to the fitting after assembly. Reflectors with or without wire guards are available. All fittings are for 240V 50Hz. Details of fittings for other supplies are available on application. The fittings comply fully with BS.229:1957; BS.889:1965; and BS.3820:1964 rainproof and dust-tight.



RANGE

Complete fitting				
Nominal tube length				
mm	ft	Rating	Circuit	Catalogue no.
600	2	40W Single	QS	FP 1240
600	2	40W Twin	QS	FP 2240
1000	4	40W Single	RS	FP 1040
1000	4	40W Twin	RS	FP 2040
1200	5	65W Single	RS	FP 1065
1200	5	65W Twin	RS	FP 2065
1800	6	85W Single	RS	FP 1685
1800	6	85W Twin	RS	FP 2685

OPTIONAL EXTRAS AND SPARES

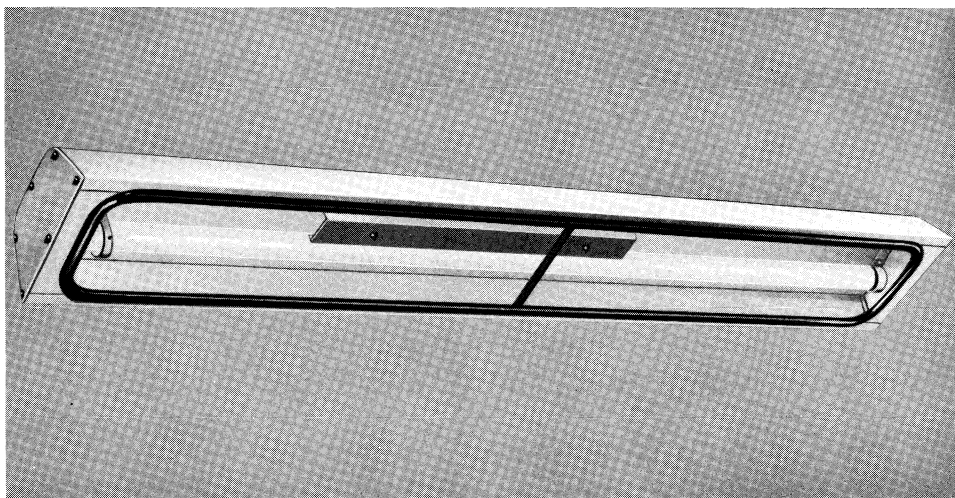
Catalogue no.	Description
FP 12	600mm/2ft Glass tube assembly
FP 14	1200mm/4ft Glass tube assembly
FP 16	1500mm/5ft Glass tube assembly
FP 18	1800mm/6ft Glass tube assembly
FP 22	600mm/2ft Wire guard
FP 24	1200mm/4ft Wire guard
FP 26	1500mm/5ft Wire guard
FP 28	1800mm/6ft Wire guard
FP 22	600mm/2ft Reflector
FP 24	1200mm/4ft Reflector
FP 26	1500mm/5ft Reflector
FP 28	1800mm/6ft Reflector
FP 4800	Adjustable suspension bracket
FP 4801	20mm/3/4" ET flameproof plug
FP 4802	13mm/1/2" Whitworth eye bolt
FP 4803	Gear cover gasket
FP 4804	Terminal cover gasket
FP 4808	Glass tube gasket
FP 4808	Adaptor gasket

DIMENSIONS

Catalogue no.	Dimension A				Approx. weight (incl. tube)		Fixing centres	
	length	width	length	width	kg	lb	mm	in
FP 1240	971	38.2	212	8.4	17	37.5	690	27.2
FP 2240	971	38.2	278	10.9	22.7	50	690	27.2
FP 1040	1681	62.2	212	8.4	23.9	52.7	1300	51.2
FP 2040	1681	62.2	278	10.9	28.8	63.4	1300	51.2
FP 1065	1882	74.1	212	8.4	26.3	57.9	1601	63
FP 2065	1882	74.1	278	10.9	32.1	70.8	1601	63
FP 1685	2147	84.5	212	8.4	29	64	1866	73.5
FP 2685	2147	84.5	278	10.9	35.4	78	1866	73.5

With reflector width of all sizes becomes 303mm(11.9in)
With reflector and wire guard width of all sizes becomes 328mm(12.9in)

mm	ft	Additional Reflector weight		Additional Wire guard weight	
		kg	lb	kg	lb
600	2	2.04	4.5	0.45	1
1200	4	4.08	9	1.18	2.6
1800	6	4.99	11	1.5	3.3
1800	6	6.9	13	1.82	4



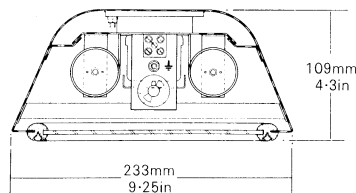
DTB/65

The housing, which is common either to one or two lamp fittings, consists of an inverted trough shape with sloping sides to discourage the collection of dust. Into the bottom surface is attached a clear plastic window by means of a special gasket to form a dust-tight, jetproof and vapour-proof seal. One end of the fitting is permanently sealed and the other end has a removable plate, normally held in position by six captive screws. This plate is suitably gasketed to maintain the 'proofness' of the fitting. The housing is manufactured in sheet steel and, following a thorough rust-proofing process, is finished with high quality white acrylic paint. External screws, etc., are in stainless steel. The reflector/gear tray assembly for either one or two 1500mm/5ft 65W lamps slides in from one end

and is fitted with mains terminal block (clamping type), earth point and circuit fuse which are easily accessible when the end plate of the housing is removed. Single and twin lamp reflector/gear assemblies are completely interchangeable. Suspension is normally to the stainless steel hooks provided, at 1410mm (55.5in) centres, but fittings can be mounted to purpose made brackets by means of 6mm/¼in Whit. screws at the same centres. Provision is made in the fitting for mains wiring to be looped in and out if required through 2 x 20mm holes adjacent to one suspension point. The method of installation is such that for normal servicing it is not necessary to remove the mains wiring from the fitting.

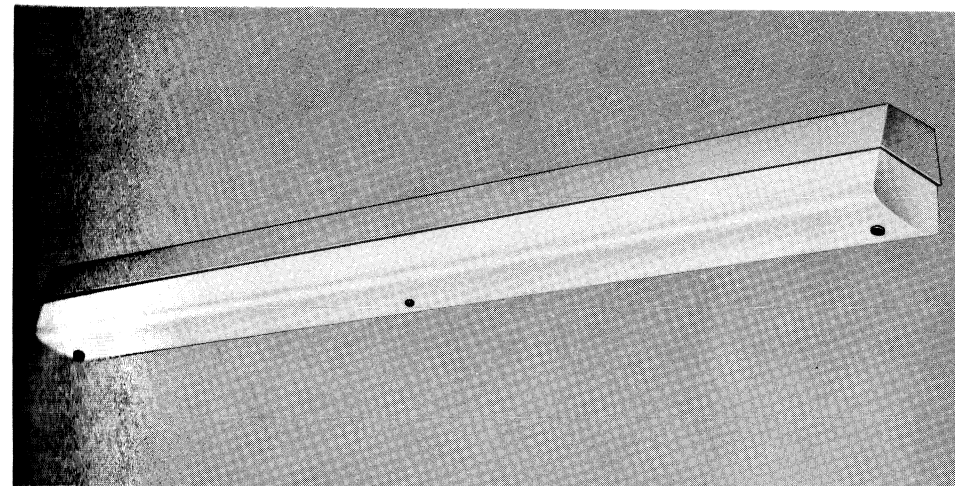
All fittings are suitable for 240V 50Hz supplies. Fully Jet-proof and Dust-tight to B.S.3820:1964.

Note: Single tube version may be used up to an ambient temperature of 40°C—Twin tube to 25°C.



RANGE

Complete fitting					Components			Dimensions					
Nominal length	Rating		No. of tubes	Circuit	Catalogue no.	Enclosure Catalogue no.	Gear tray Catalogue no.	Length	Weight (incl. tubes)		Fixing centres		
mm	ft	Rating						mm	in	kg	lb	mm	in
1500	5	65W	One	RS	DTB/65	DTB 25	DT 65	1562	61.5	15.7	34.8	1410	55.5
1500	5	65W	Two	RS	DTB/265	DTB 25	DT 265	1562	61.5	18.4	40.7	1410	55.5

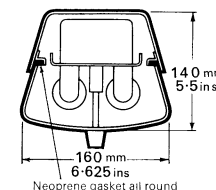


FFD 265

The fitting comprises a heavy gauge sheet metal housing, with flush seam welded ends, degreased and bonded, then given a high quality white plastic finish. A 3.2mm/0.125in thick 040 opal plastic closure with robustly constructed 08B white plastic rebated ends follows the tubes. The housing, with closure in position, has a smooth exterior to minimize the collection of moisture or dirt. The plastic closure follows

the shape of the housing metal work which is designed to overlap the diffuser and act as a water-shed. The closure is held in position by three captive nylon screws, and seats firmly on to a neoprene gasket which is cemented to an internal continuous channel inside the housing. The control gear is mounted on the upper side of a reflector gear tray and spring loaded bi-pin lampholders are mounted to the under side of this

tray. Wiring is PVC insulated, colour coded, and terminates in a three-way fused socket which fits a three-pin plug earthed to the inside of the main fitting housing. The control gear tray with gear, wiring and lampholders is removable as a complete unit by loosening three fixing screws, removing the tray and unplugging. This fitting is for 240V 50Hz. Details of fittings for other supplies are available on application.

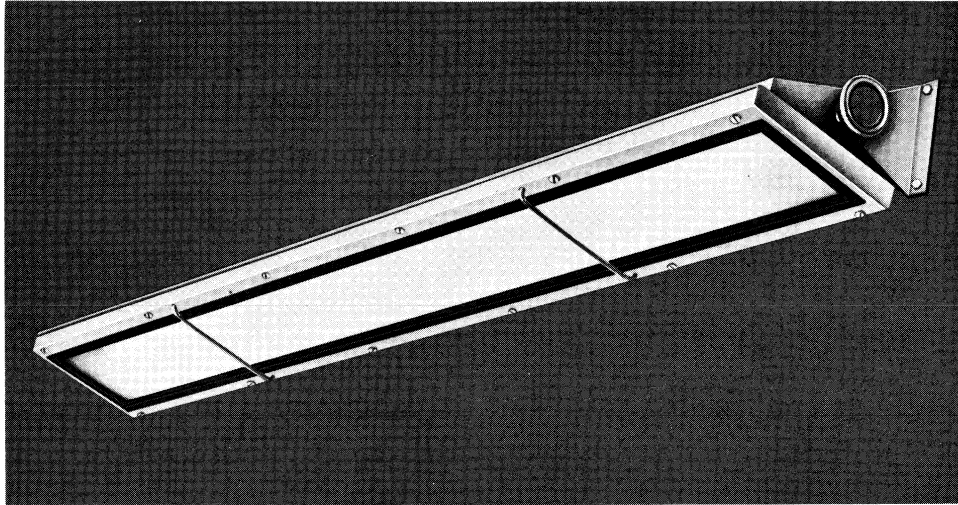


RANGE

Complete fitting					Spare Parts		Dimensions		Weight		Fixing centres	
Nominal length	Rating		No. of tubes	Circuit	Catalogue no.	Enclosure Catalogue no.	Length	Weight (incl. tubes)		Fixing centres		
mm	ft	Rating					mm	in	kg	lb	mm	in
1500	5	65W	Two	RS	FFD 265	FFD 25	1613	63.5	15.3	33.7	610	24

Small diameter conduit clearance holes are provided for suspension and mains supply entry

Invincible DF Directional floodlight fittings

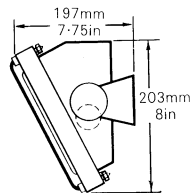


DFO 65

For some floodlighting applications. Not suitable for certified flammable areas. Zinc-coated steel finished grey stove enamelled. Supplied with

two fixing brackets, allowing 100° pivoting. These fittings comply fully with BS.3820: 1964 for Class 1, drip-

proof, indoor, normal atmospheres. These fittings are for 240V 50Hz. Details of fitting for other supplies are available on application.



RANGE

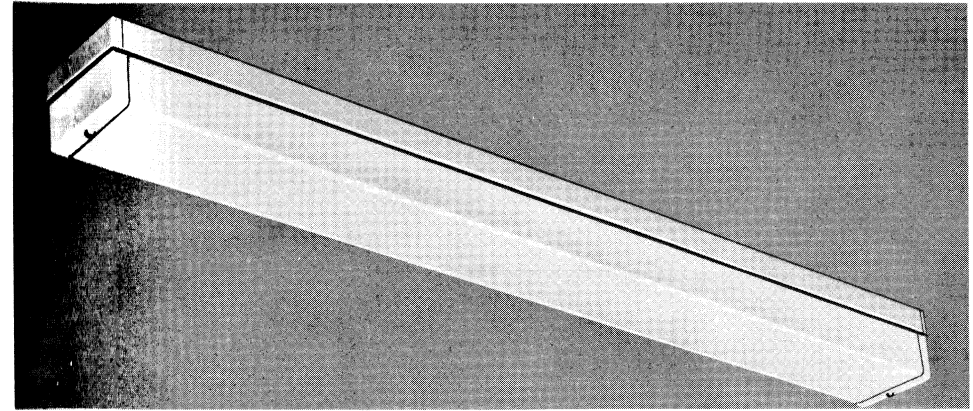
Complete fitting			Spare Parts			Dimensions			
Nominal length			No. of tubes	Circuit	Catalogue no.	Enclosure Catalogue no.	Length	Weight (incl. tubes)	Fixing centres
mm	ft	Rating					mm	kg	mm
1500	5	65W	One	RS	DFG 65*	DFG 25*	1753 69	17.9 39.6	1718 67.6†
1500	5	65W	Two	RS	DFG 265*	DFG 25*	1753 69	20.2 44.7	1718 67.6†
1500	5	65W	One	RS	DFO 65†	DFO 25†	1753 69	17.9 39.6	1718 67.6†
1500	5	65W	Two	RS	DFO 265†	DFO 25†	1753 69	20.2 44.7	1718 67.6†

* Clear laminated glass

† Opal laminated glass

‡ Two holes at 108mm/4.25in centres and 9.5mm/0.375in diameter

Invincible UC Canopy Fitting



UCD.265

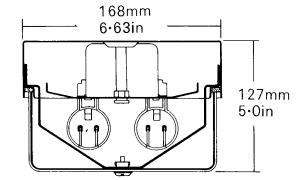
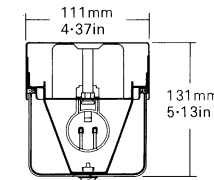
This fitting is primarily designed for under canopy, semi-sheltered locations, such as multi-storey car parks and loading bays. It is also suitable for industrial kitchens and canteens.

The frame is Zinc coated steel, finished in a Stove enamelled grey paint which gives additional protection to the metal work.

The enclosure and endcaps are manufactured from Opal plastic which gives an overall pleasing visual aspect. The total enclosure is achieved by simply tightening a fixing screw situated in each end cap. Maintenance is facilitated by mounting all gear on an easily removable gear tray.

All fittings are suitable for 240V 50 Hz supplies. Other voltages on application.

(This fitting is not designed for use in corrosive atmospheres, e.g. salt laden)

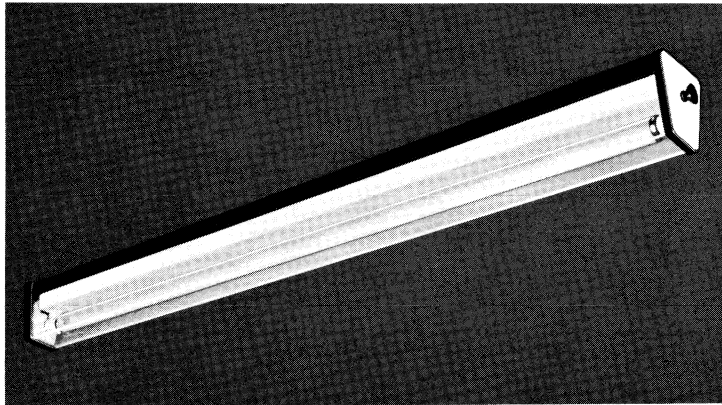


RANGE

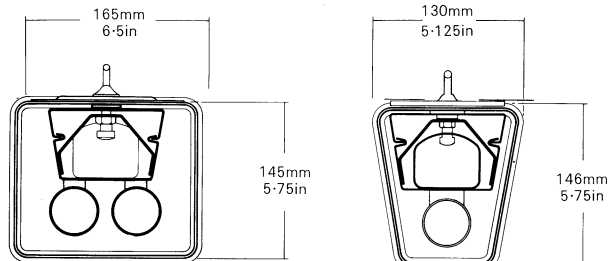
Complete fitting			Spare Parts			Dimensions			Weight		Fixing centres	
Nominal length			No. of tubes	Circuit	Catalogue no.	Diffuser Catalogue no.	Length		(inc. Tubes)			
mm	ft	Rating					mm	in	kg	lb	mm	in
1500	5	65W	One	RS	UCD.65	UCD.15	1583	62.4	8.8	19.4	610	24
1500	5	65W	Two	RS	UCD.265	UCD.25	1583	62.4	13.1	28.8	610	24

Glendale Corrosion Resistant fittings

Division 2



FGSB 65

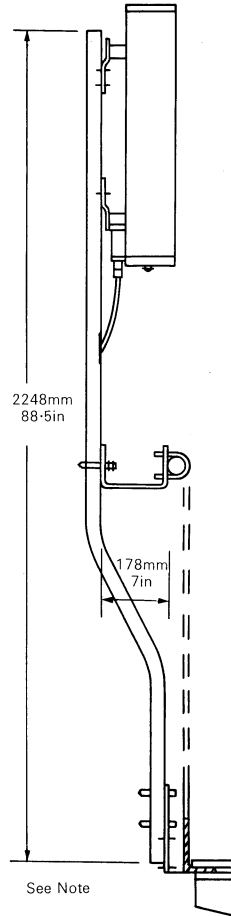


BASEEFA certified fittings for Division 2 areas—rainproof, dust-tight and suitable for use in most chemically corrosive atmospheres. The thick clear acrylic enclosure has stainless steel gasketed end plates, one of which can be removed to withdraw the gear channel for re-lamping. The channel slides on runners on a tray fixed inside the plastic enclosure and is provided with a nylon safety cord. It is locked in position by a thumb screw. All internal parts are rust-proofed and stove enamelled white.

Suspension and Mains Entry
Standard fittings have two eyebolts

Note: Special Mounting Systems are available (see page 1.44)

for suspension and a nylon cable gland suitable for 0.200–0.275 o.d. cables. Fittings with 'SB' in their catalogue numbers have fixing studs and Division 2 conduit boxes, with two 20mm entries, one plug being removable. The fittings can be mounted horizontally or vertically and comply with BS.3820:1964 for categories Class 1 rainproof, dust-tight, outdoors and chemically corrosive. All fittings are suitable for 240W 50Hz supply.
Made to BS.4533-2.1.
BASEEFA certificate No. 72064.



See Note

CATALOGUE NOMENCLATURE
 'A'—cable gland entry
 'B'—Div 2 box 2x3in ET
 'E'—eye bolt mounting
 'S'—stud mounting

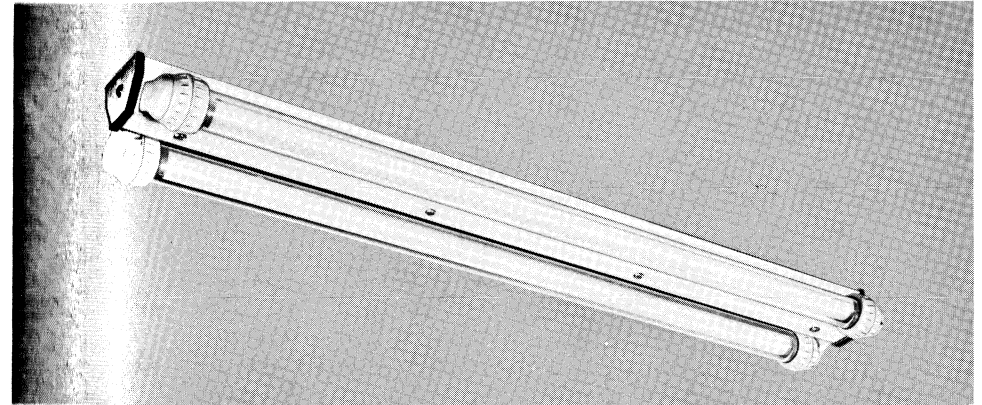
RANGE

Complete fitting					Dimensions						
Nominal length					*Suspension	Length		Approx. weight		Fixing centres	
mm	ft	Rating	Circuit	Catalogue no.		mm	in	kg	lb	mm	in
600	2	20W Single	QS	FGSB20	stud	686	27	6.35	14	457	18
600	2	20W Twin	QS	FGSB220	stud	686	27	7.25	16	457	18
600	2	20W Twin	QS	FGEA 220	eye	686	27	7.25	16	457	18
1500	5	65W Single	RS	FGSB65	stud	1595	62.8	12.7	28	610	24
1500	5	65W Twin	RS	FGSB265	stud	1595	62.8	17.25	38	610	24
1500	5	65W Single	RS	FGEA65	eye	1595	62.8	12.7	28	610	24
1500	5	65W Twin	RS	FGEA265	eye	1595	62.8	17.25	38	610	24

*Suspension and mains entry
 Note: Change of Catalogue numbers with issue of BASEEFA certificate

Ribble Corrosion Resistant fittings

Division 2



FRL 200

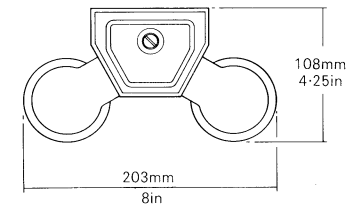
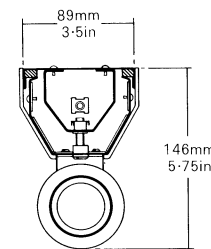
BASEEFA certified fittings for Division 2 areas—rainproof, dust-tight and for use in most chemically corrosive atmospheres. A sheet steel gear tray and ceiling plate are fixed together by four stainless steel captive screws and the joints sealed by urethane gaskets. Neoprene end-caps with PVC coated pressure plates seal the

ends. Tubes are enclosed in 51mm/2in diameter clear acrylic cylinders sealed to the two-pin lampholders by threaded rings and washers to allow relamping without disturbing the seals on the main channel. All visible surfaces of the metal work are PVC coated and of stainless steel.

All visible surfaces of the metal work are PVC coated and of stainless steel.

Mains entry is by a 20mm gland. Two 20mm holes are available for suspension and sealed by nuts, bolts and washers. All fittings are suitable for 240V 50Hz supplies. Other voltages on application.

Made to BS.4533-2.1.
BASEEFA certificate No. 72036.



RANGE

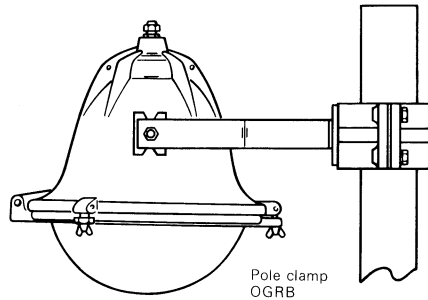
Complete fitting					Dimensions						
Nominal length					*Suspension	Length		Approx. weight		Fixing centres	
mm	ft	Rating	Circuit	Catalogue no.		mm	in	kg	lb	mm	in
600	2	20W Single	QS	FRL 20	stud	661	26	4.3	9.5	457	18
600	2	20W Twin	QS	FRL 220	stud	661	26	6.35	14	457	18
1500	4	40W Single	QS	FRL 40	stud	1271	50	6	13.25	610	24
1500	4	40W Twin	QS	FRL 240	stud	1271	50	8.28	18.25	610	24
1500	6	65W Single	RS	FRL 65	stud	1576	62	8.15	18	610	24
1500	6	65W Twin	RS	FRL 265	stud	1576	62	11.6	25.5	610	24

*Suspension and mains entry
 Note: Change of Catalogue numbers with issue of BASEEFA certificate

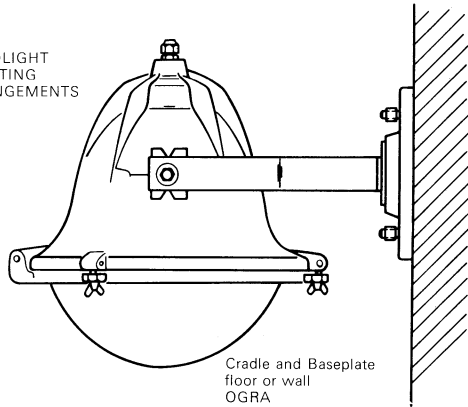
Division 2 pole mounting systems

Div 2 Pole mounting systems

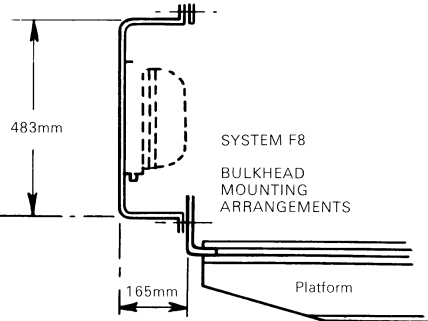
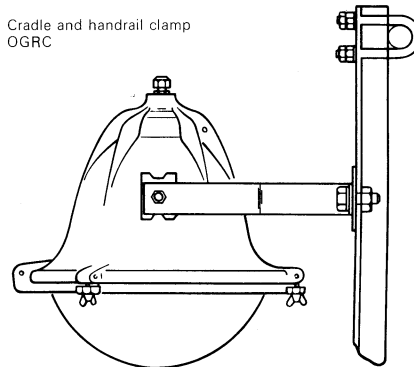
A selection of the most popular mounting systems are illustrated. Systems are available on request to customers specifications and are suitable for a wide selection of fittings from the Invincible Range. Pole systems are manufactured from 42mm o.d pipe and are galvanised after cutting.



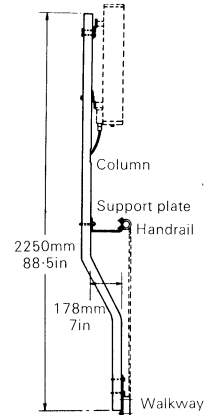
FLOODLIGHT MOUNTING ARRANGEMENTS



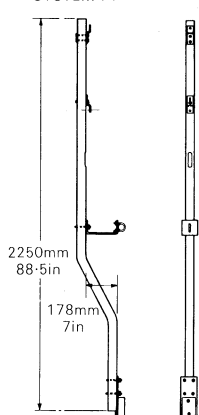
Cradle and handrail clamp OGRB



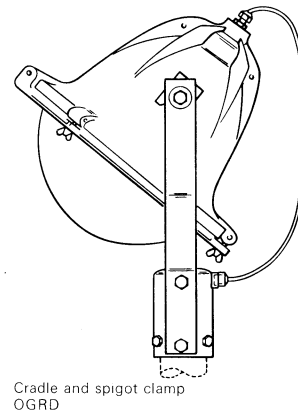
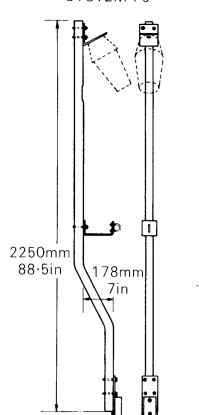
TYPICAL MOUNTING ARRANGEMENT



SYSTEM F1

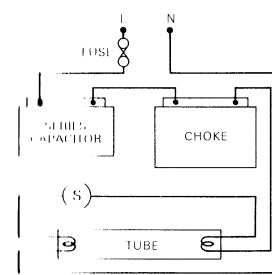


SYSTEM F5

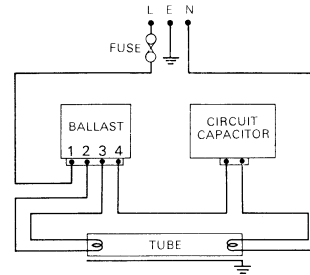


Invincible range accessories and control gear

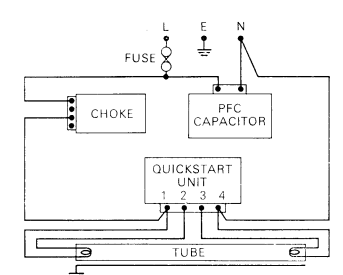
Loading power factor starter switch circuit with cold temperature use series capacitor, for 1500mm/5ft 80W tube



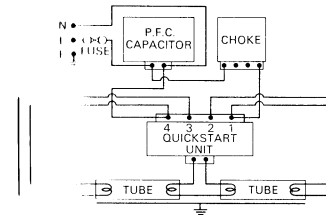
Semi-resonant start circuit for 1800mm/6ft 85W, 1500mm/5ft 65W and 1200mm/4ft 50W tube with series circuit capacitor



Quickstart circuit with PFC capacitor for 600mm/2ft 20W and 600mm/2ft 40W single tube



Quickstart circuit with PFC capacitor for 600mm/2ft 20W and 600mm/2ft 40W twin tube



	Lampholder	Fuse holder	Fuse	Fused Terminal Block	Terminal Block	Quickstart Ballast Choke	Capacitor
LD 01020	G B1548/B	G T1310/X	G T1299	—	G T1281/3	G QS/40, G CU/20	G C2204
LD 02020	G B1548/B	G T1310/X	G T1299	—	G T1281/4 G T1281/2	G QS/220, G CU/40	G C2204
LD R1065	G B1548/B	G T1310	G T1342	—	G T1281/3	G BU/65	G C2220
LD R2065	G B1548/A	—	G T1342	G T1265	—	G BI/65	G C2220
LV R1065	G B1573	—	G T1342	G T1265	—	G BI/65	G C2220
LV R2065	G B1573	—	G T1342	G T1265	—	G BI/65	G C2220
LW R1065	G B1550	G T1310/X	G T1342	—	G T1316/3 G T1317/3	G BU/65	G C2220
LW R2065	G B1550	G T1310/X	G T1342	—	G T1316/3 G T1317/3	G BU/65	G C2220
LW S1080*	G B1551	—	G T1299	G T1265	G T1281/2	G E69229.5	G C2167
FP 1240	G B1573	G T1310/X	G T1299	—	—	G CI/240, G QS/80	G C2222
FP 2240	G B1573	G T1310/X	G T1299	—	G T1281/1	G CI/2240, G QS/2240	G C2222
FP 1040	G B1573	G T1310/X	G T1299	—	G T1281/1	G BU/40	G C2273
FP 2040	G B1573	G T1310/X	G T1299	—	G T1281/1	G BU/40	G C2273
FP 1065	G B1573	G T1310/X	G T1342	—	G T1281/1	G BI/65	G C2220
FP 2065	G B1573	G T1310/X	G T1342	—	G T1281/1	G BI/65	G C2220
FP 1685	G B1573	G T1310/X	G T1342	—	G T1281/1	G BI/685	G C2220
FP 2685	G B1573	G T1310/X	G T1342	—	G T1281/1	G BI/685	G C2220
FD 1065	G B1573	G T1304	G T1342	—	G T1316/2	G BU/65	G C2220
FD 2665	G B1573	G T1304	G T1342	—	G T1316/2	G BU/65	G C2220
FD 2665	G B1548/B	—	G T1342	G A5079	—	G BI/65	G C2220
FD 665	G B1512	—	G T1342	G T1265	—	G BI/65	G C2220
FD 665	G B1512	—	G T1342	G T1265	—	G BI/65	G C2220
FD 2665	G B1512	—	G T1342	G T1265	—	G BI/65	G C2220
FD 2665	G B1512	—	G T1342	G T1265	—	G BI/65	G C2220
FD 665	G B1548/B	—	G T1342	G A5079	—	G BI/65	G C2220
FD 2665	G B1548/B	—	G T1342	G A5079	—	G BI/65	G C2220

* LW S1080 has starter switch, 155/500, and socket, G A50191X included in accessories

Atlantic range

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 - 1:61 Atlantic A4ZB broad open-ended, slotted-top reflector and A4Z four-tube reflector
 - 1:62 Atlantic accessories and replacement control gear
- *Atlas Amalgam tubes offer substantial advantages in the Atlantic range of fluorescent fittings by increasing the Light Output Ratio by between 11% and 22%. Suitable fittings are shown below.
- | | |
|---------------|---------------------------|
| Catalogue no. | Description |
| A4C/A/2685 | Prismatic controller |
| A4D/A/2685 | Opal diffuser |
| A4O/B2685 | Wide opal diffuser |
| A4P/B2685 | Wide prismatic controller |

Catalogue numbers

The catalogue number shows how the fitting is made up and how many packs are used for each complete fitting. Oblique lines indicate separate packs.

Examples:

A4X/2685 is a twin 1800mm/6ft 85W closed-end reflector fitting made up from:

- A4.2685: Twin 1800mm/6ft 85W batten *one pack*
- A4X.26: Metal 1800mm/6ft closed-end slotted reflector *one pack*

A4FAC/B2685 is a twin 1800mm/6ft 85W plain aluminium frame fitting with a prismatic controller insert. It is made up from:

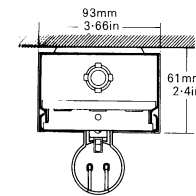
- A4.B2685: Twin 1800mm/6ft 85W batten (with broadly spaced lampholder) *one pack*
 - A4FAC.26: A4FA.26—Plain aluminium frame
 - A4FC.26—Prismatic controller
 - A4.4691—Broad channel cover
- } *all one pack*

First and Second attachment numbers are shown only to indicate catalogue numbers of cartons to expect per fitting, and catalogue numbers for replacement purposes.

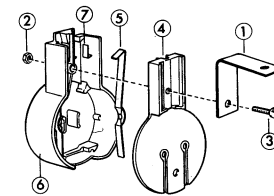
FEATURES

1. **Battens**: the cross section gives an exceptionally strong batten with very clean lines. The 5mm/0.29in ceiling stand-off reduces the effect of ceiling unevenness against the straight batten edge. The impact resistant dark blue* plastic end plates are attached at the factory to give a smart modern appearance to the fitting.
*White ends are available as optional extras
2. **Circuits**: the latest polyester resin filled ballast units are employed in switchless start circuits (no starter switch—reduces maintenance). Capacitors are of standard high quality. Wiring is of the latest metric solid conductor, single core type, insulated with high temperature PVC connected to the components by either push-in connector or pin connectors. The side entry fuse is accessible without touching any part of the fitting or most attachments.
3. **Lampholders**: spring loaded lampholders enable either-end relamping of the fitting. They are mounted on bridge pieces which can be secured to the batten without the use of tools.
4. **Installation**: fittings are suitable for conduit, rod, chain or conduit box mounting (unless detailed otherwise) at normal suspension centres. Alternative mains entry is provided in the centre back of the battens or by a cut-out in each end plate. A heavy duty, large capacity, terminal block is capable of accepting looped 2.5mm² cables (2 x 7/0.29in).
5. **Finish**: high quality acrylic enamel white finish is applied to all spines and reflectors. All diffusers and prismatic controllers are of top quality light stabilised plastic.
6. **Attachments**: two screws operating in sliding cage nuts secure the channel covers and reflectors to the spine through keyhole slots. Most commercial attachments then simply hook or spring on to channel covers or special brackets.

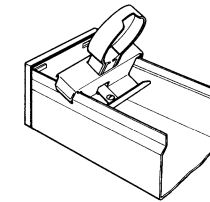
Atlantic features



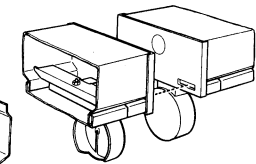
Cross section



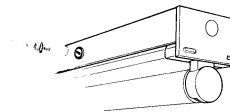
- Lampholders
1. Spring bracket
 2. Full nut
 3. Panhead fixing screw
 4. Cover moulding
 5. Terminal contact
 6. Body moulding
 7. Contact backing plate



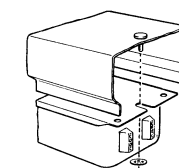
Lampholder assembly



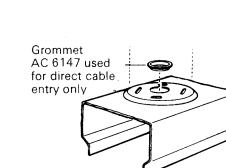
Interlocking plastic end caps



Side entry fuse

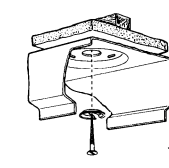


Welded-in screw studs

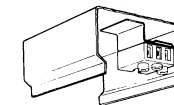


Grommet AC 6147 used for direct cable entry only

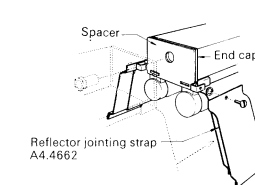
Conduit suspension



Slotted washers

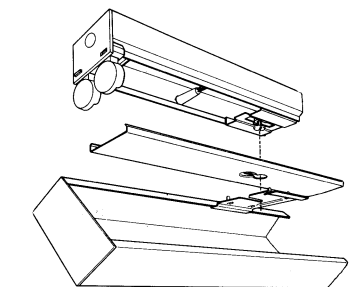


Mains terminal block



Jointing strap assembly

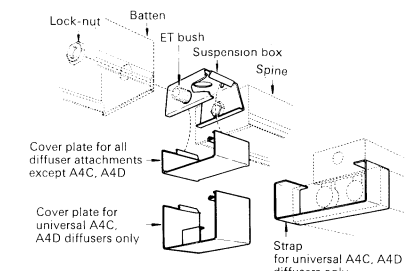
A4.4662 Reflector jointing strap: this attachment is for use when open-ended metal reflectors are being continuously mounted. It closes the gap between adjacent reflectors and ensures perfect alignment when battens are rigidly mounted.



Fast positive attachment fixing

A4.4660: This spacer assembly is available when fixed-end diffuser A4C and A4D fittings are required to be mounted continuously (space between battens: 52mm/2.05in).

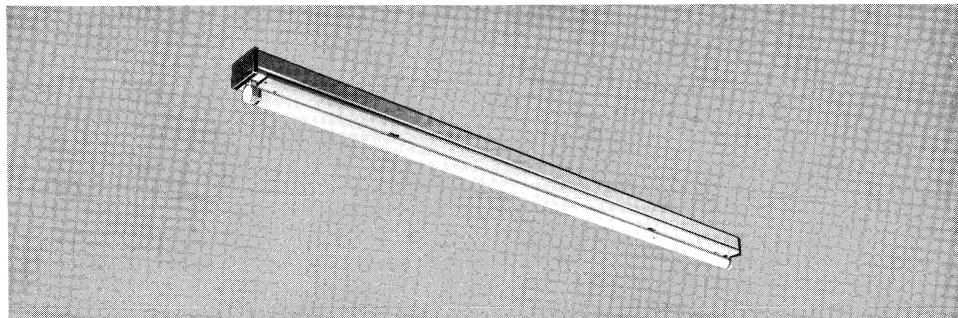
A4.4661: This spacer is available when continuous mounting of diffusers (except A4C and A4D) or closed-end reflectors is required but has no facility for the alignment of adjacent attachments which should be carried out by a manual operation on installation (space between battens: 52mm/2.05in).



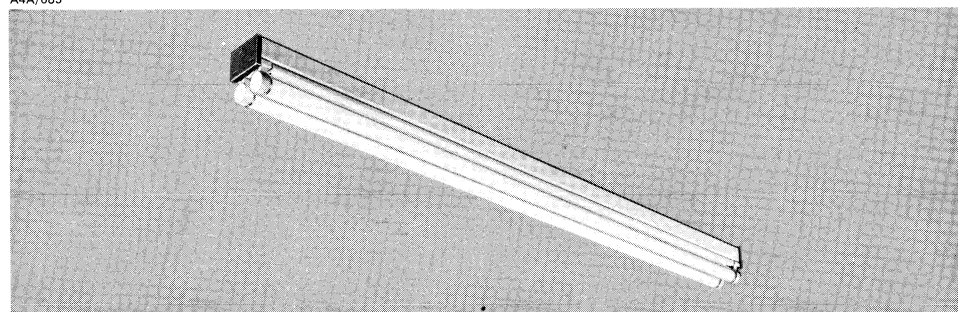
Continuous mounting jointing piece

*End fittings are provided with a suspension hole and small conduit box cluster to help minimize the number of suspension points required (except on 2400mm/8ft four-tube fittings).
*A4.1A/GD/A4.FM attachments are not suitable for continuous mounting with the above spacers.

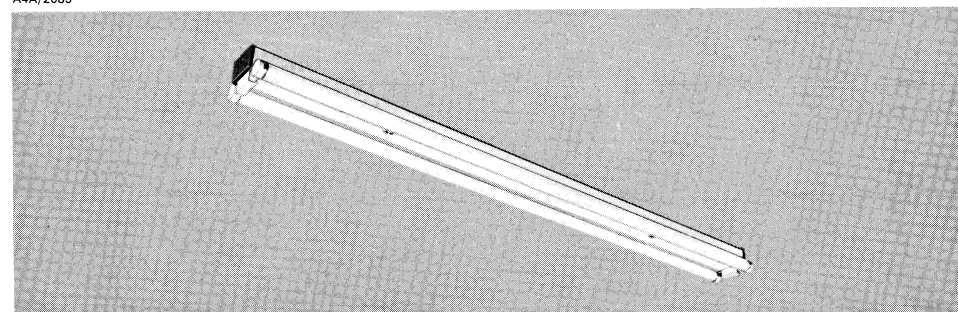
Atlantic basic battens



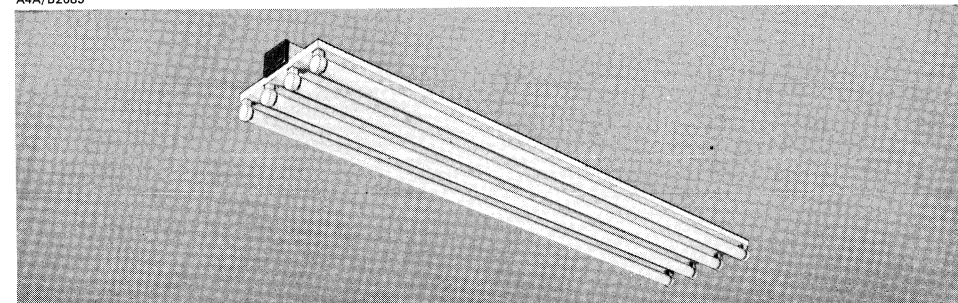
A4A/685



A4A/2685



A4A/B2685



A4B/4685

Atlantic basic battens

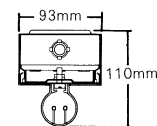
The basic spine plus the series "A" channel cover produces a range of single and twin tube batten fittings in 3ft, 6ft, 5ft, and 4ft lengths.

The 4-tube spines plus the series "B" channel cover produce a range of 4-tube batten fittings which are eminently suitable for use with suspended luminous ceilings.

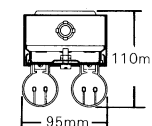
These general-purpose fittings can be used anywhere where an unshielded fluorescent tube is acceptable.

All fittings are suitable for use on 240V 50Hz supplies. Other voltages on application.

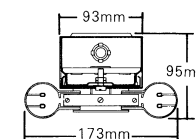
The "A" channel cover may also be used with the twin "B" spine.



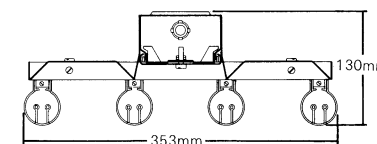
A4A (Single)



A4A (Narrow Twin)



A4A (Broad Twin)

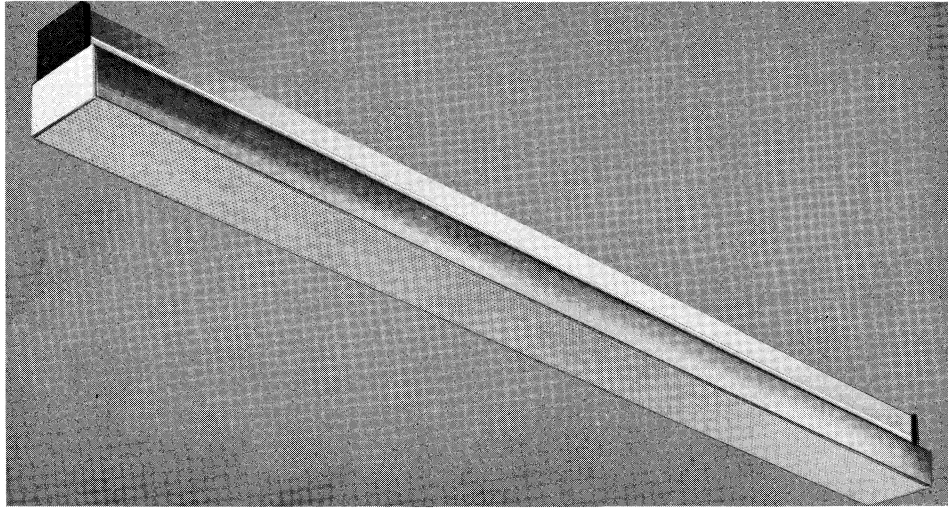


A4B (4-tube side cover reflectors)

RANGE:

Nominal Tube Length	Component Catalogue no.							Dimensions				
	mm	ft	Rating	Circuit	Fitting Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Spine Catalogue no.	o/a Length		Weight	
									mm	in	kg	lb
1200	4	40W	SRS	A4A/40	A4A.24	—	—	A4.40	1241	48-8	4-4	9-7
1200	4	2 x 40W	SRS	A4A/240	A4A.24	—	—	A4.240	1241	48-8	6-2	13-7
1500	5	65W	SRS	A4A/65	A4A.25	—	—	A4.65	1542	60-7	5-4	11-8
1500	5	2 x 65W	SRS	A4A/265	A4A.25	—	—	A4.265	1542	60-7	7-5	16-5
1500	5	2 x 65W	SRS	A4A/B265	A4A.25	—	—	A4.B265	1542	60-7	7-7	17-1
1800	6	85W	SRS	A4A/685	A4A.26	—	—	A4.685	1805	71-1	5-6	12-4
1800	6	2 x 85W	SRS	A4A/2685	A4A.26	—	—	A4.2685	1805	71-1	8-1	17-5
1800	6	2 x 85W	SRS	A4A/B2685	A4A.26	—	—	A4.B2685	1805	71-1	8-2	18-0
1800	6	4 x 85W	SRS	A4B/4685	A4B.46	—	—	A4.4685	1805	71-1	20-4	45
2400	8	85W	QS	A4A/885	A4A.28	—	—	A4.885	2416	95-1	8-5	18-1
2400	8	2 x 85W	QS	A4A/Q2885	A4A.28	—	—	A4.Q2885	2416	95-1	13-7	29-5
2400	8	2 x 85W	QS	A4A/B2885	A4A.28	—	—	A4.B2885	2416	95-1	13-7	29-5
2400	8	4 x 85W	QS	A4B/Q4885	A4B.48	—	—	A4.Q4885	2416	95-1	26-0	58-0
2400	8	1 x 125W	QS	A4A/125	A4A.28	—	—	A4.125	2416	95-1	9-7	21-4
2400	8	2 x 125W	QS	A4A/2125	A4A.28	—	—	A4.2125	2416	95-1	14-2	31-1

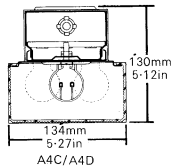
Atlantic A4C and A4D prismatic and opal diffuser



A4C/A/2685

A general purpose prismatic controller A4C and opal diffuser A4D are extruded from clear and opal plastic respectively. The controller has clear glare controlling linear prisms on each side and a fine prismatic pattern embossed in the base. The diffuser has smooth opal sides. Injection moulded white end plates are permanently attached and both the controller and diffuser are suitable for use with either single or

twin (close space) tubes. Brackets are supplied with the attachment to secure it to the batten; these are fixed by the channel cover fixing screws on the batten. Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.



A4C Universal prismatic controller
A4D Universal opal diffuser

RANGE

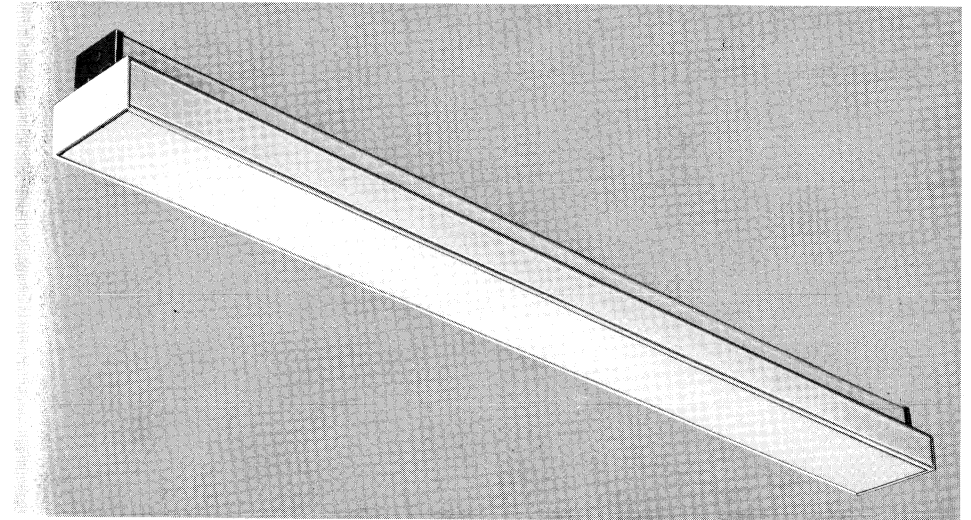
Prismatic Controller

Complete fitting				Components				Dimensions			
Nominal tube length								Approx. weight (incl. tubes)			
mm	ft.	Rating	Circuit	Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Batten Catalogue no.	Overall length mm	Overall length in	kg	lb
1200	4	40W	SRS	A4C/A/40	A4C.24	A4A.24	A4.40	1254	49.4	5.3	11.6
1200	4	2 x 40W	SRS	A4C/A/240	A4C.24	A4A.24	A4.240	1254	49.4	7.1	15.6
1500	5	65W	SRS	A4C/A/65	A4C.25	A4A.25	A4.65	1554	61.2	6.4	14.1
1500	5	2 x 65W	SRS	A4C/A/265	A4C.25	A4A.25	A4.265	1554	61.2	8.5	18.8
1800	6	85W	SRS	A4C/A/685	A4C.26	A4A.26	A4.685	1817	71.5	6.9	15.1
1800	6	2 x 85W	SRS	A4C/A/2685	A4C.26	A4A.26	A4.2685	1817	71.5	9.1	20
2400	8	85W	QS	A4C/A/885	A4C.28	A4A.28	A4.885	2429	95.6	10.1	22.3
2400	8	2 x 85W	QS	A4C/A/Q2885	A4C.28	A4A.28	A4.Q2885	2429	95.6	15.3	33.7
2400	8	125W	QS	A4C/A/125	A4C.28	A4A.28	A4.125	2429	95.6	11.4	25
2400	8	2 x 125W	QS	A4C/A/2125	A4C.28	A4A.28	A4.2125	2429	95.6	15.7	34.7

Opal Diffuser

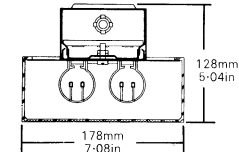
mm	ft.	Rating	Circuit	Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Batten Catalogue no.	Overall length mm	Overall length in	kg	lb
1200	4	40W	SRS	A4D/A/40	A4D.24	A4A.24	A4.40	1254	49.4	5.3	11.6
1200	4	2 x 40W	SRS	A4D/A/240	A4D.24	A4A.24	A4.240	1254	49.4	7.1	15.6
1500	5	65W	SRS	A4D/A/65	A4D.25	A4A.25	A4.65	1554	61.2	6.4	14.1
1500	5	2 x 65W	SRS	A4D/A/265	A4D.25	A4A.25	A4.265	1554	61.2	8.5	18.8
1800	6	85W	SRS	A4D/A/685	A4D.26	A4A.26	A4.685	1817	71.5	6.9	15.1
1800	6	2 x 85W	SRS	A4D/A/2685	A4D.26	A4A.26	A4.2685	1817	71.5	9.1	20
2400	8	85W	QS	A4D/A/885	A4D.28	A4A.28	A4.885	2429	95.6	10.1	22.3
2400	8	2 x 85W	QS	A4D/A/Q2885	A4D.28	A4A.28	A4.Q2885	2429	95.6	15.3	33.7
2400	8	125W	QS	A4D/A/125	A4D.28	A4A.28	A4.125	2429	95.6	11.4	25
2400	8	2 x 125W	QS	A4D/A/2125	A4D.28	A4A.28	A4.2125	2429	95.6	15.7	34.7

Atlantic A4E two-tone diffuser



A4E/A/2685

This compact two-tone extruded plastic controller gives good light control. The sides are in opal to give adequate shielding and freedom from glare, while the base is embossed with a clear prismatic pattern for high efficiency. The controller has permanently attached injection moulded ends and is supported by brackets, supplied with it, which are secured to the channel cover fixing screws onto the batten. For use with twin (close spaced) tubes (or single tube if required). Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.

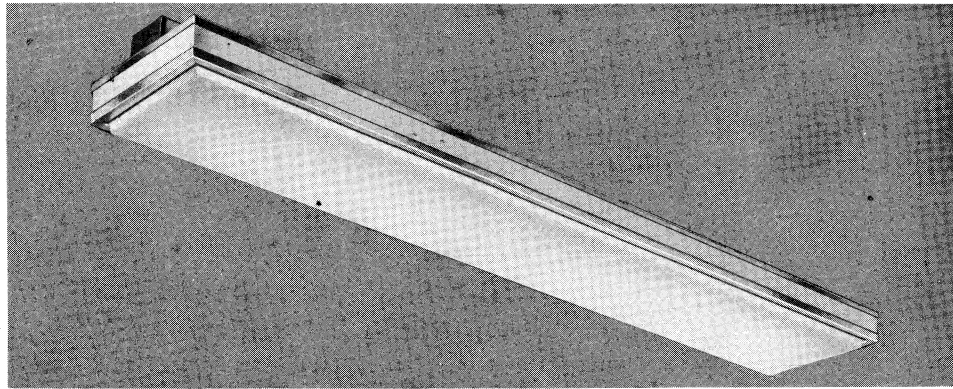


A4E Two-tone diffuser

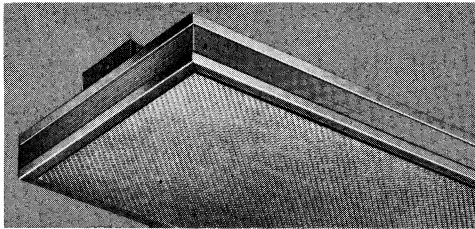
RANGE

Complete fitting				Components				Dimensions			
Nominal tube length								Approx. weight (incl. tubes)			
mm	ft.	Rating	Circuit	Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Batten Catalogue no.	Overall length mm	Overall length in	kg	lb
1200	4	2 x 40W	SRS	A4E/A/240	A4E.24	A4A.24	A4.240	1265	49.8	7.4	16.2
1500	5	2 x 65W	SRS	A4E/A/265	A4E.25	A4A.25	A4.265	1565	61.6	8.9	19.6
1800	6	2 x 85W	SRS	A4E/A/2685	A4E.26	A4A.26	A4.2685	1829	72	9.4	20.7
2400	8	2 x 85W	QS	A4E/A/Q2885	A4E.28	A4A.28	A4.Q2885	2440	96	15.6	34.4
2400	8	2 x 125W	QS	A4E/A/2125	A4E.28	A4A.28	A4.2125	2440	96	16	35.4

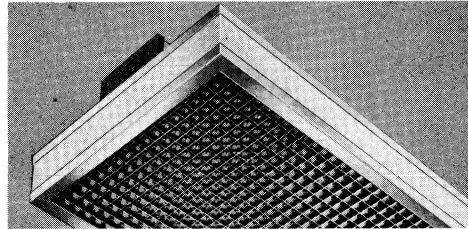
Atlantic A4FA aluminium frame plain trim



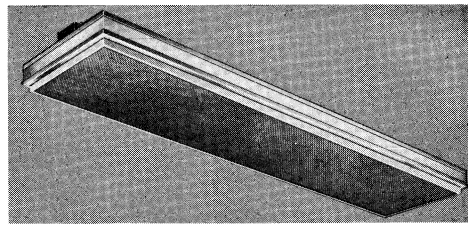
A4FAD/B2685



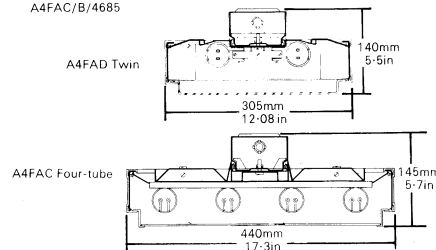
A4FAC/B2685



A4FAL/B2685



A4FAC/B/4685



The satin anodized extruded aluminium frame surrounding the fitting provides precise detailing and a crisp appearance to the fitting.

Into the base of this aluminium frame can be fitted either a metalised louver (L), opal dish (D) or prismatic controller (C) to provide the appearance or light control required.

The attachment hooks onto a standard broad channel cover, using special clips provided, and allows a small percentage of upward light.

A larger version of this aluminium frame attachment is available, for use with four-tube battens, with a dropped prismatic panel framed in opal Z section extruded polystyrene.

Standard fittings are for 230/240V 50Hz.

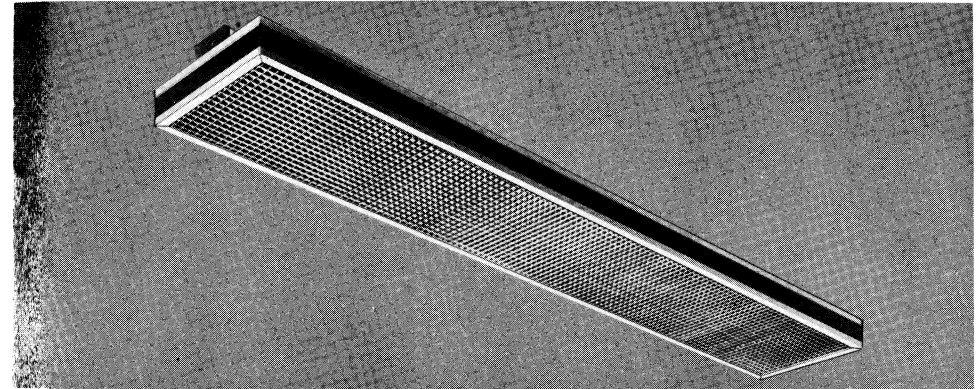
Details of fittings for other supplies are available on application.

RANGE

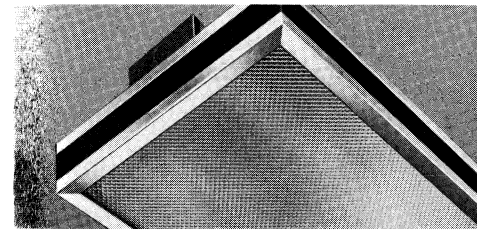
Complete fitting				Components			Dimensions				Approx. weight	
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length					
mm	ft.	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	mm	in	kg	lb
1800	6	2 x 85W	SRS	A4FAC/B2685	A4FAC.26	*	A4.B2685	1829	72	12.6	27.9	
1800	6	4 x 85W	SRS	A4FAC/B/4685	A4FAC.46	A4B.46	A4.4685	1845	72.6	26.3	58	
2400	8	2 x 85W	QS	A4FAC/B2885	A4FAC.28	*	A4.B2885	2439	96	19.3	42.5	
2400	8	4 x 85W	QS	A4FAC/B/Q4885	A4FAC.48	A4B.48	A4.Q4885	2457	96.7	33.1	73	
1800	6	2 x 85W	SRS	A4FAD/B2685	A4FAD.26	*	A4.B2685	1829	72	12.8	28.1	
2400	8	2 x 85W	QS	A4FAD/B2885	A4FAD.28	*	A4.B2885	2439	96	19.3	42.5	
1800	6	2 x 85W	SRS	A4FAL/B2685	A4FAL.26	*	A4.B2685	1829	72	13.2	29.2	
2400	8	2 x 85W	QS	A4FAL/B2885	A4FAL.28	*	A4.B2885	2439	96	20	44.2	

*Channel cover included with 1st attachment.
Overall depth of Twin FAC and FAL is 122mm/4.8in

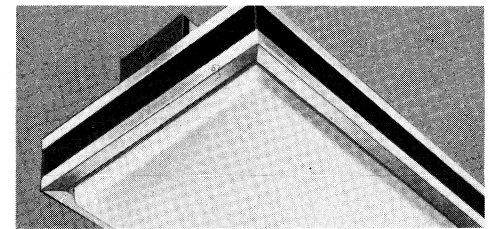
Atlantic A4FH aluminium frame, black hide effect trim



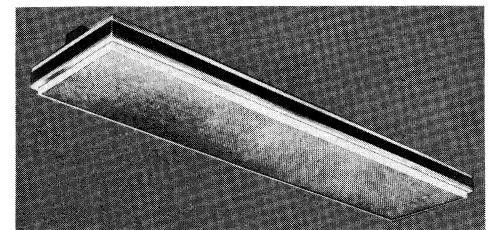
A4FHL/B2685



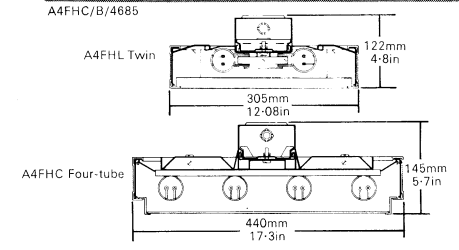
A4FHC/B2685



A4FHD/B2685



A4FHC/B/4685



The satin anodized extruded aluminium frame surrounding the fitting has a simulated black hide trim and provides precise detailing and a crisp appearance to the fitting.

Into the base of the aluminium frame can be fitted either a metalised louver (L), opal dish (D) or prismatic controller (C) as required.

The attachment hooks onto a standard broad channel cover, using special clips provided, and allows a small percentage of upward light.

A larger version of this aluminium frame attachment is available, for use with four-tube battens, with a dropped prismatic panel framed in opal Z section extruded polystyrene.

Standard fittings are for 230/240V 50Hz.

Details of fittings for other supplies are available on application.

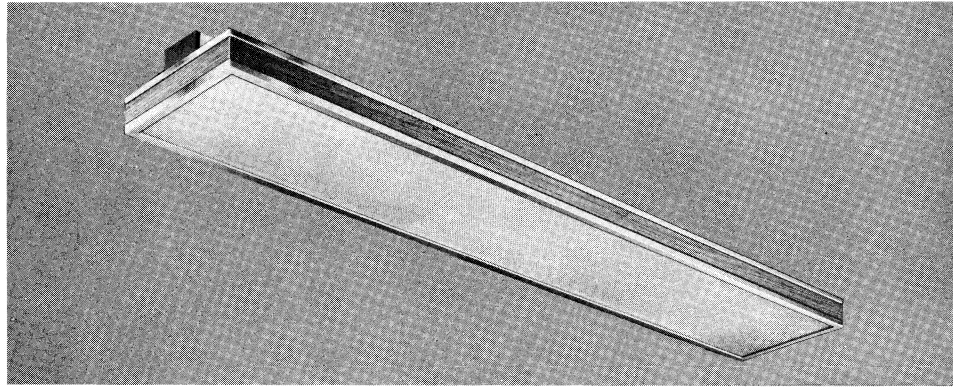
RANGE

Complete fitting				Components			Dimensions				Approx. weight	
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length					
mm	ft.	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	mm	in	kg	lb
1800	6	2 x 85W	SRS	A4FHC/B2685	A4FHC.26	*	A4.B2685	1829	72	12.6	27.9	
1800	6	4 x 85W	SRS	A4FHC/B/4685	A4FHC.46	A4B.46	A4.4685	1845	72.6	26.3	58	
2400	8	2 x 85W	QS	A4FHC/B2885	A4FHC.28	*	A4.B2885	2439	96	19.3	42.5	
2400	8	2 x 85W	QS	A4FHC/B/Q4885	A4FHC.48	A4B.48	A4.BQ4885	2457	96.7	33.1	73	
1800	6	2 x 85W	SRS	A4FHD/B2685	A4FHD.26	*	A4.B2685	1829	72	12.8	28.1	
2400	8	2 x 85W	QS	A4FHD/B2885	A4FHD.28	*	A4.B2885	2439	96	19.3	42.5	
1800	6	2 x 85W	SRS	A4FHL/B2685	A4FHL.26	*	A4.B2685	1829	72	13.2	29.2	
2400	8	2 x 85W	QS	A4FHL/B2885	A4FHL.28	*	A4.B2885	2439	96	20	44.2	

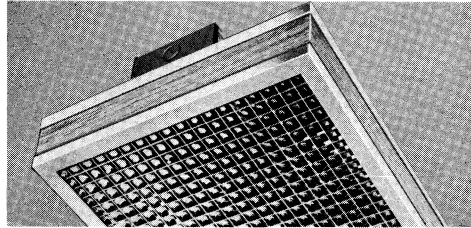
*Channel cover included with 1st attachment

Overall depth of Twin FHC is 122mm/4.8in and of FHD is 140mm/5.5in

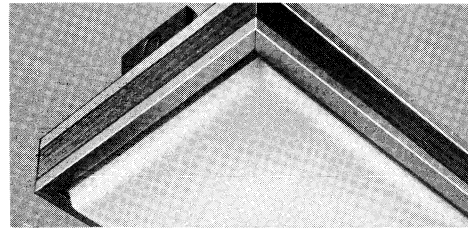
Atlantic A4FT aluminium frame timber effect trim



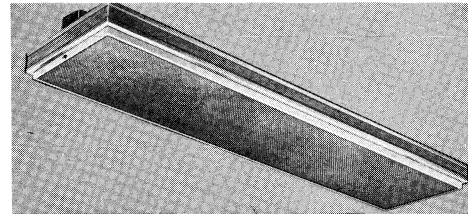
A4FTC/B2685



A4FTL/B2685

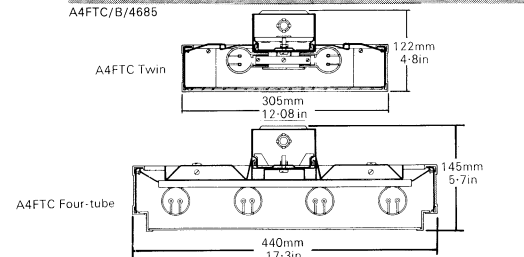


A4FTD/B2685



A4FTC/B/4685

The anodized extruded aluminium frame surrounding the fitting has a simulated timber trim. A metalised louver (L), opal dish (D) or prismatic controller (C) can be fitted to provide the final appearance or light control required. The attachment hooks onto a standard broad channel cover, using special clips provided, and allows a small percentage of upward light. A larger version of this aluminium frame attachment is available, for use with four-tube battens, with a dropped prismatic panel framed in opal Z section extruded polystyrene. Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.



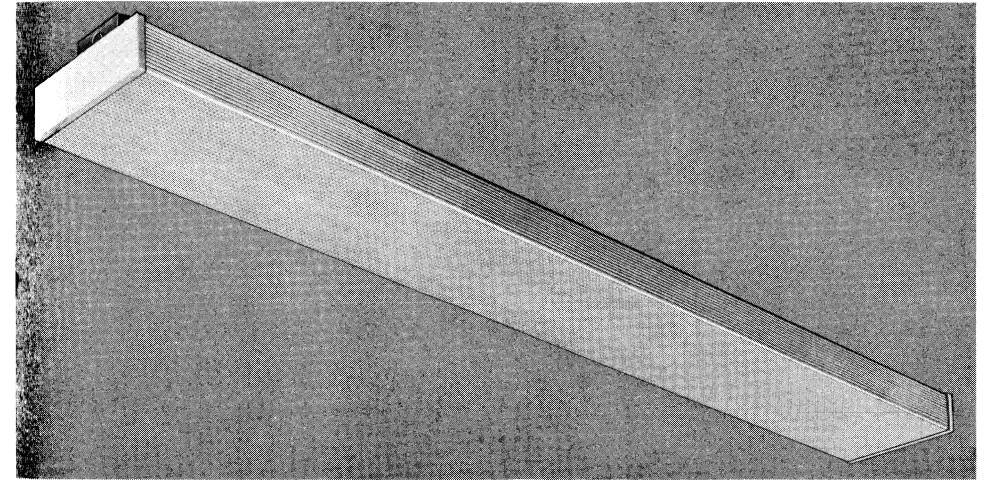
RANGE

Complete fitting				Components			Dimensions		Approx. weight (incl. tubes)		
Nominal tube length	Rating	Circuit	Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Batten Catalogue no.	Overall length				
mm	ft						mm	in	kg	lb	
1800	6	2 x 85W	SRS	A4FTC/B2685	A4FTC.26	*	A4.B2685	1829	72	12.6	27.9
1800	6	4 x 85W	SRS	A4FTC/B/4685	A4FTC.46	A4B.46	A4.4685	1845	72.6	26.3	58
2400	8	2 x 85W	QS	A4FTC/B2885	A4FTC.28	*	A4.B2885	2439	96	19.3	42.5
2400	8	4 x 85W	QS	A4FTC/B/Q4885	A4FTC.48	A4B.48	A4.Q4885	2457	96.7	33.1	73
1800	6	2 x 85W	SRS	A4FTD/B2685	A4FTD.26	*	A4.B2685	1829	72	12.8	28.1
2400	8	2 x 85W	QS	A4FTD/B2885	A4FTD.28	*	A4.B2885	2439	96	19.3	42.5
1800	6	2 x 85W	SRS	A4FTL/B2685	A4FTL.26	*	A4.B2685	1829	72	13.2	29.2
2400	8	2 x 85W	QS	A4FTL/B2885	A4FTL.28	*	A4.B2885	2439	96	20	44.2

*Channel cover included with 1st attachment

Overall depth of Twin FTD is 140mm/5.5in and of FTL is 122mm/4.8in

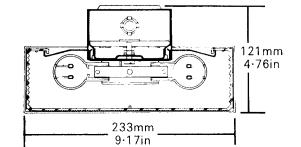
Atlantic A40 and A4P broad opal and prismatic diffusers



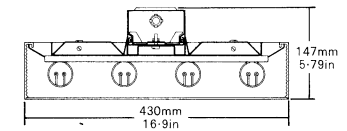
A4P/B2685

This broad prismatic controller and opal diffuser have been specifically designed for use with twin (broad spaced) tubes and the configuration of batten, lamp position and prismatic controller or diffuser allows a crisp, modern rectangular shape to be used. The controller is extruded in clear plastic with linear side prisms and pyramidal base prisms, and the diffuser from reeded opal plastic. The function of the prisms is to re-direct light from the tubes either above the horizontal or up to 30° below it, thus ensuring the least amount of light being emitted in the zone most likely to give rise to discomfort glare. A wider version of the prismatic controller only has been designed for use on four-tube battens.

Injection moulded white end caps are supplied with the attachments and are simply attached by locating two pins at the top and one at the bottom of each end cap with corresponding holes in the ends of the attachment. Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.



A4P/A40 Broad prismatic controller or opal diffuser



A4P Four-tube wide prismatic controller only

RANGE

Prismatic Controller

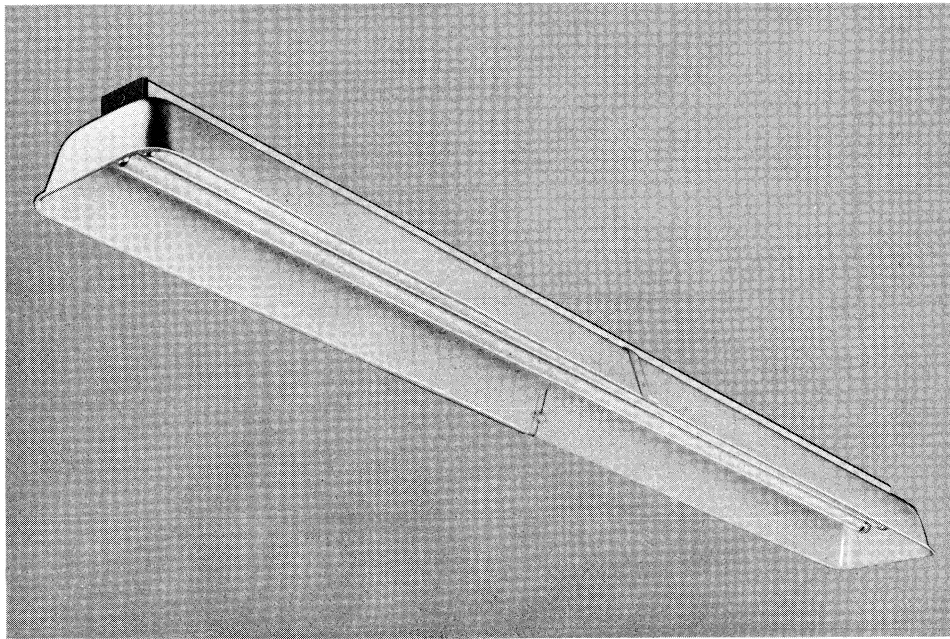
Complete fitting				Components			Dimensions		Approx. weight (incl. tubes)		
Nominal tube length	Rating	Circuit	Catalogue no.	1st Attachment Catalogue no.	2nd Attachment Catalogue no.	Batten Catalogue no.	Overall length				
mm	ft.						mm	in	kg	lb	
1500	5	2 x 65W	SRS	A4P/B265	A4P.25	*	A4.B265	1576	62	9.9	21.8
1800	6	2 x 85W	SRS	A4P/B2685	A4P.26	*	A4.B2685	1839	72.4	10.6	23.3
1800	6	4 x 85W	SRS	A4P/B/4685	A4P.46	A4B.46	A4.4685	1839	72.4	22.6	50
2400	8	2 x 85W	QS	A4P/B2885	A4P.28	*	A4.B2885	2452	96.6	15.8	35
2400	8	4 x 85W	QS	A4P/B/Q4885	A4P.48	A4B.48	A4.Q4885	2452	96.6	29.5	65

Opal Diffuser

1500	5	2 x 65W	SRS	A4O/B265	A4O.25	*	A4.B265	1576	62	9.9	21.8
1800	6	2 x 85W	SRS	A4O/B2685	A4O.26	*	A4.B2685	1839	72.4	10.6	23.3
2400	8	2 x 85W	QS	A4O/B2885	A4O.28	*	A4.B2885	2451	96.5	15.8	35

*Channel cover included with 1st attachment

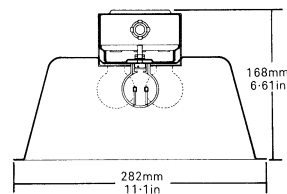
Atlantic A4V vitreous enamel reflector



A4V/Q2885

A vitreous enamel finished 2400mm/8ft reflector with closed ends and slots in the upper surface of the reflector. These provide a generous proportion of upward lighting and reduce brightness contrasts. Convection currents through the slots assist in reducing dirt accumulation on the reflector surfaces.

For ease of assembly the reflector is supplied in two halves with a central jointing assembly. The vitreous finish will withstand the vigorous cleaning necessary in certain dirty atmospheres. Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.

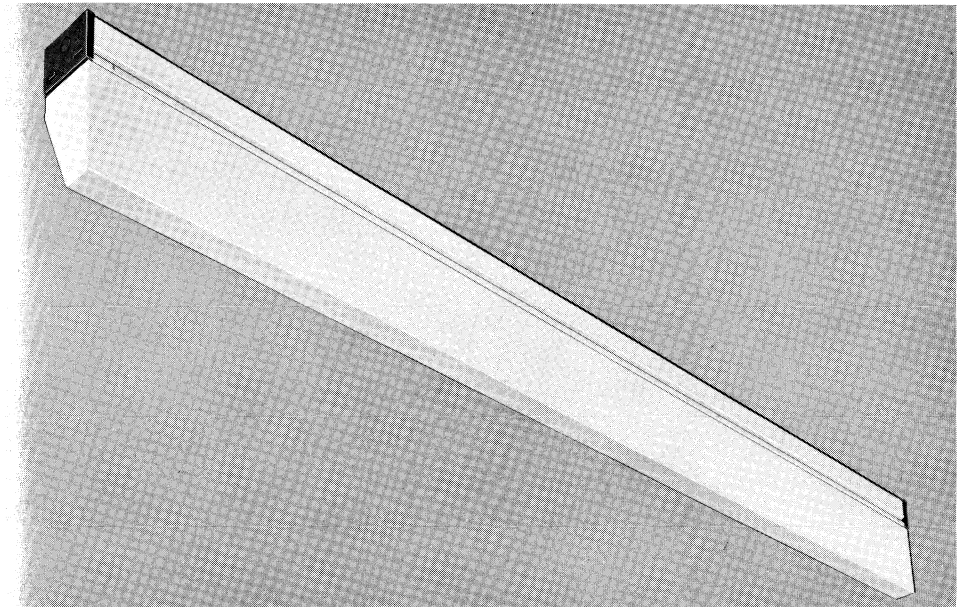


A4V Vitreous reflector

RANGE

Complete fitting				Components			Dimensions				Approx. weight		
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Approx. weight				
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	kg	lb			
2400	8	85W	QS	A4V/885	A4V.28	—	A4.885	2565	101	19.9	44		
2400	8	2 x 85W	QS	A4V/Q2885	A4V.28	—	A4.Q2885	2565	101	25.2	55.6		
2400	8	125W	QS	A4V/125	A4V.28	—	A4.125	2565	101	21.4	47.2		
2400	8	2 x 125W	QS	A4V/2125	A4V.28	—	A4.2125	2565	101	25.6	56.6		

Atlantic A4W wall washer



A4W/685

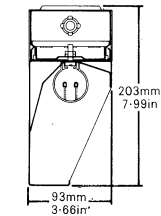
A specular reflector is designed to give an asymmetric distribution of light from this fitting. It is enclosed within a smart white enamelled framework.

The combination of single tube plus wall washer attachment gives a very smart appearance and makes the fitting particularly suitable for the lighting of office noticeboards, entrance murals, wall sculptures, shop displays and other vertical surfaces.

The designed mounting position for this fitting is on the ceiling. (1000mm/2ft from the wall to be lit: this will then give an approximate 10:1 illumination ratio over a 3048mm/10ft wall.

Standard fittings are for 230/240V 50Hz.

Details of fittings for other supplies are available on application.

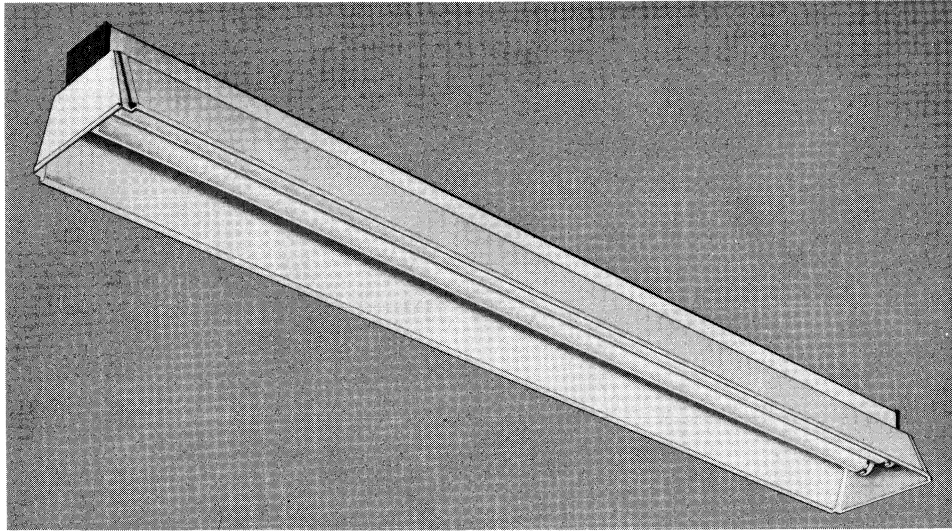


A4W Wall-washer

RANGE

Complete fitting				Components			Dimensions				Approx. weight		
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Approx. weight				
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	kg	lb			
1800	6	85W	SRS	A4W/685	A4W.16	—	A4.685	1805	71.1	7.7	17		

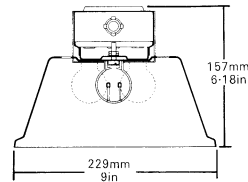
Atlantic A4X closed-end, slotted-top reflector



A4X/2685

A closed-end metal reflector with large slots in its upper surface to give a generous proportion of upward lighting and reduced brightness contrast. Convection currents through the slots assist in reducing dirt accumulation on the reflector surfaces and help to maintain the efficiency of the installation.

Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.

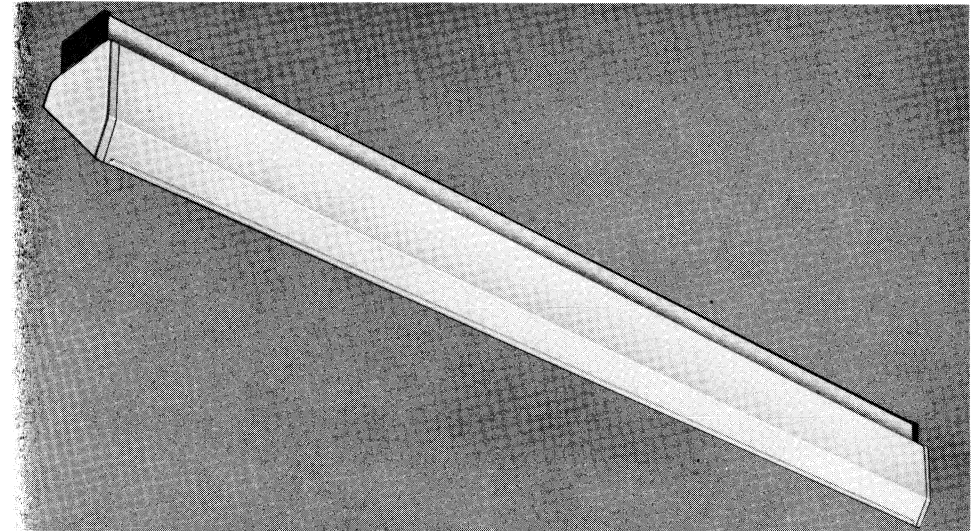


A4X Metal reflector-closed end

RANGE

Complete fitting				Components			Dimensions				Approx. weight		
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Approx. weight				
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	kg	lb			
1800	6	85W	SRS	A4X/685	A4X.26	—	A4.685	1834	72.2	9.9	21.8		
1800	6	2 x 85W	SRS	A4X/2685	A4X.26	—	A4.2685	1834	72.2	11.9	26.4		
2400	8	85W	QS	A4X/885	A4X.28	—	A4.885	2445	96.3	13.8	30.5		
2400	8	2 x 85W	QS	A4X/Q2885	A4X.28	—	A4.Q2885	2445	96.3	19.2	42.3		
2400	8	125W	QS	A4X/125	A4X.28	—	A4.125	2445	96.3	15.3	33.7		
2400	8	2 x 125W	QS	A4X/2125	A4X.28	—	A4.2125	2445	96.3	19.6	43.1		

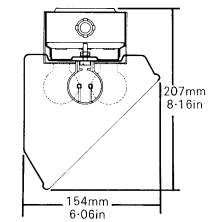
Atlantic A4Y angle reflector



A4Y/2685

This angled reflector can be attached to either single or twin-tube battens to provide a general 'flow' of light in a required direction. It is particularly suitable for the lighting of chalk boards, work benches situated against vertical services, factory planning charts and for the general illumination of shop windows.

Standard fittings are for 230/240V 50Hz. Details of fittings for other supplies are available on application.

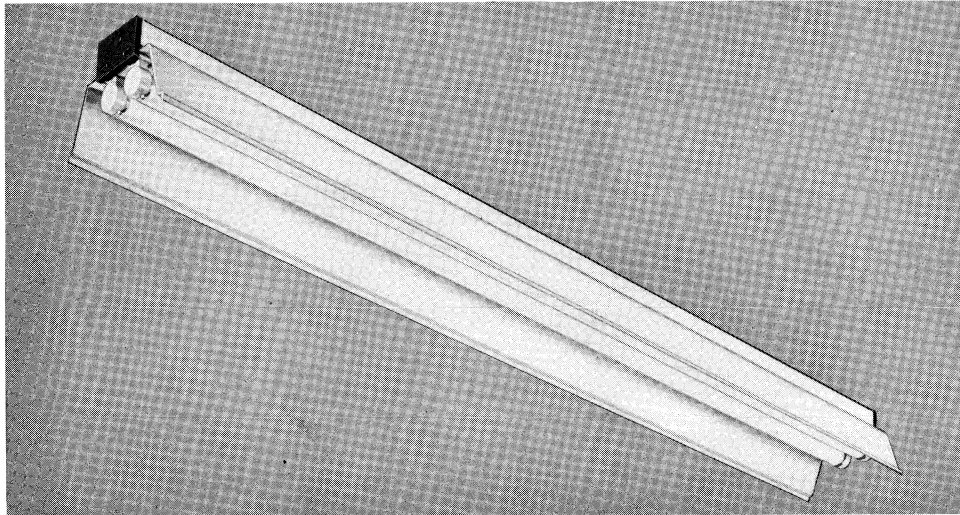


A4Y Angle reflector

RANGE

Complete fitting				Components			Dimensions				Approx. weight		
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Approx. weight				
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	kg	lb			
1500	5	65W	SRS	A4Y/65	A4Y.25	—	A4.65	1548	61.1	7.8	17.2		
1500	5	2 x 65W	SRS	A4Y/265	A4Y.25	—	A4.265	1548	61.1	10	22		
1800	6	85W	SRS	A4Y/685	A4Y.26	—	A4.685	1812	71.3	8.6	19		
1800	6	2 x 85W	SRS	A4Y/2685	A4Y.26	—	A4.2685	1812	71.3	10.7	23.6		
2400	8	85W	QS	A4Y/885	A4Y.28	—	A4.885	2423	95.4	12	26.5		
2400	8	2 x 85W	QS	A4Y/Q2885	A4Y.28	—	A4.Q2885	2423	95.4	17.3	38.1		
2400	8	125W	QS	A4Y/125	A4Y.28	—	A4.125	2423	95.4	13.4	29.7		
2400	8	2 x 125W	QS	A4Y/2125	A4Y.28	—	A4.2125	2423	95.4	17.7	39.1		

Atlantic A4Z open-ended, slotted-top reflector



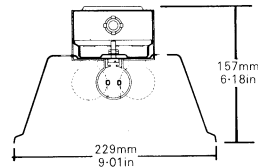
A4Z/2685

An open-ended metal reflector with large slots in its upper surface to give a generous proportion of upward lighting and reduce brightness contrast. Convection currents through the slots assist in reducing dirt accumulation on the reflector surfaces and help to maintain the efficiency of the installation.

An A4ZB version of this reflector is available for use on A4B type spines. A four-lamp version is also available. Both are shown on the next page.

Standard fittings are for 230/240V 50Hz.

Details of fittings for other spines are available on application.

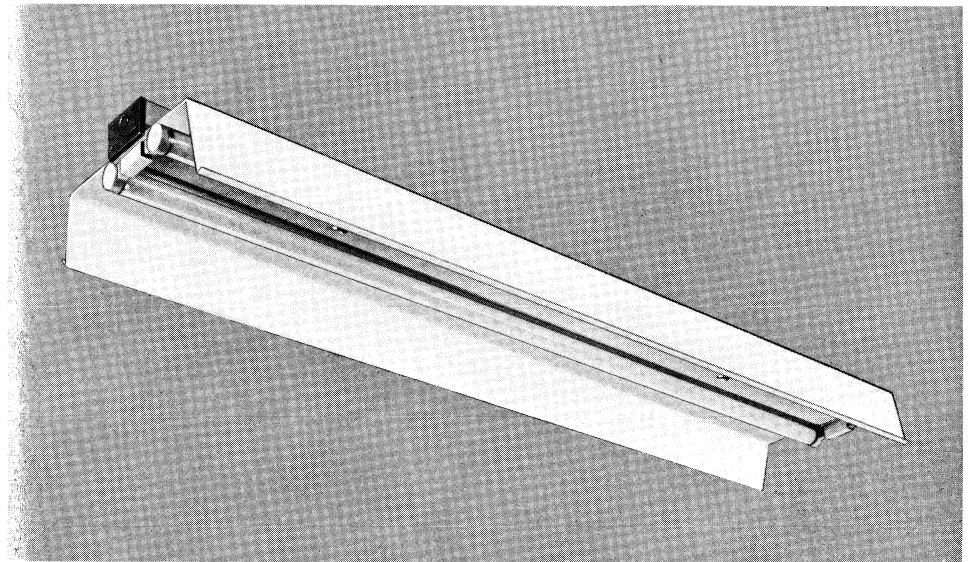


A4Z Metal reflector—open ended

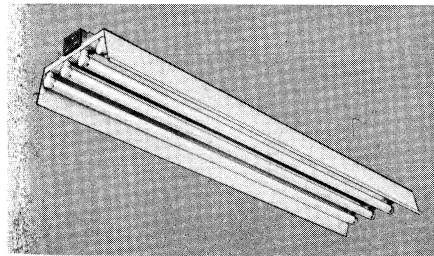
RANGE

Complete fitting				Components			Dimensions				Approx. weight	
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Overall length		Overall length	
mm	in	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	mm	in	kg	lb
1200	4	40W	SRS	A4Z/40	A4Z.24	—	A4.40	1241	48-8	7-1	15-6	
1200	4	2 x 40W	SRS	A4Z/240	A4Z.24	—	A4.240	1241	48-8	8-3	18-4	
1500	5	65W	SRS	A4Z/65	A4Z.25	—	A4.65	1542	60-7	8-7	19-1	
1500	5	2 x 65W	SRS	A4Z/265	A4Z.25	—	A4.265	1542	60-7	10-8	23-9	
1800	6	85W	SRS	A4Z/685	A4Z.26	—	A4.685	1805	71-1	9-7	21-3	
1800	6	2 x 85W	SRS	A4Z/2685	A4Z.26	—	A4.2685	1805	71-1	11-8	25-9	
2400	8	85W	QS	A4Z/885	A4Z.28	—	A4.885	2416	95-1	13-5	29-9	
2400	8	2 x 85W	QS	A4Z/Q2885	A4Z.28	—	A4.Q2885	2416	95-1	18-8	41-5	
2400	8	125W	QS	A4Z/125	A4Z.28	—	A4.125	2416	95-1	15	33-1	
2400	8	2 x 125W	QS	A4Z/2125	A4Z.28	—	A4.2125	2416	95-1	19-2	42-3	

Atlantic A4Z four-tube reflector and A4ZB broad open-ended, slotted-top reflector



A4ZB/B2685



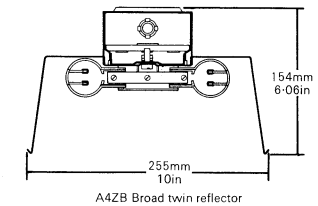
A4Z/4685

A wide version of the fitting shown on the previous page.

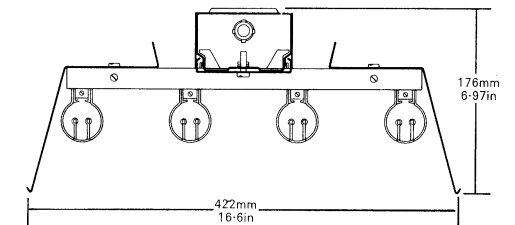
The A4ZB reflector fits on an A4B spine to give a broader light distribution.

A four-lamp version of the A4Z fitting is also available as shown.

All fittings are for 240V 50Hz.



A4ZB Broad twin reflector



A4Z Four-tube reflector

RANGE

Complete fitting				Components			Dimensions				Approx. weight	
Nominal tube length				1st Attachment	2nd Attachment	Batten	Overall length		Overall length		Overall length	
mm	ft	Rating	Circuit	Catalogue no.	Catalogue no.	Catalogue no.	mm	in	mm	in	kg	lb
1500	5	2 x 65W	SRS	A4ZB/B265	A4ZB.25	—	A4.B265	1542	60-7	12-7	28	
1800	6	2 x 85W	SRS	A4ZB/B2685	A4ZB.26	—	A4.B2685	1805	71-1	13-7	30-2	
2400	8	2 x 85W	QS	A4ZB/B2885	A4ZB.28	—	A4.B2885	2416	95-1	20-7	45-6	
1800	6	4 x 85W	SRS	A4Z/4685	A4Z.46	—	A4.4685	1805	71-1	24-5	54	
2400	8	4 x 85W	QS	A4Z/Q4885	A4Z.46	—	A4.Q4885	2416	95-1	30-8	68	

Atlantic Replacement Control Gear and Accessories

Batten Accessories

Description	Catalogue no.
Lampholder	AMEB.1580/A4
Lampholder (broad twin)	AMEB.1580/A4T
Lampholder plate	
single	A4.4663
twin	A4.4664
broad twin	A4.4679
4-tube	A4.4665
Terminal block	AMET.1338
Fuse-holder	AMET.1334
Capacitor clip	AMEY.5288
End-cap	A4.4666
Cage screw	AC.5768
Cage nut	AC.5656
Slotted suspension washer	AC.4861
Besa cluster cap	A4.4674

Attachment Accessories

Diffuser suspension bracket	
A4C, A4D attachments	A4.4667
Cover-plate Unicap twin (now obsolete)	A4.4668
End-cap for A4GC, A4GD attachments (now obsolete)	
single	A4.4669
twin	A4.4670
4-tube attachment suspension bracket	A4.4672
Diffuser suspension bracket	
A4E attachment	A4.4673
Cover-plate A4L (now obsolete)	A4.4675
Linear Prism Panel A4L (now obsolete)	A4.4676
5ft Broad cover-plate	A4.4690
6ft Broad cover-plate	A4.4691
8ft Broad cover-plate	A4.4692

Replacement Control Gear

These items are chosen from the extensive range of control gear stocked in, and readily available from regional stores in the U.K. The reference numbers quoted differ from those marked on the control gear in the fitting, but the units are equally applicable to A4 fittings.

		Choke(s) or ballast(s)	Quickstart Units	Capacitor(s)	Fuse
40W 4ft	Single	1 × BU/40	—	1 × GC2273	1 × GT1332
	Twin	2 × BU/40	—	1 × GC2273	1 × GT1332
65W 5ft	Single	1 × BI/65	—	1 × GC2220	1 × GT1342
	Twin	2 × BI/65	—	2 × GC2220	1 × GT1342
	Broad twin				
85W 6ft	Single	1 × BI/685	—	1 × GC2220	1 × GT1342
	Twin	2 × BI/685	—	2 × GC2220	1 × GT1342
	Broad twin				
	4-tube	4 × BI/685	—	4 × GC2220	2 × GT1342
85W 8ft	Single	1 × BQI/85	—	1 × GC2226	1 × GT1299
	Twin	2 × BQI/85	—	2 × GC2226	1 × GT1299
	Broad twin				
	4-tube	4 × BQI/85	—	4 × GC2226	2 × GT1299
125W 8ft	Single	1 × CQI/125	1 × QS/125	1 × GC2228	1 × GT1299
	Twin	2 × CQI/125	2 × QS/125	2 × GC2228	1 × GT1299

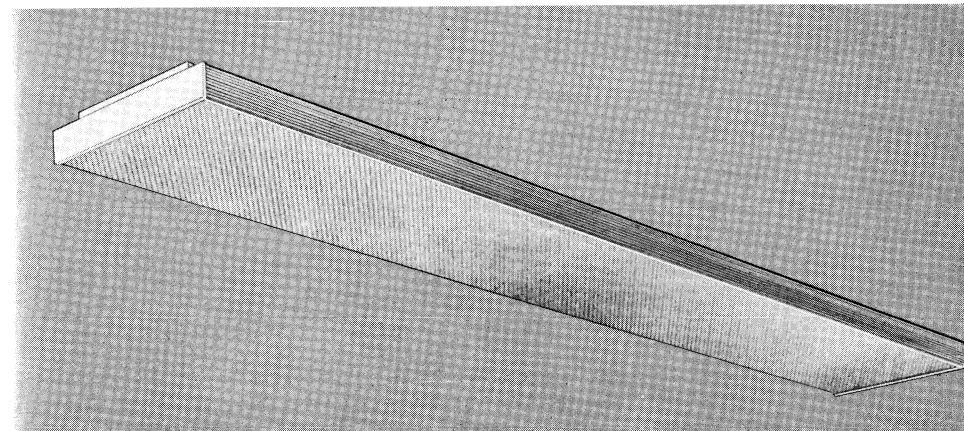
Joining Pieces Accessories

Description	Catalogue no.
Spacer for A4C, A4D diffusers	A4.4660
Spacer for closed-end reflectors and most attachments except A4C, A4D	A4.4661
Reflector jointing strap for A4Z (single/narrow twin)	A4.4662

Aluminium Frames Accessories

Description	Catalogue no.
Frame support clips (2-tube)	A4.4671
Attachment suspension bracket (4-tube)	A4.4672

KSP London line fitting

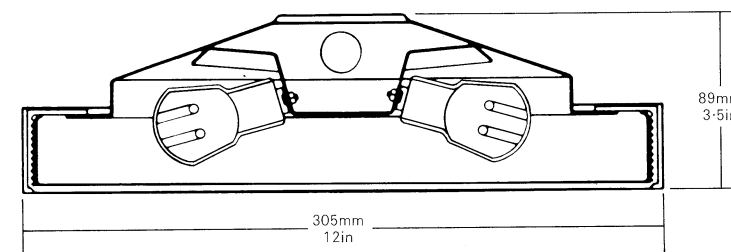


KSP/R2685

This 'Wafer Slim' fitting has a unique lightness and elegance of appearance. The complete ceiling mounted fitting projects only 89mm/3.5in from the ceiling which makes it ideal for modern low ceilings. These fittings provide a

high technical efficiency with a low glare index and also give rise to the impression of a panel of light due to the fact that from almost all normal angles of vision the batten is invisible.

All fittings are for 240V 50Hz. Details of fittings for other supplies are available on application.



RANGE

Complete fitting			Components			Dimensions							
Nominal length	Rating	No. of tubes	Circuit	Diffuser Catalogue no.	Batten Catalogue no.	Overall length	Overall weight	Fixing centres					
mm	ft					mm	kg	mm					
1800	6	85W	2	SRS	KSP/R2685	KSP 26	KS R2685	1829	72	12.7	28	610	24
2400	8	85W	2	QS	KSP/Q2085	KSP 28	KS Q2085	2438	96	15.3	33.9	1220	48

This fitting is not suitable for chain suspension

Polrized panels

POLRIZED panels represent a new concept in light control technique with a lighting system that ensures increased seeing ability and greater viewing comfort. The principle of polarization is used to help solve the problem of reflected glare.

Almost all viewing angles in office and school environments lie between 0° and 40° to the downward vertical. A typical viewing task may be that of reading typescript or writing on paper of varying degrees of gloss and/or reflectance.

In areas lit by conventional distribution luminaires, difficulty may be experienced in reading the text due to reflections of the light source on the paper reducing the contrast between the lettering and the background. Consequently, eye strain may be experienced. The contrast may be improved by carefully adjusting the viewing angle.

But, the new approach to solving this problem is to use polarized light — whereby contrast is improved without the need to adjust the viewing angle. With POLRIZED panels an

improvement in contrast, at least equivalent to that attainable by increasing the illuminance by 45%, can be achieved. At larger viewing angles than those already noted, an even greater improvement is obtained. POLRIZED panels not only reduce reflected glare but control discomfort glare since they have a low brightness compared with an opal diffuser at high viewing angles. POLRIZED material for ceiling use transmits a countless number of cones of vertically polarized light. These cones are radially symmetrical, each cone overlapping its neighbour to ensure uniform lighting distribution. So this increased visual effectiveness applies at all points in the room and at all viewing angles. It is the only system that at the same time effectively reduces veiling reflections

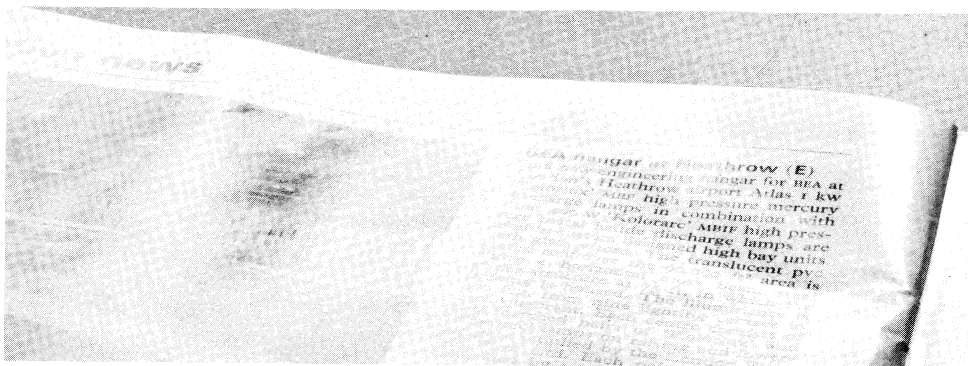
and direct glare. Moreover, colour and textures are seen in their true light. Veiling reflections inherent in conventional lighting systems dilute the subtleties of many colours and surface finishes.

POLRIZED attachments are available for the following fittings ranges and ceilings:

- New Format range
- Format (SM) range
- Pop-in troffer fitting
- Arena lighting/ceiling system
- Dome and Plaza ceiling panels

Polarization offers these advantages:

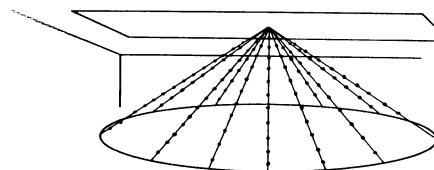
- *Greater visual effectiveness and contrasts for the same wattage.
- *Truer textures and colour rendition.
- *A dramatic reduction in eye fatigue with low brightness comfort.



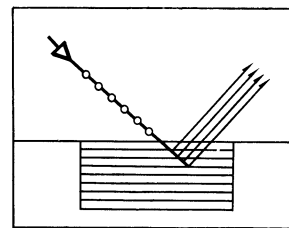
An extreme example of veiling glare and its removal by polarization



Polrized panels



Each point in the POLRIZED panel gives radially symmetrical distribution of vertically polarized light. The cones overlap to give uniform distribution.

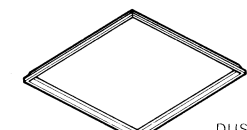


POLRIZED panels permit the passage of light with vibrations limited primarily in the vertical plane. The diagram illustrates this phenomenon and it can be seen that there are no veiling reflections from the surface of the object.

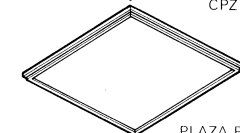
RANGE

Nominal Size	Catalogue no.	Description	Approximate weight gms
11	CPZ 1001	Dome panel (Polrized)	190
11	CPZ 1002	Plaza panel (Polrized)	176
11	CPZ 2001	Dust cover for Dome panel	176
11	CPZ 2002	Dust cover for Plaza panel	156

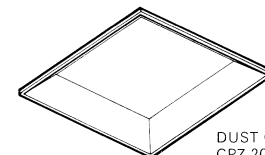
GRID: Thom Isora Grid 25.



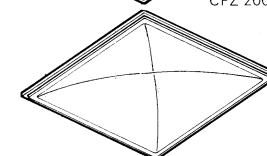
DUST COVER
CPZ 2002



PLAZA POLRIZED
PANEL CPZ 1002



DUST COVER
CPZ 2001



DOMES PANEL
600mm square
CPZ 1001

Airlume and Special Fittings

There are many occasions when a ceiling design calls for special fittings as part of an integrated scheme. These may be recessed into the suspended ceiling and required to fulfil multiple functions such as heat recovery, air handling, etc. Air supply is usually achieved via side slots along the fitting bezel whilst air is extracted through the fitting via an open or louvered diffuser, or end slots where a closed diffuser is used. A wide range of fittings has been designed to meet these particular requirements and to have a low brightness appearance where high levels of illumination are planned. A variety of aluminium and injection moulded louvers or prismatic panels is available. The Technical Department of the Isora Division of Thorn Lighting is available to advise on applications and provide information generally on these products.

Advantages of Airlume fittings

When airlume fittings are used to extract room air a large proportion of the heat produced by the lighting equipment is removed before it can enter the occupied space. This results in a reduction of the air conditioning load on the room which means less air volume is required for temperature control and the air can be passed through the system with a higher temperature rise than normal, resulting in increased efficiency of the airhandling system. As less air volume is required the ductwork sizes and plenum depths can be reduced, giving economies in construction. Because an airlume fitting can be used for both supply and return two types of services can use one distribution point in the ceiling, thus helping to create a neat and tidy appearance of the ceiling.

In most recessed fittings the fluorescent tube is normally operating at a temperature above that of its optimum light output. If air is drawn through the fitting and around the lamps the tube wall is cooled to this optimum or very close to it, resulting in a greatly increased light output depending on the design and type of fitting used.

Low Brightness and Airlume Fittings

These fittings have been designed to meet the demand for lighting units that can provide high levels of illumination without glare discomfort and to meet the growing demand for integrated air handling and heat from light units.

It is possible that these fittings will not have the characteristics necessary to meet the needs of every design installation and in this event the Isora Division Technical Department, in conjunction with the Thorn Lighting designers, can undertake the development of fittings to suit specific requirements.

All fittings can be supplied manufactured to Metric or Imperial modular dimensions on application.

LBL F Fittings

Flush mounting recessed fittings with a highly efficient reflector louver assembly. All sizes of fitting can be supplied with air extract slots in the back panel. The four tube 608mm wide versions can also be supplied with

slotted trim face and mounting for air supply attachments.

Construction of the optical systems, which is of one piece unit assembly per lampway, is from figured aluminium sheet and extruded aluminium baffles. The form and profile of these assemblies, which have a specular anodized finish, have been designed to provide the efficiency necessary for the levels of illumination required for modern interiors with the comfort of a well designed optical system.

Housings are constructed in sheet metal which has stove enamelled finish.

Suspension of these fittings is by means of holes provided, from the true ceiling or by means of side suspension arms (Catalogue no. LB 4601) supported from a suspended ceiling grid. These are available at extra cost on application.

These fittings have been designed for concealed 'T' ceiling systems but before the ceiling design is complete consultation with Isora Division Technical Department would be advisable to ensure suitability of the fitting to the ceiling. The fittings are particularly suitable for continuous mounting and capping strip (Catalogue no. LB 4600) is available on request to ensure neatness of runs.

AHP Fittings

Recessed mounting fittings with a dished prismatic controller designed and developed for heat recovery installations.

This model of fitting is in service in installations where the sole source of heating for the premises is derived from the recirculated heat extracted from the lighting fittings.

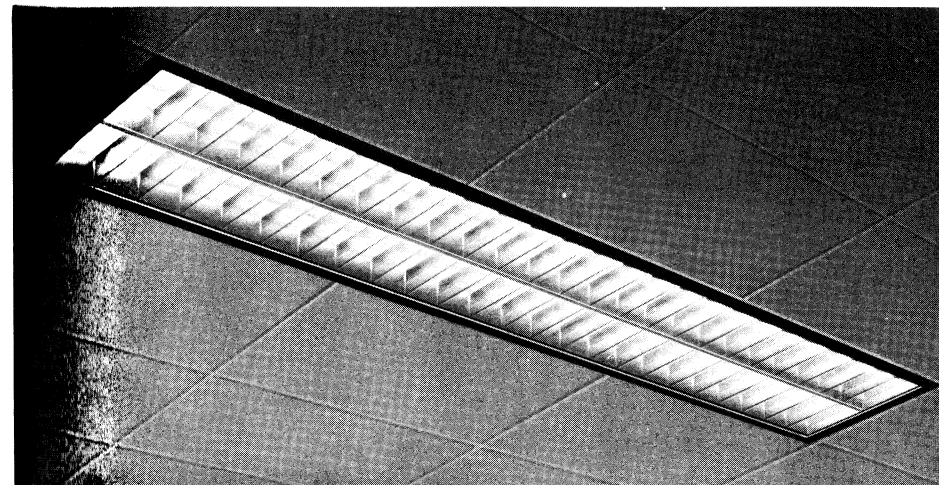
These fittings are equally suitable for use in installations as a purely extract fitting for the disposal of air from the room and to assist in dispersing heat from the fittings.

Housings are constructed from sheet metal which has stove enamelled finish.

Suspension is from holes provided in the back panel of the fittings.

These fittings comply fully with BS.3820:1964 for Class 1 ordinary, indoor, normal atmospheres.

LB Recessed fittings



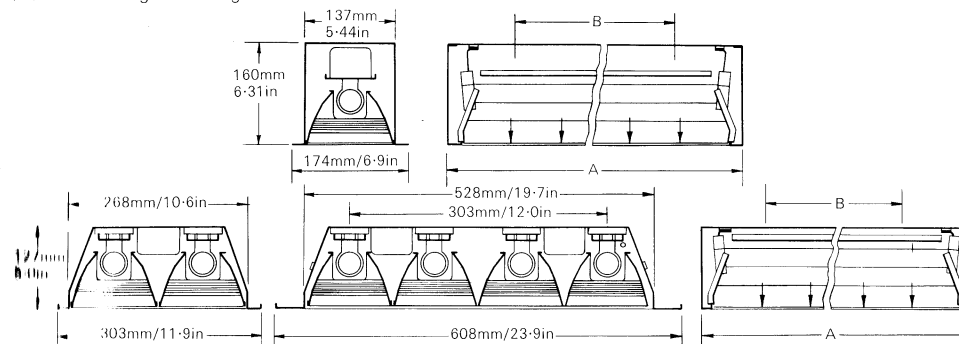
LBL F Fittings

Flush mounting recessed fittings designed to provide high levels of illumination with effective glare control. All sizes can be supplied with holes pierced in the back plate for air extraction through the fitting. The four

tube 608mm wide versions can also be provided with slots in the trim face and fixing for air boots for the supply of air.

The metalwork of these fittings is

stove enamelled white. Other finishes can be provided on request. **Surface mounted fittings type LBLC are available to special order.**



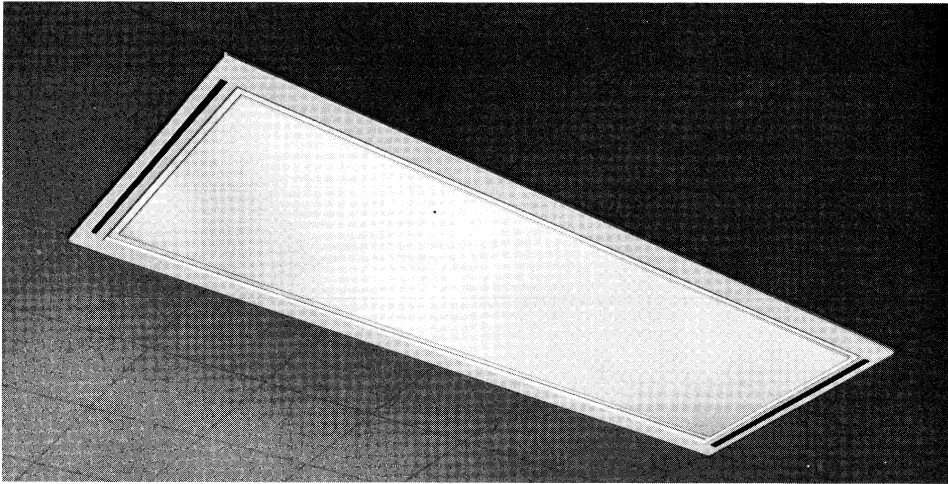
Range and Dimensions

Catalogue no	Rating	No of Tubes	Circuit	Fitting size				Minimum ceiling opening				Fixing centres			
				A Length mm	Width mm	A Length in	Width in	Length mm	Width mm	Length in	Width in	B Length mm	Width mm	B Length in	Width in
LBL F/01040	40W	One	QS	1217	174	47.9	6.9	1219	140	48	5.5	914	*CL	36	*CL
LBL F/02040	40W	Two	QS	1217	303	47.9	11.9	1219	305	48	12	914	*CL	36	*CL
LBL F/04040	40W	Four	QS	1217	608	47.9	23.9	1219	610	48	24	914	303	36	12
LBL F/01685	85W	One	RS	1827	174	71.9	6.9	1829	140	72	5.5	1372	*CL	54	*CL
LBL F/02685	85W	Two	RS	1827	303	71.9	11.9	1829	305	72	12	1372	*CL	54	*CL
LBL F/04685	85W	Four	RS	1827	608	71.9	23.9	1829	610	72	24	1372	303	54	12
LBL F/01085	85W	One	QS	2436	174	95.9	6.9	2438	140	96	5.5	1372	*CL	54	*CL
LBL F/02085	85W	Two	QS	2436	303	95.9	11.9	2438	305	96	12	1372	*CL	54	*CL
LBL F/04085	85W	Four	QS	2436	608	95.9	23.9	2438	610	96	24	1372	303	54	12

*CL = Centre

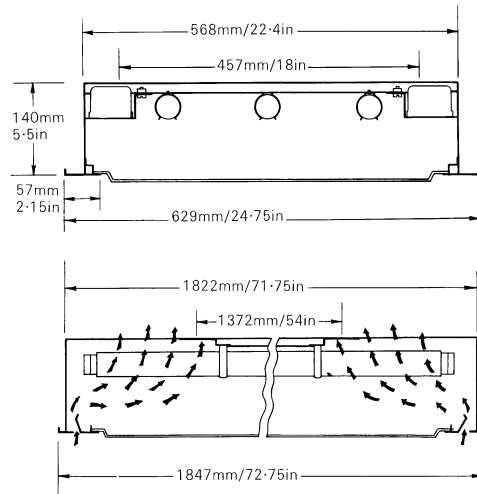
All two, three and four tube LBL F fittings are suitable for the extraction of air. The four tube versions, LBL F/04040, LBL F/04685 and LBL F/04085, are also available for the supply of air. Add the following suffixes to the end of catalogue numbers when air handling facilities are required: E at end of catalogue reference denotes Extract only; S denotes Supply fitting only; SE denotes Supply and Extract.

AH Recessed Air Handling fittings



AHP Fittings

Recessed fittings with a prismatic controller, designed for the extraction of air through slots at the ends of the fitting incorporating dust traps. The 1847mm long fitting shown can be manufactured to handle various volumes of air. Other sizes of fittings can be manufactured to meet specific requirements. The metalwork of these fittings is finished stove enamelled white.

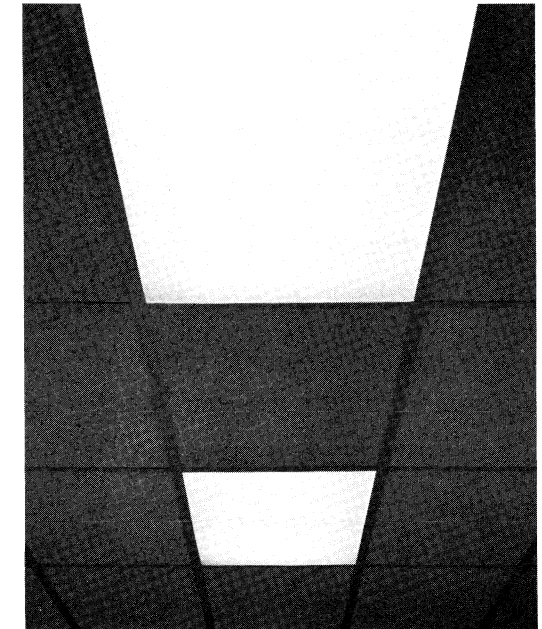


Range and Dimensions

Catalogue no	Rating	No of Tubes	Circuit	Fitting size		Ceiling opening				Fixing centres					
				Length mm	Width mm	Length mm	Width mm	Length mm	Width mm	Length mm	Width mm	Length mm	Width mm		
AHP/R2685	85W	Two	RS	1847	629	72.75	24.75	1829	610	72	24	1372	457	54	18
AHP/R3685	85W	Three	RS	1847	629	72.75	24.75	1829	610	72	24	1372	457	54	18
AHP/R4685	85W	Four	RS	1847	629	72.75	24.75	1829	610	72	24	1372	457	54	18

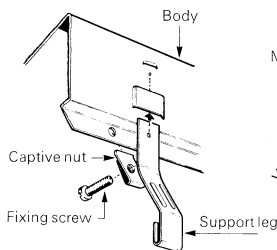
All the above fittings are available to special order, full price details available on request.

Pop-in troffer

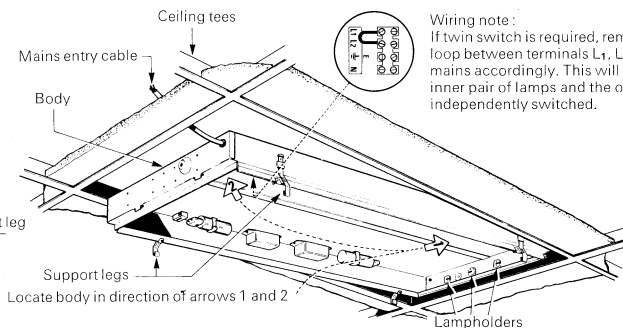


The Pop-in troffer is designed for use with both imperial and metric dimension lay-in (exposed tee) grid systems. This enables the body (which is common for metric and imperial grids) to be used in either a nominal 2ft x 4ft opening or 600 x 1200mm opening as a direct replacement for a ceiling panel. Main tees should be 1 1/2 in (38mm) high with 3/8 in (24mm) table. Cross tees should have 5/8 in (24mm) table and up to 1 1/2 in (38mm) high. Minimum clearance above the top of the main tee is 6 in (150mm). A range of diffuser panels is available to fit either on the imperial 2ft x 4ft module or metric 600mm x 1200mm module. The design of the support legs enables the fitting body to be used with both metric and imperial grids.

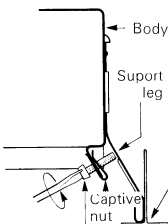
Pop-in troffer



1 Assemble four support legs



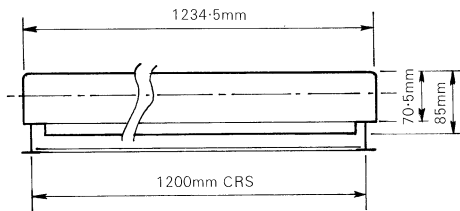
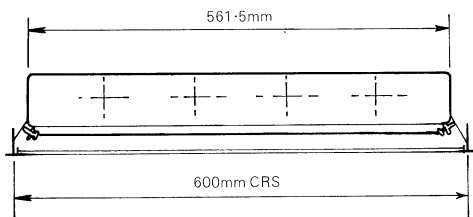
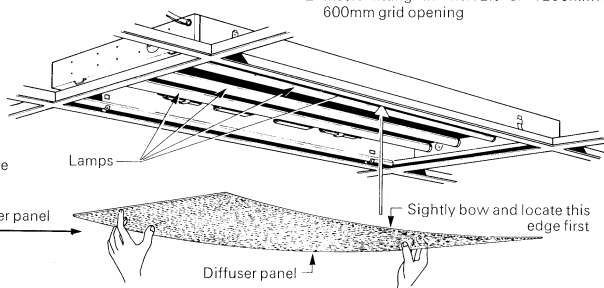
Wiring note:
If twin switch is required, remove wire loop between terminals L₁, L₂ and connect mains accordingly. This will enable the inner pair of lamps and the outer pair to be independently switched.



3 Locate support legs on tee bar and tighten screw

4 Insert selected diffuser panel

Fixing screw tighten to position body after centralizing



POP-IN TROFFER FITTING

Nominal length		Nominal width		Rating	Number of tubes	Circuit	Catalogue no. c/w tubes	Approx weight c/w tubes	
mm	ft	mm	ft					kg	lb
1200	4	600	2	40	4	SRS	FPMW 440	14.5	32

DIFFUSERS

Metric

Nominal panel size (mm)		Actual panel size (mm)		Catalogue no.	Type
1200	600	1190	586		
1200	600	1190	586	FPMH 612	K19, Prismatic
1200	600	1190	586	FPMO 612	Opal
1200	600	1190	586	FPMP 612	K12, Prismatic

Imperial

Nominal panel size (ft)		Actual panel size (in)		Catalogue no.	Type
4	2	47.6	23.5		
4	2	47.6	23.5	FPMH 24	K19, Prismatic
4	2	47.6	23.5	FPMO 24	Opal
4	2	47.6	23.5	FPMP 24	K12, Prismatic

Maximum diffuser weight 2kg/4.5lb.

Based on information obtained from a survey of Architects, the Format range combines reliability, strength and versatility, with an elegant, visually pleasing appearance.

The range comprises of metric modular fittings in 100, 200, 300, 400 or 500mm widths, to take from 1-4 1200mm (4ft) or 1800mm (6ft) tubes. To complete the range, circular (60W) and square (4 x 20W) fittings are also available.

The fittings consist of a sheet steel body finished in semi-matt black outside and white inside for maximum reflectivity. All sizes have a choice of four plastic attachments. In addition the 200mm wide, 1800mm (6ft) version can be fitted with an aluminium frame, low brightness, attachment.

'Wishbone' springs

A 'wishbone' attachment fixing has been introduced for all except the single tube (100mm) and circular sizes. 'Wishbones' provide a strong captive action, with the result that re-lamping has now become a one man operation.

Amalgam Tubes

Amalgam tubes offer a significant increase in Light Output Ratios when used with 1800mm (6ft) Format fittings.

Catalogue Numbers System

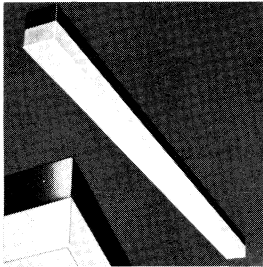
1SM - 100mm wide
2SM - 200mm wide
3SM - 300mm wide
4SM - 400mm wide
5SM - 500mm wide
QSM - 698 x 698mm square
OSM - 498mm diameter circular

D - Opal diffuser
O - Opal sided prismatic base diffuser
P - Prismatic Controller
A - Opal sided Polrized base diffuser
E - Aluminium frame with prismatic base
W - Wishbone attachment fixing
B - Body

1040 - 1 x 1200mm (4ft) tube
2040 - 2 x 1200mm (4ft) tube
3040 - 3 x 1200mm (4ft) tube
1060 - 1 x 60W Circular tube
1685 - 1 x 1800mm (6ft) tube
2685 - 2 x 1800mm (6ft) tube
3685 - 3 x 1800mm (6ft) tube
4685 - 4 x 1800mm (6ft) tube
4020 - 4 x 600mm (2ft) tube

Format 1SM and 2SM fittings

1SMD/1685

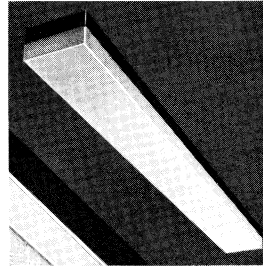


A surface-mounted fitting with black metal body and a choice of three plastic attachments.

The sheet steel body is bonderized and stove enamelled semi-matt black outside and white inside, in a hard alkyd paint.

ISM fittings have spring clips for attachment fixing, and 2SM types use 'wishbone' fixing.

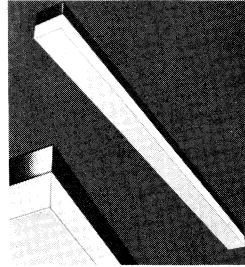
2SMWP/2685



Attachments seat against foam gaskets. Control gear and wiring are connected to a three-way fused terminal block: cable entry is at the centre or at fixing centres, or by 20mm dia. knock-outs at the end of the fitting.

Fittings should be ceiling mounted but can be suspended on 20mm conduits. If they are connected

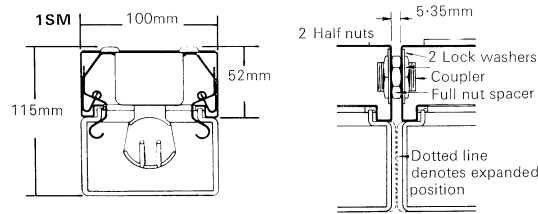
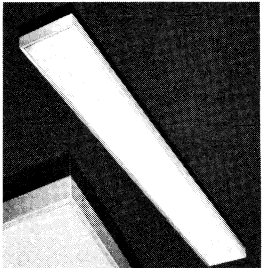
1SMWO/1685



end-to-end for continuous mounting by means of a 20mm conduit coupler, a 20mm full conduit nut should be used as a spacer to leave room for the expansion of attachments (see diagram).

Ambient temperatures at fitting level should not exceed 25°C. All fittings are suitable for 240V 50Hz supplies.

2SMWE/2685



- Suspension and wiring entry
- Wiring entry only
- Terminal block

1SMB 1040/1SMB 1685

Dimension A	Dimension B
mm in	mm in
610 24	— —
900 35.4	— —

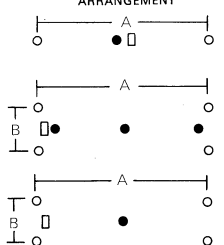
2SMWB 2685

Dimension A	Dimension B
mm in	mm in
900 35.4	100 3.9

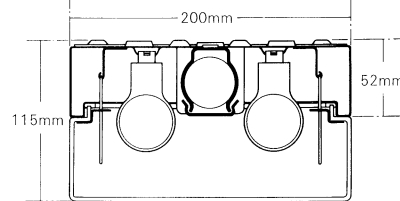
2SMWB 2040

Dimension A	Dimension B
mm in	mm in
610 24	100 3.9

CABLE AND SUSPENSION HOLE ARRANGEMENT



2SM



Diagrams are not to scale.

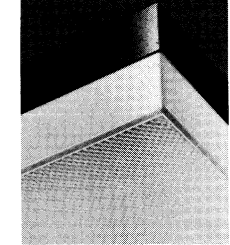
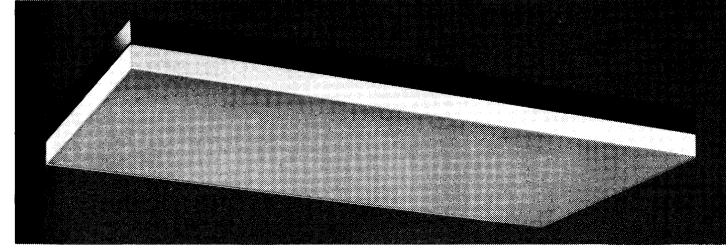
Information in the table is for 'D' (Opal Diffuser) version. The 'O' (opal sides, prismatic base) 'P' (prismatic), and 'A' (Polized) versions are identical and data is obtained by substituting 'O', 'P', or 'A' for 'D' in the catalogue numbers.

RANGE

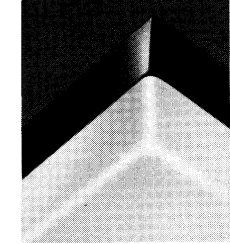
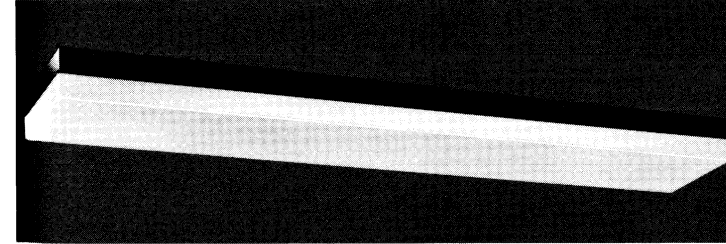
Complete fitting				Components			Dimensions			Approx. weight (incl. tubes)	
Nominal length	Rating	No. of tubes	Circuit	Diffuser Catalogue no.	Batten Catalogue no.	Length	mm	in	kg		lb
1200	4	40W	One	OS	1SMD/1040	1SMD 4	1SMB 1040	1300	51.2	5.1	11.2
1800	6	85W	One	SRS	1SMD/1685	1SMD 6	1SMB 1685	1850	72.8	6.6	14.7
1200	4	40W	Two	QS	2SMWD/2040	2SMWD 4	2SMWB 2040	1300	51.2	8.4	18.5
1800	6	85W	Two	SRS	2SMWD/2685	2SMWD 6	2SMWB 2685	1850	72.8	10.9	24
1800	6	85W	Two	SRS	2SMWE/2685	2SMWE 6	2SMWB 2685	1850	72.8	10.9	24

Format 3SM and 4SM fittings

4SMWO/3685



3SMWD/2685



A wider, two or three lamp version of the 1SM and 2SM fittings with wishbone attachment fixing.

The sheet steel body is bonderized and stove enamelled semi-matt black outside and white inside. Cable entry is by 20mm/25/32in dia. hole (for which a plastic grommet is provided) as shown in the diagrams below.

Fittings should be ceiling mounted but can be suspended on conduits: for diagram of end to end connection see page 1:72

Ambient temperatures at fitting level should not exceed 25°C. All fittings are suitable for 240V 50Hz supplies.

3SMWB 2685

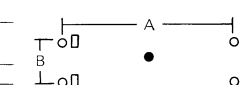
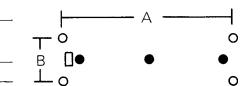
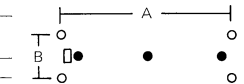
Dimension A	Dimension B
mm in	mm in
900 35.4	100 3.9

4SMWB 3685

Dimension A	Dimension B
mm in	mm in
900 35.4	200 7.9

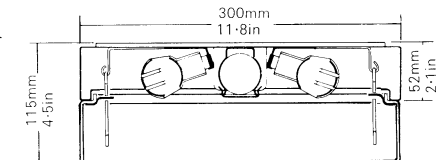
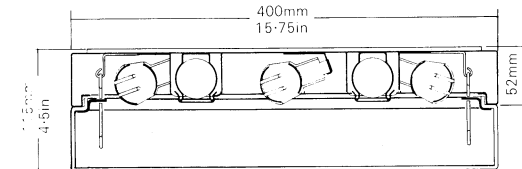
4SMWB 3040

Dimension A	Dimension B
mm in	mm in
610 24	200 7.9



CABLE AND SUSPENSION HOLE ARRANGEMENT

- Suspension and wiring entry
- Wiring entry only
- Terminal block

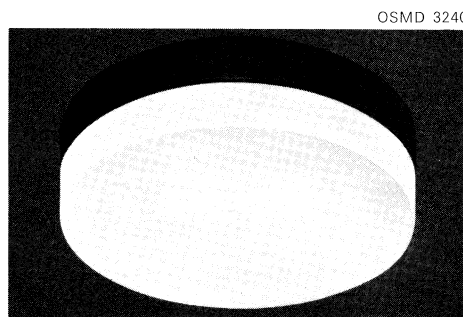
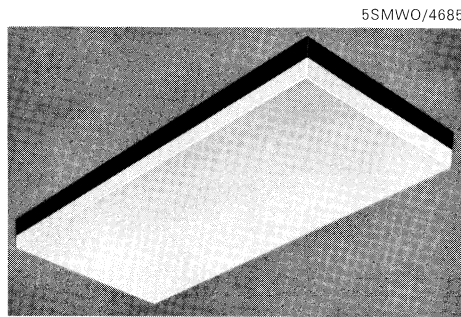


Diagrams are not to scale

Range

Complete fitting				Components			Dimensions			Approx. weight (incl. tubes)	
Nominal length	Rating	No. of tubes	Circuit	Diffuser Catalogue no.	Batten Catalogue no.	Length	mm	in	kg		lb
1800	6	85W	Two	SRS	3SMWD/2685	3SMWD 6	3SMWB 2685	1850	72.8	13.4	29.5
1800	6	85W	Two	SRS	3SMWO/2685	3SMWO 6	3SMWB 2685	1850	72.8	13.4	29.5
1800	6	85W	Two	SRS	3SMWA/2685	3SMWA 6	3SMWB 2685	1850	72.8	13.4	29.5
1200	4	40W	Three	QS	4SMWD/3040	4SMWD 4	4SMWB 3040	1300	51.2	13.7	30.2
1800	6	85W	Three	SRS	4SMWD/3685	4SMWD 6	4SMWB 3685	1850	72.8	17.9	39.5
1800	6	85W	Three	SRS	4SMWO/3685	4SMWO 6	4SMWB 3685	1850	72.8	17.9	39.5
1800	6	85W	Three	SRS	4SMWA/3685	4SMWA 6	4SMWB 3685	1850	72.8	17.9	39.5

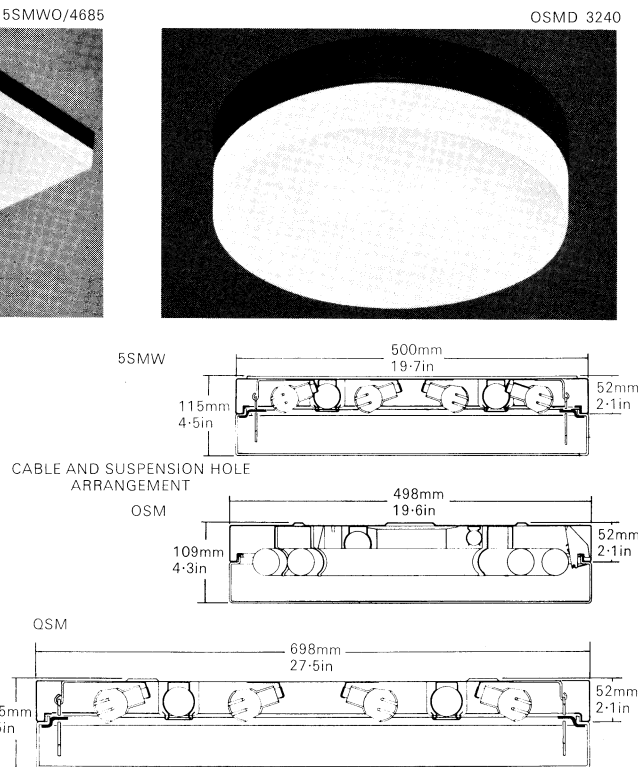
Format 5SM, QSM and OSM fittings



Wider versions of the two previous fittings for use on modular ceilings, and a circular fitting of matching design. Details of the rectangular fittings are shown on pages 1:72 and 73. The circular fitting is supplied in switch start only and the cable entry and conduit suspension slots are centrally placed. For details of continuous mounting see page 1:72. The cable entry of the square fitting is offset on the centre-line by 203mm/8in.

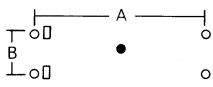
The circular fitting is designed for ceiling and wall mounting only. The circular fitting only is supplied complete with 60W Warm White tube.

Ambient temperatures at fitting level should not exceed 25°C. All fittings are suitable for 240V 50Hz.

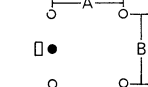


○ Suspension and wiring entry □ Terminal block
● Wiring entry only ⊙ 19.8mm conduit box entry 2in PCD
Diagrams are not to scale

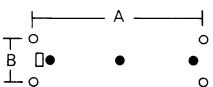
5SMWB 4040	
Dimension A	Dimension B
mm in	mm in
610 24	200 7.9



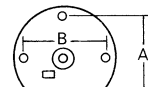
QSMWB 4020	
Dimension A	Dimension B
mm in	mm in
406 16	406 16



5SMWB 4685	
Dimension A	Dimension B
mm in	mm in
900 35.4	200 7.9



OSMD 60	
4.8mm/3/8in dia. on 305mm/12in PCD	



Range		Complete fitting			Components			Dimensions		Approx. weight
Nominal length	Rating	No. of tubes	Circuit	Catalogue no.	Diffuser Catalogue no.	Batten Catalogue no.	Length		(incl. tubes)	
mm	ft						mm	in	kg	lb
1200	4	40W	Four QS	5SMWD/4040	5SMWD 4	5SMWB 4040	1300	51.2	17.9	39.5
1200	4	40W	Four QS	5SMWO/4040	5SMWO 4	5SMWB 4040	1300	51.2	17.9	39.5
1200	4	40W	Four QS	5SMWA/4040	5SMWA 4	5SMWA 4040	1300	51.2	17.9	39.5
1800	6	85W	Four SRS	5SMWD/4685	5SMWD 6	5SMWB 4685	1850	72.8	23.3	51.4
1800	6	85W	Four SRS	5SMWO/4685	5SMWO 6	5SMWB 4685	1850	72.8	23.3	51.4
1800	6	85W	Four SRS	5SMWA/4685	5SMWA 6	5SMWA 4685	1850	72.8	23.3	51.4
600	2	20W	Four QS	QSMWD/4020	QSMWD 2	OSMWB 4020	698	27.5	13.3	29.3
600	2	20W	Four QS	OSMWO/4020	OSMWO 2	OSMWB 4020	698	27.5	13.3	29.3
Circ.		60W	One SRS	OSMD 60*	OSMD Circ.	OSMB 60	498	19.6	7.2	15.8

*Fitting packed complete

Format accessories

Accessories

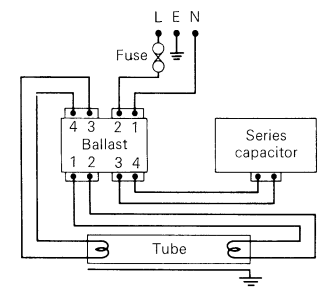
	SM Accessory Catalogue no. (excluding OSMD 60)	OSMD 60 Accessory Catalogue no.
Lampholder	GB1548/K	GB1535
Fused terminal block	GT1265	GT1265
Fuse	2ft 20W- GT1299 4ft 40W- GT1299 6ft 85W- GT1342	4ft 40W- GT1299
Capacitor clip	GY5244	GY5244
Capacitor safety clip	GY5245	GT5245
Starter switch clip	—	GY5274
Loop starter socket	—	GM6064/12
Cable cleat	AC 5363	AC 5363
Lamp clip	—	GY5294
Wiring grommet	AC 5297	AC 5297
Blind grommet	AC 5402	—
Gasket for sides/ mm length	SM 4600/-	—
Gasket for end/ mm length	SM 4601/-	—

Replacement control gear

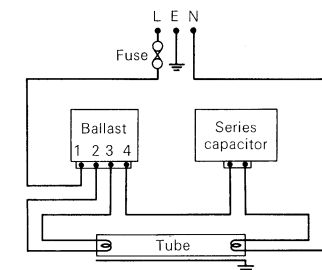
These items are selected from the extensive range of control gear stocked for ready availability. The reference numbers quoted will be different from those marked on the control gear in the fitting, but the units are equally applicable to Format fittings.

	QS Unit	Choke(s) or Ballast	Capacitor(s)	Starter Switch
95W 8ft	Single tube circuit	1-B1/85	1-GC2226	—
	Twin tube circuit	2-B1/85	2-GC2226	—
85W 6ft	Single tube circuit	1-BU/685	1-GC2220	—
	Twin tube circuit	2-BU/685	2-GC2220	—
40W 4ft	Single tube circuit	1-QS/40	1-GC2224	—
	Twin tube circuit	2-QS/40	2-CU/40	1-GC2222
20W 2ft	Twin tube circuit	1-QS/220	1-CU/40	1-GC2224
OSMD 60				
60W Circular	Single tube circuit	1-CU/65	GC2241	155/500

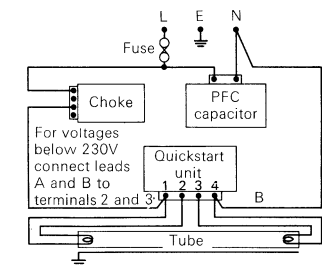
230/240V 50Hz circuit diagrams



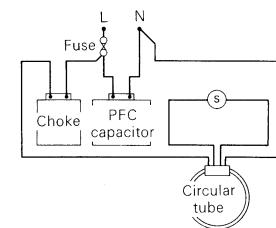
Single 8ft 85W Quickstart (QS) circuit, combined choke and transformer with essential series capacitor



Semi-resonant start (SRS) circuit for 6ft 85W with essential circuit capacitor

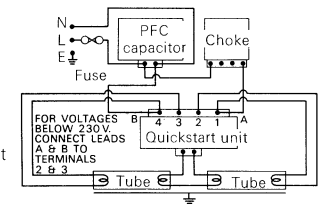


Tapped quickstart (QS) transformer circuit with PFC capacitor for 4ft 40W



Starter switch (SS) circuit with PFC capacitor for 60W

Twin tube Quickstart (QS) circuit with PFC capacitor for 2ft 20W



Introduction

The new range of Recessed Troffer Fittings incorporates all the merits of previous recessed fittings but now permits even greater flexibility in methods of light control and maintaining modular discipline for both metric and imperial modules. To this should be added the facility which can, if required, be provided for air extract capabilities. The New Format successfully unites functional demands of strength, simplicity of installation and maintenance with elegance of appearance and scope for light distribution.

Light Control

For efficient control of light output from the range of fittings, the lighting engineer is offered a wide choice of attachments, each with its own particular application.

An Opal diffuser, two Prismatic Controllers and a Polarized Controller are offered complete with a simple trim frame for attachment direct to the fitting, by means of wishbone springs.

Trimless diffusers, sonically welded with opal sides with a choice of opal or prismatic bases, offer a wider distribution.

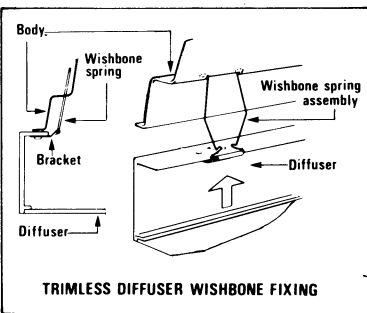
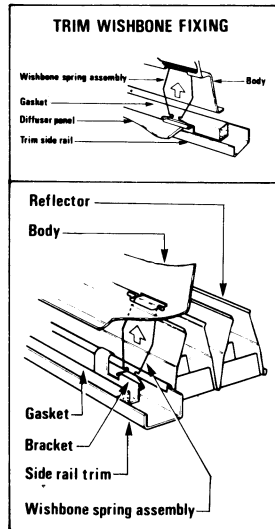
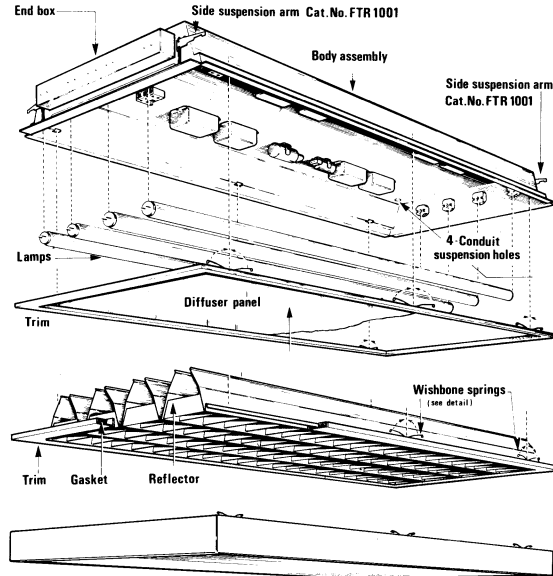
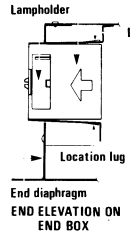
For the 4-tube fittings a symmetrical low brightness reflector giving a wide "batwing" distribution is available. As an alternative there is a low brightness louver, with a normal distribution.

Modules

The New Format maintains its flexibility by the selection of light controllers and by its ready application to both metric and imperial ceiling modules.

Only one standard body need be used for any given length, the differences being catered for by the choice of a metric or an imperial attachment. Wishbone springs are used throughout the range to achieve a strong "positive" captive action. This, of course, is an advantage for maintenance when removal of the attachment can be satisfactorily handled by one man.

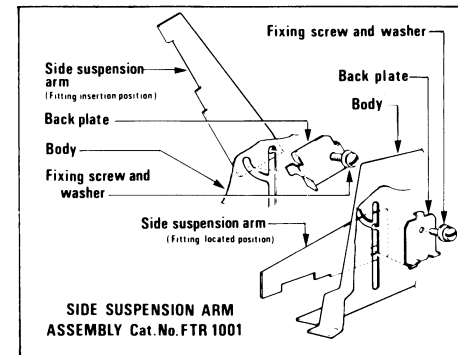
Lengths, too, follow the popular sizes for ceiling modules, 600mm, 1200mm and 1800mm (2ft, 4ft and 6ft). Standard module widths are 300mm and 600mm (1ft and 2ft).



The FTRA series is available for use with metric (300mm) module width or imperial (1ft) module width. Standard fitting lengths are 1200mm (4ft) and 1800mm (6ft) with a choice of 1 lamp or 2 lamp fittings. The diffuser attachments, either opal or prismatic, are supplied complete with a frame for direct attachment, by means of "wishbone" springs to the Troffer body. Attachments are available in both metric and imperial sizes. When specifying attention should be paid to the ceiling module (and nominal body size) with either metric or imperial attachments ordered as appropriate. The fitting body is supplied complete with control gear and is common to metric and imperial modules for any nominal length.

Air-handling fittings

We can also supply the fitting bodies and attachment frames (for the full range of diffusers) suitable for air extract. Full details on request.

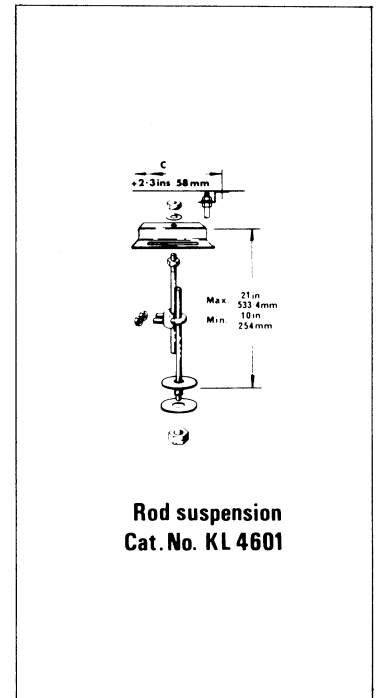


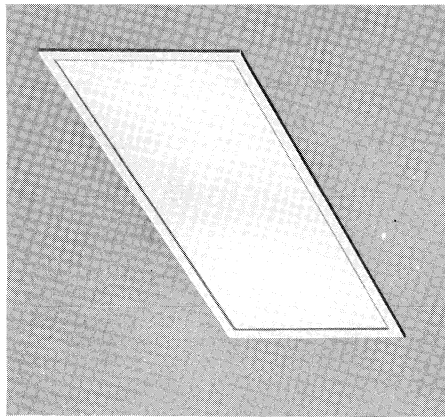
Suspension

Three methods of suspension are allowed for:

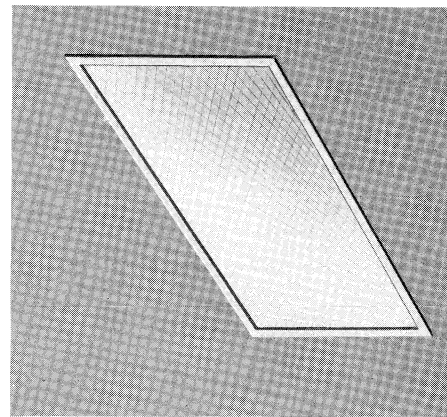
1. Using standard 20mm diameter conduit
2. Using rod suspension set KL 4601
3. Using side suspension arm set FTR 1001 for direct suspension from the top edge of the 'T' bar in a lay-in grid ceiling.

Fittings are supplied complete with control gear and an end box which covers the lampholder is pushed over locating lugs during installation.

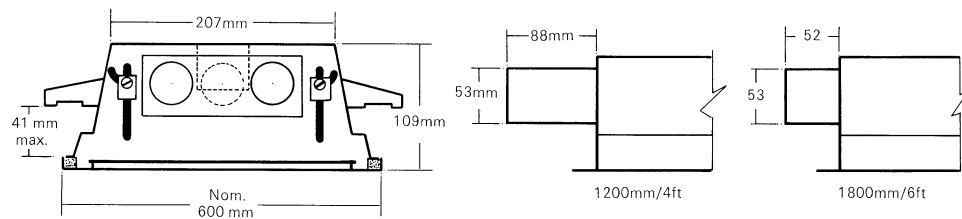
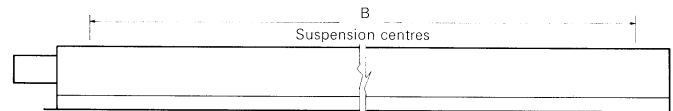
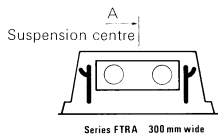




OPAL
FTRA/O 140



PRISMATIC
FTRA/ P140



Range FTRA Series—300mm module & 1ft module.

Nominal length	No. of tubes	Rating	Circuit	Cat. no.	Housing c/w gear cat. no.	Metric attachment no.	Imperial attachment no.	Attachment description	Fixing centres A(mm) B(mm)
1200 4 1	40	SRS	FTRA/O 140	FTRA 140	FTRO 34	FTRP 34	FTRP 14	Opal c/w Frame	900
1200 4 1	40	SRS	FTRA/P 140	FTRA 140	FTRP 34	FTRP 14	FTRP 14	Prismatic (K12) c/w Frame	900
1800 6 1	85	SRS	FTRA/O 1685	FTRA 1685	FTRO 36	FTRP 36	FTRP 16	Opal c/w Frame	1350
1800 6 1	85	SRS	FTRA/P 1685	FTRA 1685	FTRO 36	FTRP 36	FTRP 16	Prismatic (K12) c/w Frame	1350
1200 4 2	40	SRS	FTRA/O 240	FTRA 240	FTRO 34	FTRP 34	FTRP 14	Opal c/w Frame	900
1200 4 2	40	SRS	FTRA/P 240	FTRA 240	FTRO 34	FTRP 34	FTRP 14	Prismatic (K12) c/w Frame	900
1800 4 2	85	SRS	FTRA/O 2685	FTRA 2685	FTRO 36	FTRP 36	FTRP 16	Opal c/w Frame	1350
1800 4 2	85	SRS	FTRA/P 2685	FTRA 2685	FTRO 36	FTRP 36	FTRP 16	Prismatic (K12) c/w Frame	1350

Cat. No. Description
 FTR 1001 Side Suspension arm set (4 per set) Cat. No. FTR 1001 is for complete set of 4 suspension arms
 KL 4601 Rod suspension set—2 required per fitting.

The FTRB series of The New Format Troffer Range is available for use with metric (600mm) module width or imperial (2ft) module width. Standard fitting lengths are 600mm (2ft), 1200mm (4ft) and 1800mm (6ft). These fittings are all 3 tube versions.

Framed diffuser attachments are attached to the Troffer body by means of 'wishbone' springs and there are opal, a choice of two prismatic controllers and a polrized attachment in this range. In addition there are 2 trimless diffusers one with opal base and sides and the other with a prismatic base and opal sides. Attachments are available in both metric and imperial sizes. When specifying, attention should be paid to the ceiling module nominal body size with either metric or imperial attachments ordered as appropriate. The fitting body is supplied complete with control gear and is common to metric and imperial modules for any nominal length.

Air-handling fittings

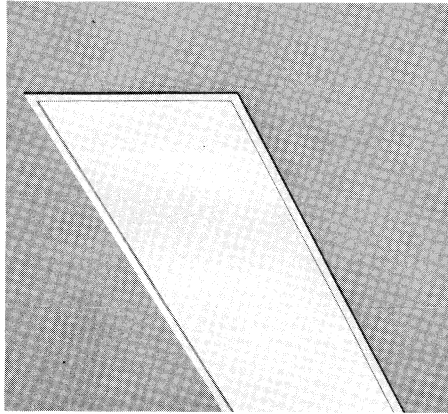
We can also supply the fitting bodies and attachment frames (for the full range of diffusers) suitable for air extract. Full details on request.

FTRB series 600mm module

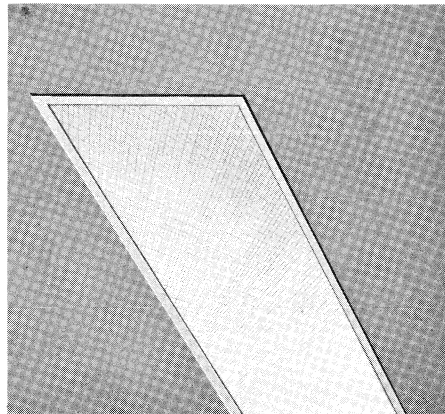
Nominal length	No. of tubes	Rating	Circuit	Catalogue no.	Housing c/w gear Catalogue no.	Metric attachment no.	Imperial attachment no.	Attachment description	Fixing centres A mm B mm
600 2 3	20	QS	QS	FTRB/O 320	FTRB 320	FTRO 62	FTRO 22	Opal c/w frame	450 450
600 2 3	20	QS	QS	FTRB/P 320	FTRB 320	FTRP 62	FTRP 22	K12 c/w frame	450 450
600 2 3	20	QS	QS	FTRB/H 320	FTRB 320	FTRH 62	FTRH 22	K19 c/w frame	450 450
600 2 3	20	QS	QS	FTRB/Z 320	FTRB 320	FTRZ 62	FTRZ 22	Polrized c/w frame	450 450
600 2 3	20	QS	QS	FTRB/D 320	FTRB 320	FTRD 62	FTRD 22	Opal trimless	450 450
600 2 3	20	QS	QS	FTRB/E 320	FTRB 320	FTRE 62	FTRE 22	K12/Opal trimless	450 450
1200 4 3	40	SRS	SRS	FTRB/O 340	FTRB 340	FTRO 64	FTRO 24	Opal c/w frame	450 900
1200 4 3	40	SRS	SRS	FTRB/P 340	FTRB 340	FTRP 64	FTRP 24	K12 c/w frame	450 900
1200 4 3	40	SRS	SRS	FTRB/H 340	FTRB 340	FTRH 64	FTRH 24	K19 c/w frame	450 900
1200 4 3	40	SRS	SRS	FTRB/Z 340	FTRB 340	FTRZ 64	FTRZ 24	Polrized c/w frame	450 900
1200 4 3	40	SRS	SRS	FTRB/D 340	FTRB 340	FTRD 64	FTRD 24	Opal trimless	450 900
1200 4 3	40	SRS	SRS	FTRB/E 340	FTRB 340	FTRE 64	FTRE 24	K12/Opal trimless	450 900
1800 6 3	85	SRS	SRS	FTRB/O 3685	FTRB 3685	FTRO 66	FTRO 26	Opal c/w frame	450 1350
1800 6 3	85	SRS	SRS	FTRB/P 3685	FTRB 3685	FTRP 66	FTRP 26	K12 c/w frame	450 1350
1800 6 3	85	SRS	SRS	FTRB/H 3685	FTRB 3685	FTRH 66	FTRH 26	K19 c/w frame	450 1350
1800 6 3	85	SRS	SRS	FTRB/Z 3685	FTRB 3685	FTRZ 66	FTRZ 26	Polrized c/w frame	450 1350
1800 6 3	85	SRS	SRS	FTRB/D 3685	FTRB 3685	FTRD 66	FTRD 26	Opal trimless	450 1350
1800 6 3	85	SRS	SRS	FTRB/E 3685	FTRB 3685	FTRE 66	FTRE 26	K12/Opal trimless	450 1350

Accessories

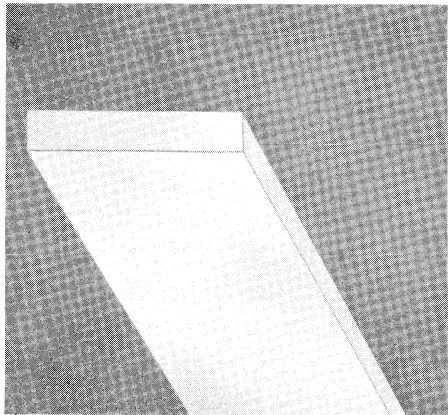
Catalogue no. Description
 FTR 1001 Side suspension arm set (4 per set) Note. Catalogue no. FTR 1001 is for complete set of 4 suspension arms.
 KL 4601 Rod suspension set—4 required per fitting



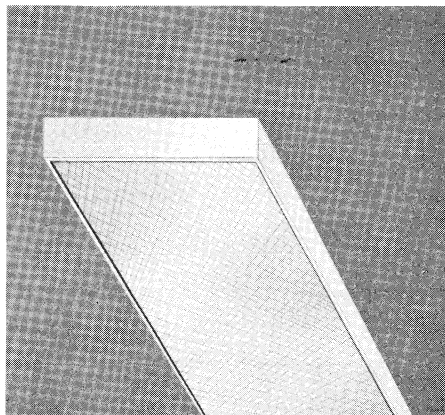
OPAL FTRB/O 340 (not illustrated—Polirized FTRB/Z 340)



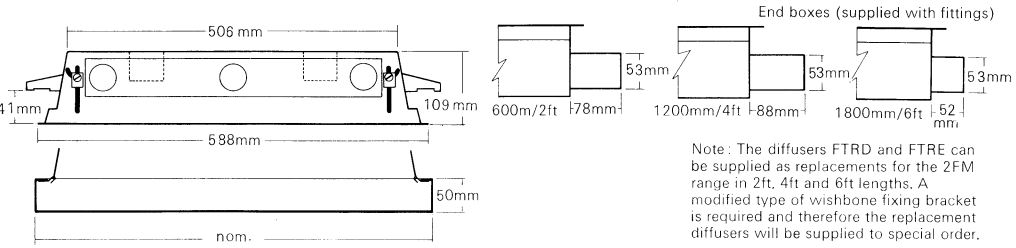
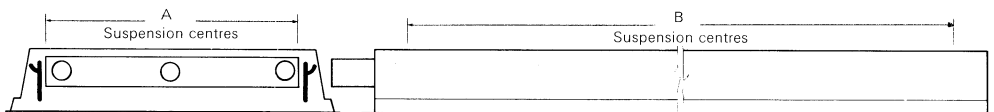
PRISMATIC FTRB/P 340



OPAL (trimless) FTRB/D 340



PRISMATIC (trimless) FTRB/E 340



The FTRB series of the New Format Range is available for use with metric (600mm) module width or imperial (2ft) module width. Standard fitting lengths are 600mm (2ft), 1200mm (4ft) and 1800mm (6ft). Those fittings illustrated are all 4 tube versions. Framed diffuser attachments are attached to the Troffer body by means of 'wishbone' springs and there are opal, a choice of 2 prismatic controllers and a polirized attachment in this range. In addition there are 2 trimless diffusers, one with opal base and sides and the other with prismatic base and opal sides. For the 4 tube versions only, a low brightness louver and a symmetrical low brightness reflector system (with a 'batwing' distribution) are also available. Attachments are available in both metric and imperial sizes. When specifying attention should be paid to the ceiling module and nominal body size and either metric or imperial attachments ordered as appropriate. The fitting body is supplied complete with control gear and is common to metric and imperial modules for any nominal length.

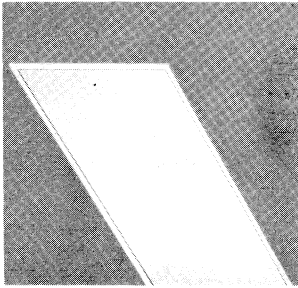
Air-handling fittings
We can also supply the fitting bodies and attachment frames (for the full range of diffusers) suitable for air extract. Full details on request.

Accessories
Catalogue no. FTR 1001
KL 4601
Description
Side suspension arm set (4 per set)
Note : Catalogue no. FTR 1001 is for complete set of 4 suspension arms
Rod suspension set—4 required per fitting

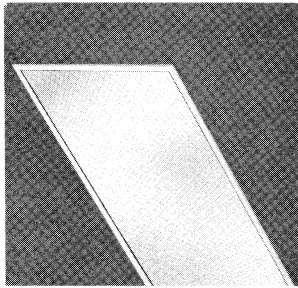
RANGE FTRB series — 600mm module = 2ft module

Nominal length	No. of tubes	Rating	Catalogue Circuit no.	Housing c/w gear catalogue no.	Metric attachment no.	Imperial attachment no.	Attachment description	Fixing centres A mm	B mm	
600	2	4	20 QS	FTRB/O 420	FTRB 420	FTR O 62	FTRO 22	Opal c/w frame	450	450
600	2	4	20 QS	FTRB/P 420	FTRB 420	FTR P 62	FTRP 22	K12 c/w frame	450	450
600	2	4	20 QS	FTRB/H 420	FTRB 420	FTR H 62	FTRH 22	K19 c/w frame	450	450
600	2	4	20 QS	FTRB/Z 420	FTRB 420	FTR Z 62	FTRZ 22	Polirized c/w frame	450	450
600	2	4	20 QS	FTRB/D 420	FTRB 420	FTR D 62	FTRD 22	Opal trimless	450	450
600	2	4	20 QS	FTRB/E 420	FTRB 420	FTR E 62	FTRE 22	K12/Opal trimless	450	450
1200	4	4	40 SRS	FTRB/O 440	FTRB 440	FTR O 64	FTRO 24	Opal c/w frame	450	900
1200	4	4	40 SRS	FTRB/P 440	FTRB 440	FTR P 64	FTRP 24	K12 c/w frame	450	900
1200	4	4	40 SRS	FTRB/H 440	FTRB 440	FTR H 64	FTRH 24	K19 c/w frame	450	900
1200	4	4	40 SRS	FTRB/Z 440	FTRB 440	FTR Z 64	FTRZ 24	Polirized c/w frame	450	900
1200	4	4	40 SRS	FTRB/D 440	FTRB 440	FTR D 64	FTRD 24	Opal trimless	450	900
1200	4	4	40 SRS	FTRB/E 440	FTRB 440	FTR E 64	FTRE 24	K12/Opal trimless	450	900
1200	4	4	40 SRS	FTRB/L 440	FTRB 440	FTR L 64	FTRL 24	Low brightness louver	450	900
1200	4	4	40 SRS	FTRB/X 440	FTRB 440	FTR X 64	FTRX 24	Symmetrical low brightness reflector (batwing distribution)	450	900
1800	6	4	85 SRS	FTRB/O 4685	FTRB 4685	FTR O 66	FTRO 26	Opal c/w frame	450	1350
1800	6	4	85 SRS	FTRB/P 4685	FTRB 4685	FTR P 66	FTRP 26	K12 c/w frame	450	1350
1800	6	4	85 SRS	FTRB/H 4685	FTRB 4685	FTR H 66	FTRH 26	K19 c/w frame	450	1350
1800	6	4	85 SRS	FTRB/Z 4685	FTRB 4685	FTR Z 66	FTRZ 26	Polirized c/w frame	450	1350
1800	6	4	85 SRS	FTRB/D 4685	FTRB 4685	FTR D 66	FTRD 26	Opal trimless	450	1350
1800	6	4	85 SRS	FTRB/E 4685	FTRB 4685	FTR E 66	FTRE 26	K12/Opal trimless	450	1350
1800	6	4	85 SRS	FTRB/L 4685	FTRB 4685	FTR L 66	FTRL 26	Low brightness louver	450	1350
1800	6	4	85 SRS	FTRB/X 4685	FTRB 4685	FTR X 66	FTRX 26	Symmetrical low brightness reflector (batwing distribution)	450	1350

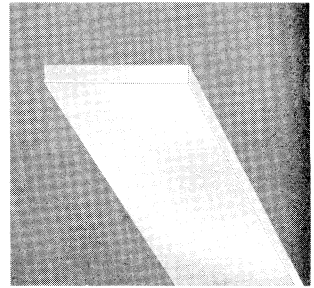
New Format



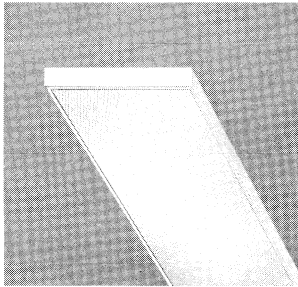
FTRB/O 440
(not illustrated FTRB/Z 440)



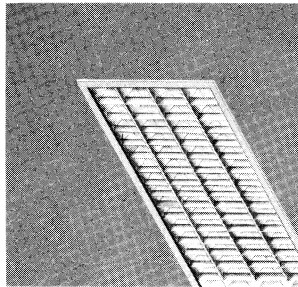
FTRB/P 440 (FTRB/H 440)



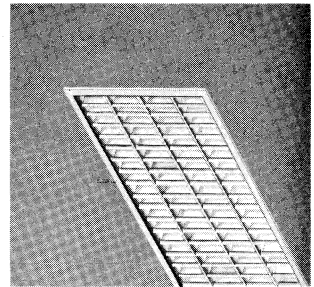
FTRB/D 440



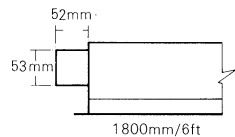
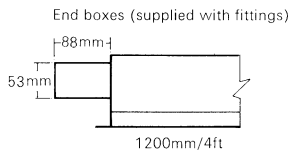
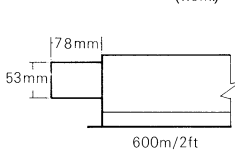
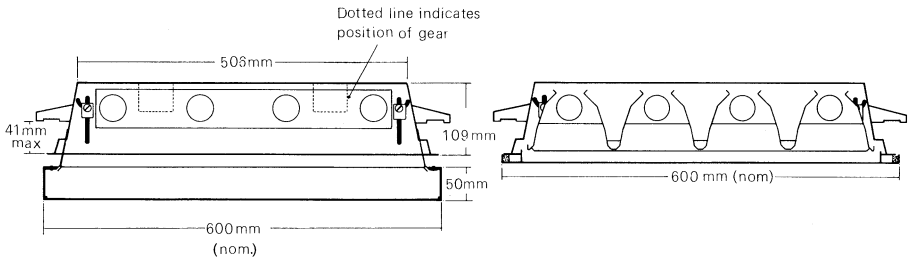
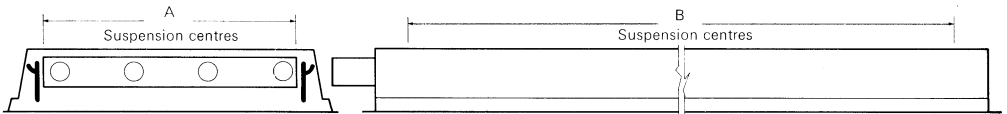
FTRB/E 440



FTRB/L 440



FTRB/X 440



Emergency Lighting

At the time of the Catalogue going to print, there is no one clear-cut standard for emergency lighting. A large number of publications, ranging from Acts of Parliament to Codes of Practices, to British Standards, referring to safety precautions in cinemas, boarding houses, factories, etc. all contain clauses on emergency lighting. However, the definitions generally in use are as follows:

Emergency Lighting

Lighting which is provided in addition to, or as an alternative to, normal lighting to assist safe, unobstructed means of escape and/or safe environment.

Emergency lighting may use one of two systems:

Central System

A number of luminaires operating from a central secondary power supply.

Independent System

Each luminaire contains a secondary power source, and will function independently of all other luminaires in the system.

Within either system, the emergency lighting may be defined as either:

Maintained

Emergency lighting lamps/tubes are illuminated at all times when persons are on the premises.

or:

Non-Maintained

An emergency lighting system in which the lamp/tube is energised only when the normal supply is interrupted.

The fittings used in the latter system may be one of the following:

Sustained Emergency Lighting Luminaires

A luminaire containing both normal lighting and non-maintained emergency lighting.

Non-Sustained Lighting Luminaire

A luminaire containing non-maintained emergency lighting only.

The most common, simplest, and well established means of emergency lighting is the non-maintained system, using non-sustained fittings. These fittings may be either (1) *independent units*, with integral batteries, or (2) part of a *central system*, with one battery operating a number of luminaires.

(1) INDEPENDENT SYSTEM

Emergency Lighting Bulkhead

The Escort fluorescent bulkhead fitting (for full details of construction, see page 2:6) has been modified for emergency lighting use. This robust, but attractive fitting is suitable for use in any commercial application, indoors or out, where emergency lighting may be required in the event of mains failure. The fitting is non-sustained, which means that no light is emitted during normal healthy mains conditions, but a standard 300mm (12in) 8W tube is instantaneously lit on mains failure. On mains recovery, the internal battery is recharged automatically.

Two versions are available — a 3 hour and a 1 hour type. Following a complete discharge of the batteries the 3 hour version will give 1 hour of emergency light after 8 hours of normal mains supply, and the complete 3 hours after 24 hours charge. The 1 hour version will give 15 to 20 minutes of emergency light after 8 hours charging following complete discharge, which should be sufficient to evacuate small premises in an emergency. After 24 hours charge it will give the full 1 hour.

Range

Catalogue Number	Description
FBS 18	1 hour bulkhead c/w 8W tube
FBL 18	3 hour bulkhead c/w 8W tube

(2) CENTRAL SYSTEM

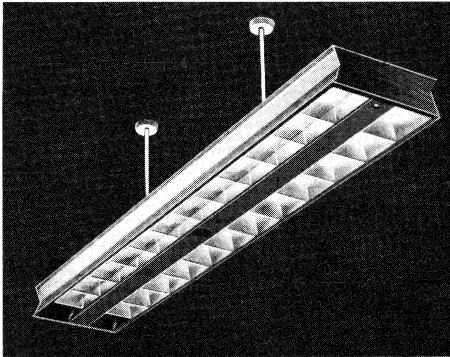
Transistorized Fittings

When used in conjunction with the battery charger (catalogue number G.R.2463, see Section 10) and a 12V battery, transistorized fittings provide a useful non-maintained central emergency lighting system.

Fittings suitable for use in this system are the Nomad (see page 1:29 for details) and 12V versions of the Minipack (details of 240V fittings on page 1:27), which can be supplied to special order.

For details of the above mentioned fittings, and for further advice on your emergency lighting requirements, please contact your local order office.

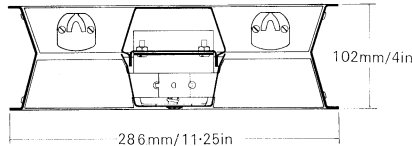
This fitting has been designed for various applications and is equally suitable for use in hospital wards or without the centrally mounted night light in commercial applications. Hospital lighting is a specialised subject and generally requires special consideration for each particular project. Thorn Lighting have designed and manufactured a considerable number of "special" fittings for various hospital installations. Further information and prices for all these fittings can be obtained on application to your local Thorn Lighting office.



OFL/Q2065

Construction of the main spine, containing the Quickstart control gear, is in steel. The main reflector, attached to the underside of the spine is in satin etched and anodised aluminium, and incorporates steel baffles, painted BS.8-089 colour, the assembly being easily removable for cleaning. The side reflectors are also satin etched and anodised aluminium. If required, the reflector is available without cross baffles. Particular attention has been paid to minimising projections on all surfaces, in order that in situ cleaning can be easily and thoroughly carried out and horizontal surfaces have also been reduced to a minimum.

The two fluorescent tubes can be simply removed without disturbing any part of the fitting. A centrally arranged night lighting fitting is incorporated into the spine projecting through the main reflector, and screening for the 25w night light is provided by a stove enamelled cylinder.



RANGE AND DIMENSIONS

Nominal Length	Rating	Circuit	Cat. No.	Length		Fixing centres	
				mm.	ins	mm	ins
5ft	65W Twin	Resonant Start	OFLQ2065	1567	61.75	610	24

Isora Division products

Introduction

In recognition of the extent to which lighting and air terminal equipment have become integrated with the ceiling, Thorn Lighting has designed integrated lighting/ceiling systems and is actively engaged in developing new systems to meet this market.

ARENA

Arena represents the full integration of lighting, ceiling and air handling facilities – a system which permits the use of acoustic tiles and metal tray panels of standard and therefore readily obtainable sizes.

COFFERLIGHT

Cofferlight selects the 5ft SRS Pop Pack fitting as the lighting unit in a recessed coffered ceiling system based on a 1200 x 1800mm module.

METRI LUX

Metri lux provides continuous recessed lighting, again using Pop Pack fittings and Atlantic fittings as well to provide a simple suspended ceiling and lighting scheme with a

choice of metal tray panels, acoustic glass fibre panels or metal louver blades. The system is based on an integral trunking support which will accommodate Trakline.

OTHER CEILING SYSTEMS

The extensive Isora range of luminous ceiling products can be categorised in two main groups – the open louvered systems and the closed translucent systems.

Open systems

Cancan, complete with a range of lampholder attachments for the Decor Spot, Decor Round and Reflector spot lamps, provides an open louver system for achieving both decorative effects and functional illuminance.

Leaf-Lite, a non-modular system, also allows a variety of design possibilities with interesting visual effects.

Aluminium Louvers, in a wide variety of cell sizes and textured configurations, permit low brightness ceilings or featured areas.

Circlgrid and Paragrid, two related open louvered panels, are available complete with their own aluminium support grid.

Closed systems

Thermalucet is a plain double-layered translucent diffusing panel suitable for many industrial and commercial applications.

The Architectural range of panels provides a variety of design shapes for overall luminous ceilings or for featured 'light bays'.

Polarized ceiling panels in two standard patterns – Dome and Plaza – complete the translucent range and give the added benefits of visual performance achieved by polarized lighting.

SUPPORTING GRIDS

The introduction of Isora-grid in two table sizes, 25mm and 40mm, gives a ceiling support grid suitable for all standard types of panel.

The Spaceliner grid remains available for use with Thermalucet panels.

ARENA Integrated Ceiling System

In most conventional suspended ceiling systems using recessed lighting fittings either the electrical contractor first hangs the lighting fittings from the structural ceiling and the ceiling contractor installs his tiles around them, or the ceiling contractor erects his ceiling first, leaving openings within which the electrician places his fittings. Either method is expensive, requiring a large number of suspension points, time is wasted while men of different trades wait for each other to finish, and almost always adjustments have to be made in the final stages. When ventilation or air conditioning is also required, the situation is still further complicated. Yet another sub-contractor is involved, and his ducting which must be installed before either lighting fittings or suspended ceilings are in place may conflict with the positioning of these components or their suspensions.

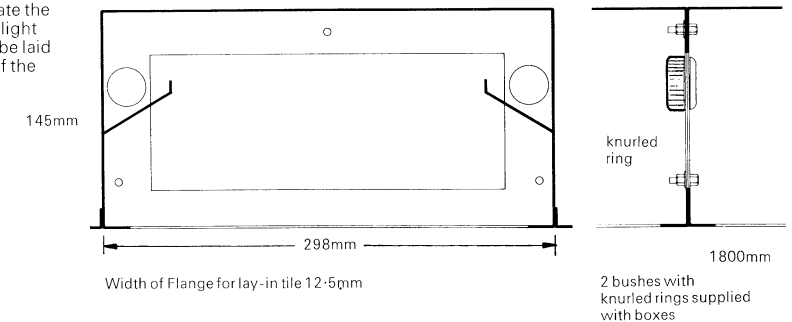
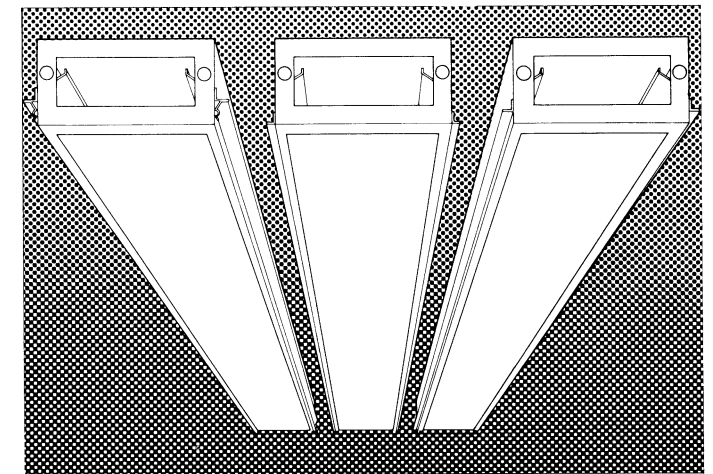
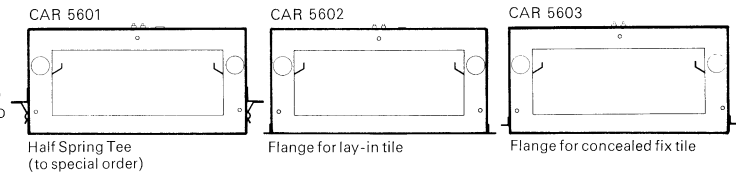
In the ARENA system the planning starts with the lighting layout. This determines the position of all components, and since the ceiling-boxes form the main structural support for the suspended ceiling, the number of suspension points for the latter is much reduced. The air ducting is designed in relation to the ceiling construction, and flexible connections can be made to terminal equipment at an early stage. The electrician's work is to provide wiring in the ceiling-boxes already installed and to the trunking runs (if any) and finally installing the gear channels, fluorescent tubes and diffusers. The whole planning and installation process is shortened and simplified with a consequent saving in time and money.

The Ceiling-Box

This is made flangeless with half spring-tees on each side to accept metal panels or with two types of flange to accept lay-in or concealed fix tiles. It is of modular tile width and it is constructed of sheet steel to the dimensions shown and stove enamelled white.

Apertures are provided at each end and in the top for air-extraction and the latter can be adapted to accept ducting. Air flow is controlled by a baffle plate. Two 26mm dia. holes are provided at each end to give access to the internal wiring channels and three holes are provided at either end to allow the boxes to be secured to each other or to air supply or extract-boxes by means of 5 SI nuts and bolts. Suspension is by hook bolts, entering four slots arranged in pairs at either end of 180mm x 1400mm centres. They are included in the ceiling-box assembly.

Internal wiring channels are provided and also support the gear-trays carrying fluorescent lamps. Clip-in covers can be supplied to order to isolate the wiring. Various types of light controlling devices can be laid on the internal flanges of the ceiling-box.

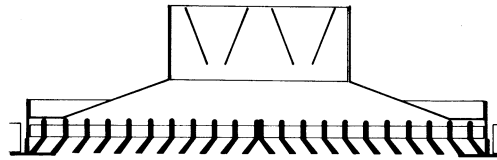


ARENA Ceiling Supporting and Air-flow components

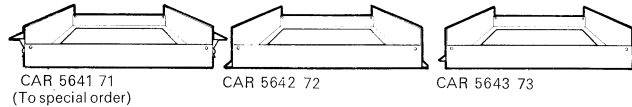
Air Supply-Frames

These are made of the same width as the ceiling-box and are designed to be installed between and in line with them. The assembly consist of four parts all of which are made in 300mm (or 12in) and 600mm (or 24in) sizes.

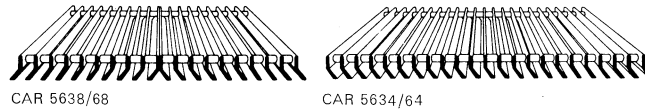
1 An open supporting frame, secured to the ends of the ceiling-boxes by nuts/bolts, and with similar fixing arrangements for ceiling tiles.



Assembly of Supply air box

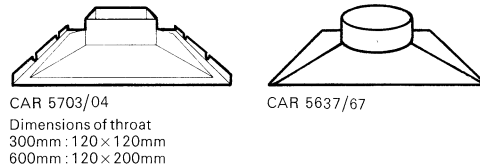


2 An extruded anodised aluminium grille which rests within it. Two types are available, with the blades arranged for single or two-way throw. They are installed with the blades in line with the major axis of the ceiling-boxes.



3 A 'cone' which fits on the grille and feeds air from the ducting by means of a flexible connection.

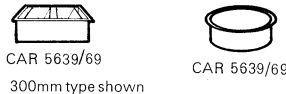
Where 600mm air supply-boxes and grilles are used it is possible to install a 300mm cone centrally, allowing the ends of the grille to act as an air-extract by-pass. Alternatively a blanking-piece is provided for use above the grille in such a case.



CAR 5703/04
Dimensions of throat
300mm : 120 x 120mm
600mm : 120 x 200mm

CAR 5637/67

4 An opposed-blade damper fits in the throat of the cone to control air flow. This is an essential device if individual dampers are not installed in the duct-work. The damper blades must be parallel with grille.



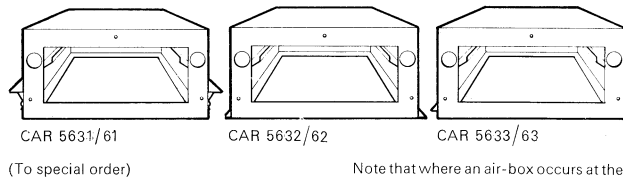
CAR 5639/69
300mm type shown

CAR 5638/68

Note that 26mm dia. (or 1 in dia.) conduits must be provided by the electrical contractor to connect the wiring channels in the ceiling-boxes on either side of the supply-boxes.

Air Extract-Boxes

A 300mm (or 12in) or 600mm (or 24in) long closed top version of the ceiling-box, in which can be rested a grill similar to those described above. These boxes are used when the ceiling-box has a closed diffuser and are designed to allow air to pass over the lamps and control gear and out through the opening in the top of the ceiling-box. They are not necessary where a low-brightness reflector or a louver is used.



CAR 5631/61
(To special order)

CAR 5632/62

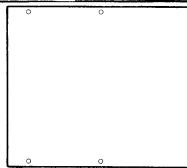
CAR 5633/63

Note that where an air-box occurs at the end of a row of ceiling-boxes it may need extra support to avoid sagging. To reduce light leakage the extract boxes are finished with white flange and black interior.

Grilles may be orientated in either direction.

Top Flow Plate

A plate is provided to restrict or obstruct air-flow through the opening in the top of the ceiling-box. Used in one position it allows 50% air-flow, in the other it blanks the hole off completely. (Supplied with ceiling box).



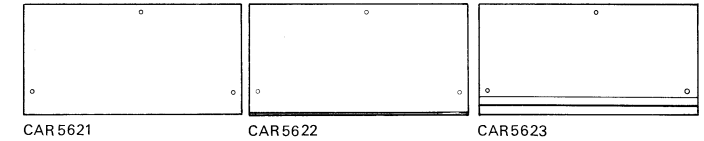
ARENA Ceiling Supporting and Airflow components

End Plates

These are used to close the ends of runs of Ceiling Units. They are made flange-less and with flush and recessed flanges as above, and allow through wiring.

The end-plates are also required on the ends of the ceiling-boxes adjacent to the air-supply boxes and fill-in frames to avoid light loss.

All end plates are supplied fitted with membrane grommets.



CAR 5621

CAR 5622

CAR 5623

Infill Plates

These are designed to fill the gaps between the ceiling units and diffuser-boxes or at the edge of the ceiling. They are made in two sizes, 300mm (or 12in) and 600mm (or 2ft) long.

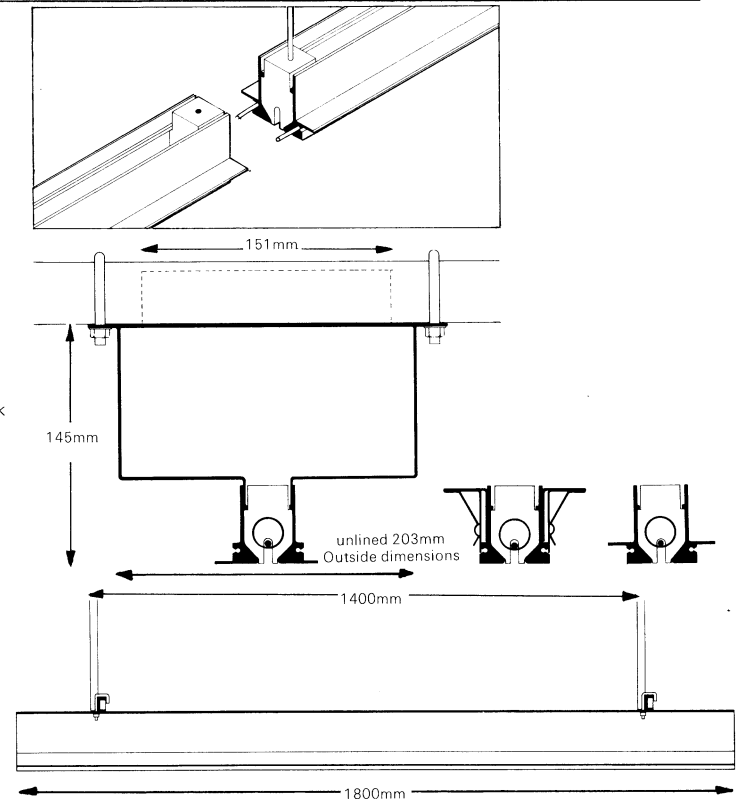
They may also be used to accept 'speakers' for public address systems etc., and comprise of air supply frames fitted with the appropriate infill plates.

Flowline Air Diffusers

These are made in extruded aluminium in three types as the ceiling-boxes. They incorporate a roller device which can be used to control air-flow both in direction and quantity. Their external cross sections match those of the Atlas Lightweight Trunking system and they are 1800mm (or 6ft) long and connected and aligned with one another by dowels. Active lengths required must be specified.

An adaptor plate is provided to connect them to Atlas Lightweight Trunking. The active lengths of Flowline form part of the air supply assemblies which are rigidly suspended from the same support frame as the ceiling-boxes by hook bolts attached to flanges on the top of the boot. The boots are 1800mm (or 6ft) long unlined, and are supplied already attached to a standard 1800mm (or 6ft) length of Flowline. Shorter boots may be supplied to special order.

Blanking sections of Flowline are provided in 300mm (or 12in) and 600mm (or 2ft) lengths, and can be connected to and aligned with active lengths or to one another by dowels as described above. They normally need no extra support, but intermediate supports may be required where a span of more than 1200mm (or 4ft) is required.



Gear Trays

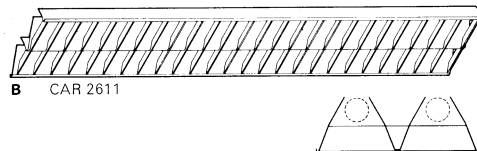
Carry two 6ft 85W fluorescent lamps and gear. Made of sheet steel, stove enamelled white, they can be hooked on to the through-wiring channels in the ceiling-box. Wiring is of heat-resisting PVC cable, terminating in a fused three-way terminal block for connection to the through-wiring. Standard gear-trays are suitable for use on 240V 50Hz supplies. Other voltages on application.



A CAR 2685

Low-Brightness Louver/Reflector Assembly

A twin lamp assembly in anodised aluminium with white cross baffles which rests on the inner flange of the ceiling-box. It is designed to allow a free air-flow through the apertures in the top of the fitting. This type of control is suggested for situations where low glare ratings are specified.



B CAR 2611

Prismatic Panels

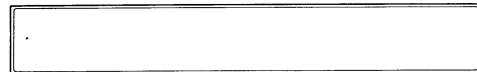
Two patterns of prismatic panels to give varying degrees of light control are catalogued and fit in the inner flange of the ceiling-box. Other types are available to special order. When this type of controller is used in air-handling fittings, air-extract-boxes must be installed between the light-boxes.



CAR 2612 and CAR 2613

Opal Dish Diffusers

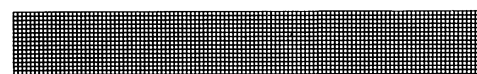
A simple lay-in dish for situations where low glare ratings are not required. Air-extract-boxes are necessary if this type of diffuser is used in an air-handling fitting.



CAR 2614

Specular Plastic Low-Brightness Louver

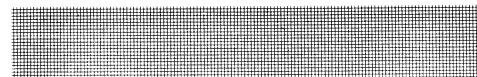
A metalised plastic louver with 12mm square cells of parabolic cross section is used to produce a low-brightness surface and is suitable for situations where a very low-brightness louver of elegant appearance is required. Since the air-flow through the louvers is unrestricted air-boxes are not required.



CAR 2615

Egg Crate Louvers

A conventional louver in satin anodised aluminium and plastic suitable for open air-handling fittings. For use where continuous unbroken lines of fittings are required with moderate glare ratings, see note C.

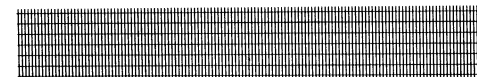


CAR 2616 and CAR 2617

Line-Text Louver

A white stove-enamelled aluminium louver for use where a more interesting texture is required. The cross blades are deepened to give a slotted appearance.

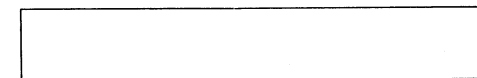
Note: Both the above louvers can be obtained in different finishes to order: other types are also available.



CAR 2618

Polrized Panel

A flat sheet Polrized Panel can be used in installations where control of "veiling glare" and reductions in "direct glare" are sought: Air-extract boxes are necessary if this type of diffuser is used in an air-handling fitting.



CAR 2919

A Note: a three-lamp gear-tray can be provided on demand, but is only suitable for use with louvers or air-handling situations. Thorn Isora Division should be consulted before specifying this unit. Lamps not included.

B Note: Both the above aluminium louvers can be obtained in different finishes to order: other types are also available.

C Note: Both the above louvers can be obtained in different finishes to order: other types are also available.

Lighting/ceiling components

Catalogue no.	Description
CAR 5601	300 x 1800mm Ceiling Box for Metal Tray
CAR 5602	300 x 1800mm Ceiling Box for Lay-in Tile
CAR 5603	300 x 1800mm Ceiling Box for Concealed Fixing Tile
CAR 2685	Gear Tray Assembly (twin 6ft 85W) 1800mm
CAR 3601	300 x 1800mm Ceiling Box (for 3 tube version) for Metal Tray
CAR 3602	300 x 1800mm Ceiling Box (for 3 tube version) for concealed fixing tile
CAR 3603	300 x 1800mm Ceiling Box (for 3 tube version) for concealed fixing tile
CAR 3685	Gear Tray Assembly (3 x 6ft 85W) 1800mm
CAR 2681	Top Flow Plate for Ceiling Box (1 packed with each ceiling box)
CAR 2611	1800mm Twin Low brightness louver assembly
CAR 2612	1800mm Prismatic Panel (K15)
CAR 2613	1800mm Prismatic Panel (K12)
CAR 2614	1800mm Opal dish diffuser
CAR 2615	1800mm Specular Plastic Louver
CAR 2616	1800mm Eggcrate Plastic Louver
CAR 2617	1800mm Anodised Aluminium Louver
CAR 2618	1800mm Line-Text Louver (White)
CAR 2619	1800mm Polrized Panel

Air handling components

CAR 5631	300mm long, Extract Box for Metal Tray
CAR 5632	300mm long, Extract Box for Lay-in Tile
CAR 5633	300mm long, Extract Box for Concealed Fixing Tile
CAR 5635	300mm long, One way extract grille
CAR 5636	300mm long, Two way extract grille
CAR 5690	300mm long, Line-Text extract grille
CAR 5661	600mm long, Extract Box for Metal Tray
CAR 5662	600mm long, Extract Box for Lay-in Tile
CAR 5663	600mm long, Extract Box for Concealed Fixing Tile
CAR 5665	600mm long, One way extract grille
CAR 5666	600mm long, Two way extract grille
CAR 5691	600mm long, Line-Text extract grille
CAR 5637	300mm long, Input Cone (round spigot)
CAR 5667	600mm long, Input Cone (round spigot)
CAR 5703	300mm long, Input Cone (square spigot)
CAR 5704	600mm long, Input Cone (square spigot)
CAR 5634	300mm long, Input Grille (1 way throw)
CAR 5638	300mm long, Input Grille (2 way throw)
CAR 5664	600mm long, Input Grille (1 way throw)
CAR 5668	600mm long, Input Grille (2 way throw)
CAR 5639	300mm Circular Damper
CAR 5669	600mm Circular Damper
CAR 2639	300mm O/B Damper (square)
CAR 2669	600mm O/B Damper (square)
CAR 2691	1800mm length, Flowline for Metal Tray
CAR 2692	1800mm length, Flowline for Lay-in Tile
CAR 2693	1800mm length, Flowline for Concealed Fixing Tile
CAR 2655	1800mm length, Unlined Air Supply Boot for Flowline
CAR 2694	300mm long, Flowline blanking section for Metal Tray
CAR 2695	300mm long, Flowline blanking section for Lay-in Tile
CAR 2696	300mm long, Flowline blanking section for Concealed Fixing Tile
CAR 2697	600mm long, Flowline blanking section for Metal Tray
CAR 2698	600mm long, Flowline blanking section for Lay-in Tile
CAR 2699	600mm long, Flowline blanking section for Concealed Fixing Tile

End plates and fill-in frames

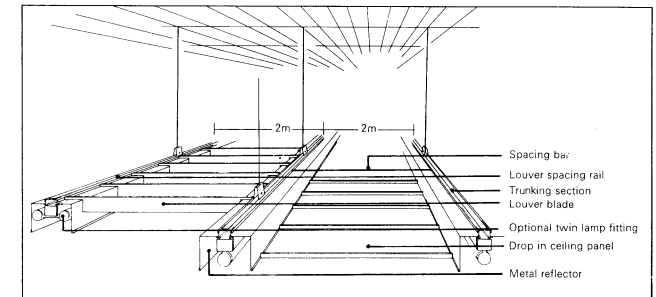
Catalogue no.	Description
CAR 5621	Ceiling box end plate (no flange)
CAR 5622	Ceiling box end plate with support for Lay-in Tile
CAR 5623	Ceiling box end plate with support for Concealed Fixing Tile
CAR 5641	300mm long, Input Cone Frame for Metal Tray
CAR 5642	300mm long, Input Cone Frame for Lay-in Tile
CAR 5643	300mm long, Input Cone Frame for Concealed Fixing Tile
CAR 5671	600mm long, Input Cone Frame for Metal Tray
CAR 5672	600mm long, Input Cone Frame for Lay-in Tile
CAR 5673	600mm long, Input Cone Frame for Concealed Fixing Tile
CAR 5644	300mm long, Infill Plate c/w Spring Clip
CAR 5674	600mm long, Infill Plate c/w Spring Clip
CAR 5647	Blanking Panel for use with 300mm Cone/600mm Grille
CAR 2680	Clip-in Wiring Cover for Ceiling Box

Suspension and accessories

CAR 2659	Suspension Hook/bolt assembly for Ceiling Box and Flowline Air Supply Boot
CAR 2657	Suspension Rod Set (for Lightweight Trunking to Arena sub-frame)
CAR 2658	Top-hat bracket (for fixing half spring tee to LTN trunking)
CAR 2677	3.6m length of half spring tee (for assembly with CAR 2658 & LTN trunking)
CAR 2660	End Bracket for Trakline with ceiling junction
CAR 2700	'C' Clamp for use with Trunking Suspension Set CAR 2667
CAR 2690	Trakline/Flowline Junction Bracket



The Mترلux system has the merits of simplicity of installation and ease of maintenance. It is based on a specially designed aluminium trunking (CMT 1006), which can be used with or without Atlas Trakline to support fluorescent batten fittings mounted within Mترلux reflectors. Either Popular Pack or Atlantic A4 (narrow twin) fittings can be used within the troughs formed by the reflectors (CMT 1007 for Pop Pack and CMT 2007 for Atlantic). With trunking runs spaced at 2 metres, reflectors locate on the trunking and these in turn support the ceiling panels (CMT 1001). The panels can also be mounted in the high position, this requires 1.8m spacing of the trunking runs. Acoustic glass fibre panels (CMT 5001) can be used with a special tee bar (CMT 5002). The tee bar locates on the reflectors (in a similar manner to the metal tray panels) and these then support the glass fibre panel. Reflectors join together with a jointing strap (CMT 1008 or CMT 2008) and the reflector runs are terminated by an end plate (CMT 1009 or CMT 2009). Louver blades (CMT 1003) 110mm deep provide an alternative treatment to panels and can be spaced at 200mm, 400mm or 600mm centres by use of the louver spacing rail (CMT 1002). The ceiling perimeter is completed by perimeter fixing channels, CMT 1005 for panels or CMT 1014 for louvers. With the

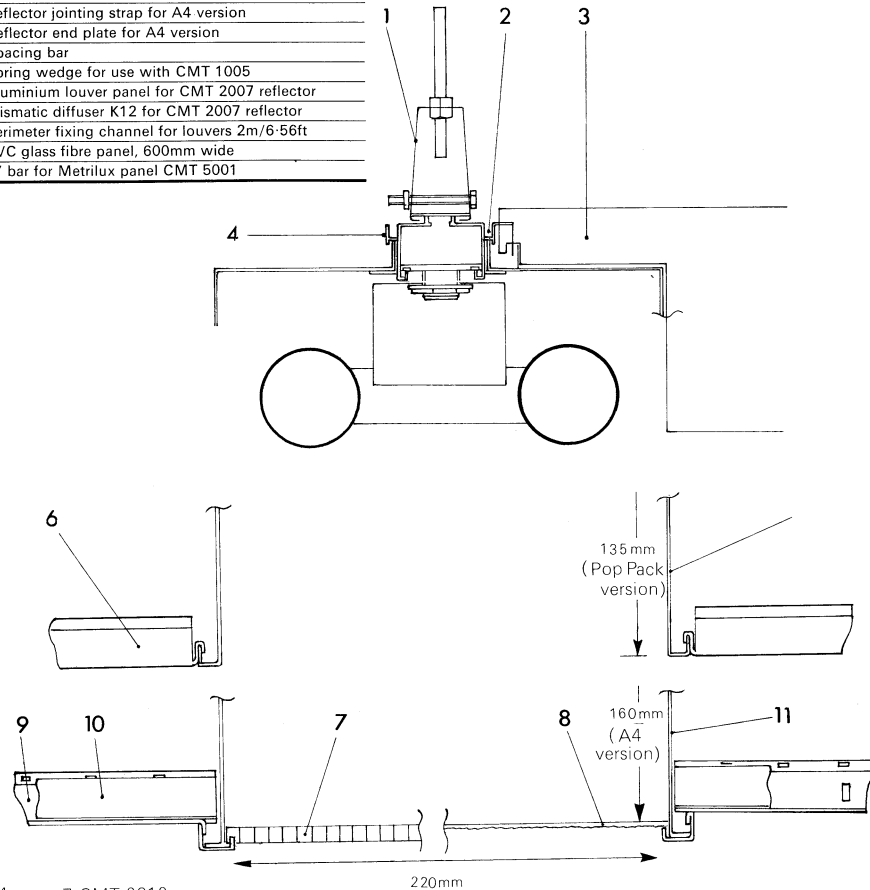


Recommended suspension centres for trunking:
 a. With metal tray panels 1 metre.
 b. With louvers or glass fibre panels 2 metres.

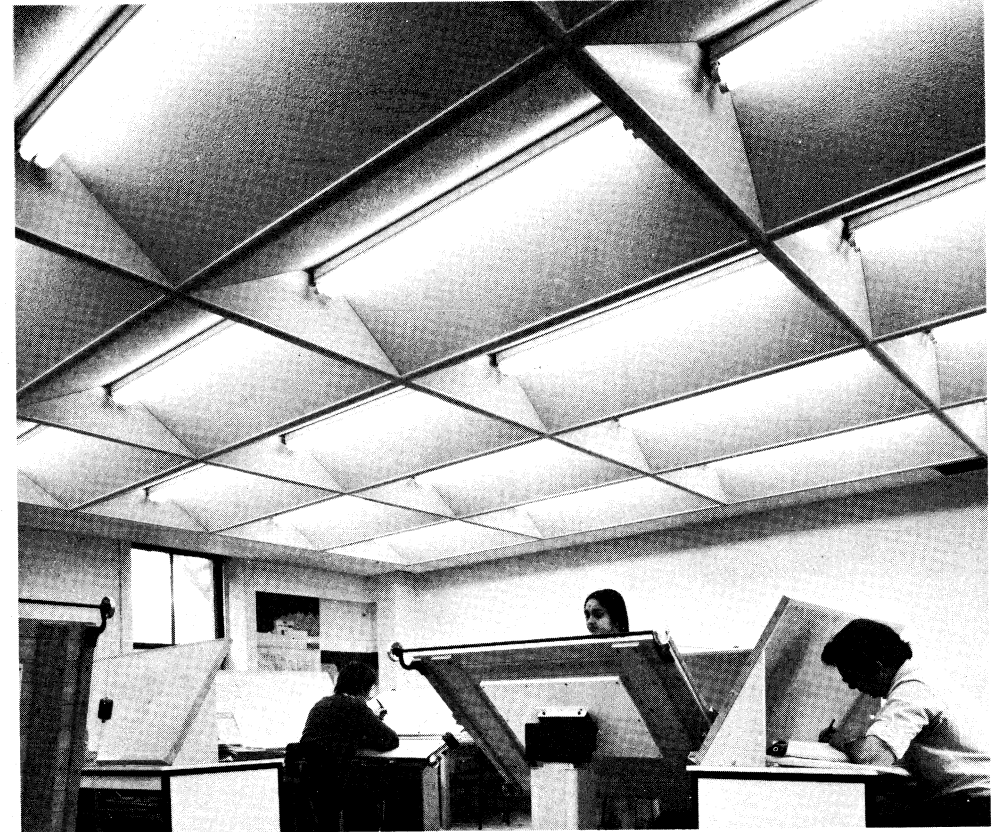
Atlantic version two types of diffuser can be used: an aluminium louver with a 13 x 13 x 13mm (nominal size) cube cell (CMT 2012) or a K12 pattern prismatic panel (CMT 2013). For full illustrations and descriptions of the system refer to publication TLL0099/6/72

RANGE

Catalogue no	Description
CMT 1001	Metal ceiling panel, 400mm wide
CMT 1002	Louver spacing rail 1.6m/5.25ft
CMT 1003	Louver blade (110mm deep)
CMT 1004	Trunking suspension assembly
CMT 1005	Perimeter fixing channel for panels 2.44m/8ft
CMT 1006	Trunking 4.5m/14.76ft
CMT 1007	Side reflector for Pop Pack version
CMT 1008	Reflector jointing strap for Pop Pack version
CMT 1009	Reflector end plate for Pop Pack version
CMT 2007	Side reflector for A4 version
CMT 2008	Reflector jointing strap for A4 version
CMT 2009	Reflector end plate for A4 version
CMT 1010	Spacing bar
CMT 1011	Spring wedge for use with CMT 1005
CMT 2012	Aluminium louver panel for CMT 2007 reflector
CMT 2013	Prismatic diffuser K12 for CMT 2007 reflector
CMT 1014	Perimeter fixing channel for louvers 2m/6.56ft
CMT 5001	PVC glass fibre panel, 600mm wide
CMT 5002	'T' bar for Metrilux panel CMT 5001



- | | |
|------------|---|
| 1 CMT 1004 | 7 CMT 2012 |
| 2 CMT 1002 | 8 CMT 2013 (only with Atlantic A4 version) |
| 3 CMT 1003 | 9 CMT 5002 |
| 4 CMT 1006 | 10 CMT 5001 |
| 5 CMT 1007 | 11 CMT 2007 (used with Atlantic A4 narrow twin filters) |
| 6 CMT 1001 | |



Cofferlight is a lighting/ceiling system with a recessed coffer design based on an 1800 x 1200mm module, formed by a supporting grid system of channels which can provide location of partitions, with complete facility for fixing anywhere on this module. The lighting unit can be selected from the Atlas Pop Pack range using 5ft 65W SRS fittings and diffusers. At normal viewing angles Cofferlight provides glare-free lighting but still permits high illuminance levels to be achieved.

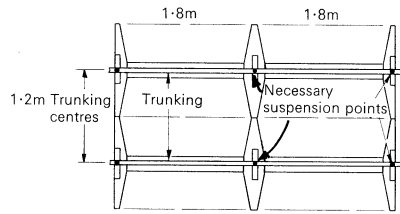
Three separate methods of suspension are possible:

- (1) Using Liteline trunking;
- (2) Using longitudinally-mounted twin 'C' channels;
- (3) Using cross-mounted 'C' channels.

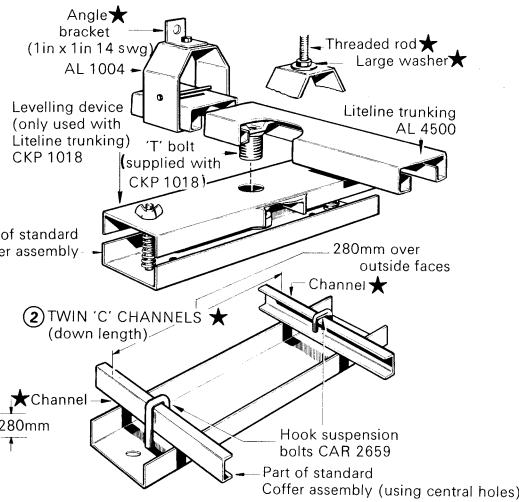
Single or dual coffer ends form the end of the individual coffers and it is these that are attached to the Liteline trunking. Main channel sections connect between the coffer ends and are terminated or joined to adjacent coffers by means of intersection assemblies. 5ft SRS Pop Pack fittings attached to top coffer plates span between the tops of the coffers and boards are laid either side to complete the recessed coffers.

METHODS OF SUSPENSION

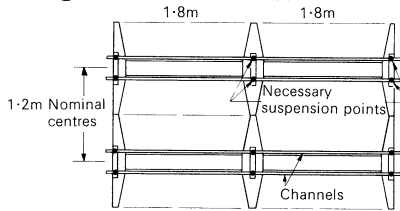
① USING LITELINE TRUNKING



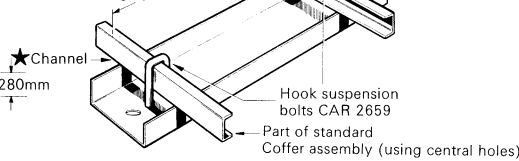
① LITELINE TRUNKING



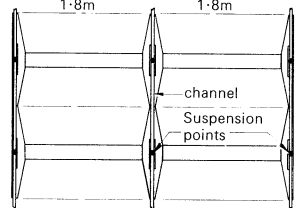
② TWIN 'C' CHANNEL GRID ★



② TWIN 'C' CHANNELS ★



③ SINGLE CHANNELS ★



③ ONE CHANNEL (across width) ★

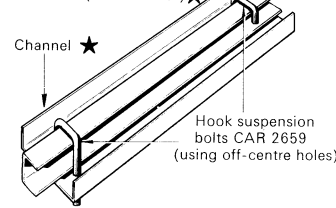


ILLUSTRATION OF PRIMARY FIXINGS ONLY

★denotes items supplied by contractor

1. Liteline Trunking

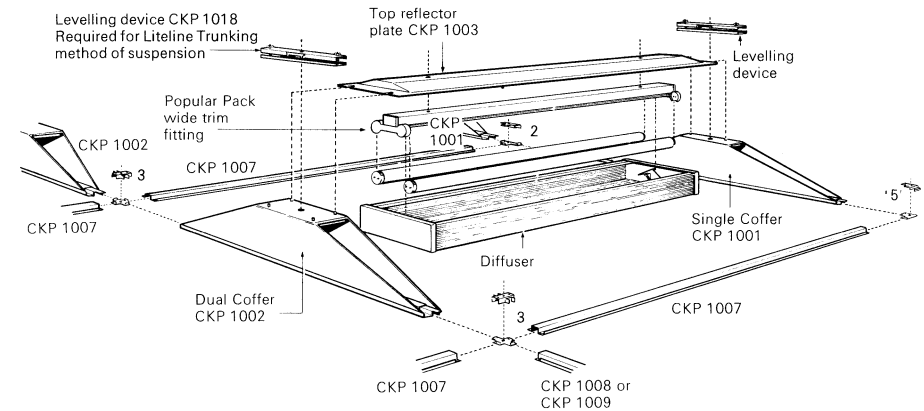
Standard Liteline Trunking (AL 4500) and associated components is used as the standard suspension system. Recommended suspension centres 1.8m. With this method of suspension, a levelling device (Catalogue no. CKP 1018) is required. Two screws, springs, wing nuts and 'T' bolt assembly are supplied to attach this to the appropriate coffer end (Catalogue no. CKP 1001 or 1002) (Diagram 1)

2. Twin 'C' Channels

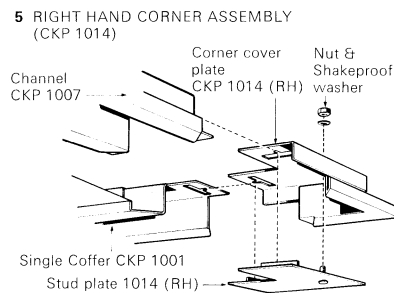
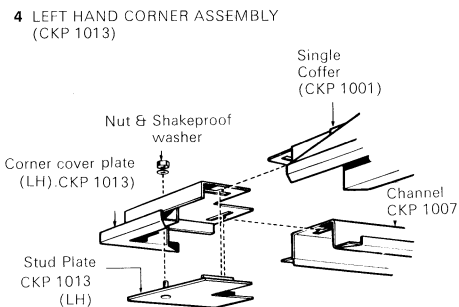
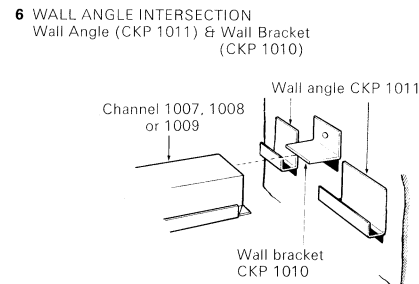
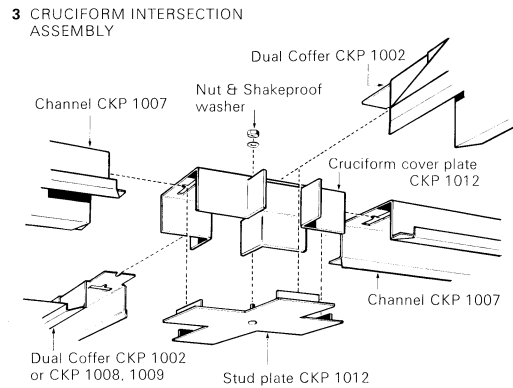
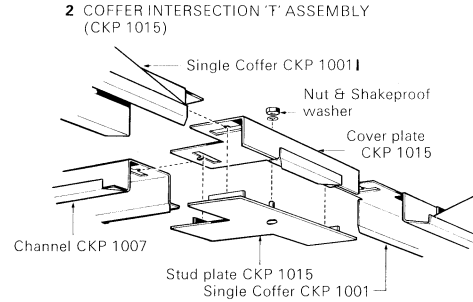
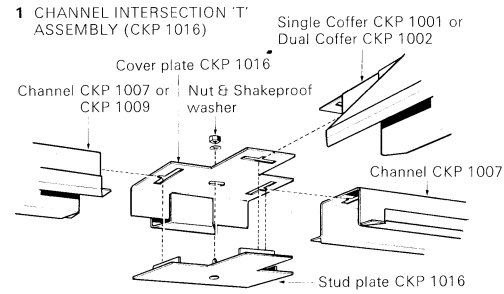
Use hook bolts (CAR 2659) in the two holes of the top coffer bracket nearest the centre. A 19mm x 38mm x 19mm 14swg galvanized channel is recommended. Recommended suspension centres 1.8m. The distance between outside faces of the 'C' Channels is 280mm. (Diagram 2)

3. Transverse 'C' Channel

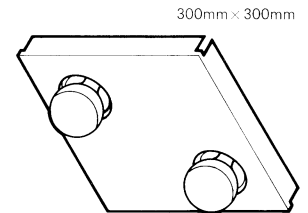
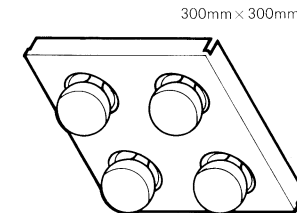
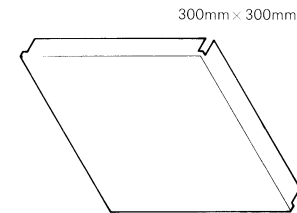
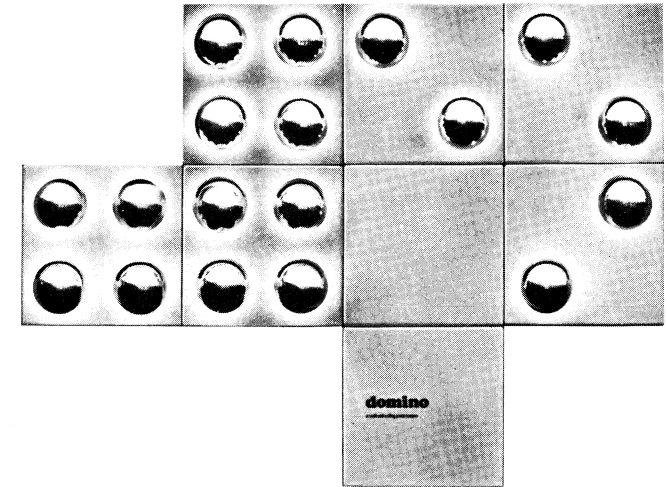
Use hook bolts (CAR 2659) in staggered holes. 'C' Channel, 19mm x 38mm x 19mm 14swg galvanized is recommended. Recommended suspension centres 1.2m. (Diagram 3)



NOTE: Hook Bolts CAR 2659 required when 'c' channel method of suspension is used.



Domino is a collection of decorative ceiling panels, featuring the 40W 100mm crown silvered Decor Round lamp. The Domino panels are a nominal 300 x 300mm and designed for use with the various spring tee grid systems which are in common use. Domino consists of plain panels (i.e. without lamps), two lamp panels or four lamp panels which can be arranged in a variety of attractive Domino patterns. The two lamp panels are arranged with the lamps diagonally and the four lamp panels with lamps in a symmetrical pattern. Panels are supplied complete with lampholders wired to a terminal block and comply with Class 2 luminaire requirements.



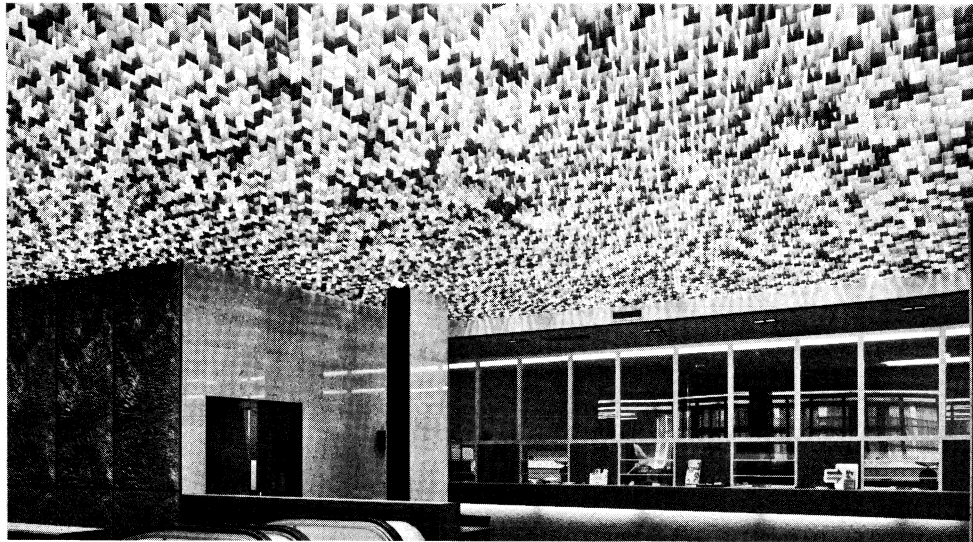
Main Panel CDO 1000

Four Lamp Panel CDO 1004

Two Lamp Panel CDO 1002

Catalogue no.	Description	Approx Weight (gms) Complete with Lamps
CDO 1000	300 x 300 plain Domino panel	500
CDO 1002	300 x 300 Domino panel (2 lamps)	1250
CDO 1004	300 x 300 Domino panel (4 lamps)	1800

Lamps to be ordered separately

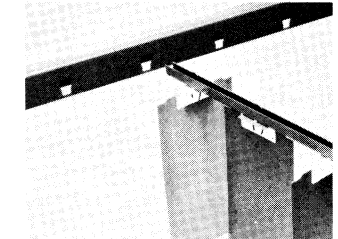
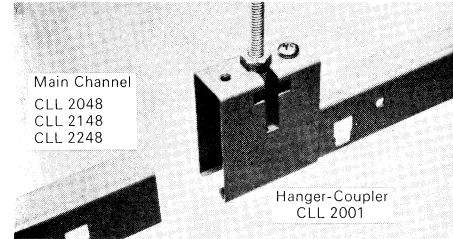


Leaf-Lite is a non-modular louver system of metal leaves mounted alternately at right angles to each other, giving a luminous ceiling with richly textured appearance. The standard leaf finish is high reflectivity semi-gloss white but colours to the BS. range can be supplied to order. Other textures and finishes, such as gold finish or stainless steel, can also be supplied. Leaf-Lite offers a wide variety of visual effects utilizing either conventional light sources or coloured PAR lamps with permutations of coloured leaves and variations in leaf shape. Leaf-Lite with its all steel construction is non-combustible and does not interfere with sprinkler systems or air supply mounted above. The system is simple and quick to install and requires only infrequent maintenance.

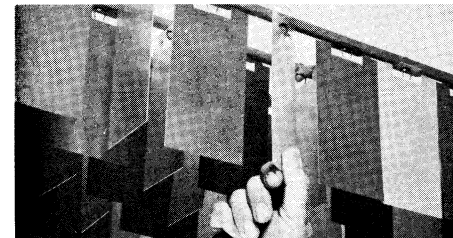
Weight of Leaf-Lite
For estimating ceiling loadings an approximate guide to the installed weight of Leaf-Lite would be:
4 1/2 lb/sq ft
(22 Kg/sq m)

Range	
Catalogue no.	Description
CLA 1036	Leaf-Lite, 3ft channel complete with white leaves
CLA 1048	Leaf-Lite, 4ft channel complete with white leaves
CLA 1136	Leaf-Lite, 3ft channel complete with gold leaves
CLA 1148	Leaf-Lite, 4ft channel complete with gold leaves
CLA 1236	Leaf-Lite, 3ft channel complete with leaves to BS. range of colours
CLA 1248	Leaf-Lite, 4ft channel complete with leaves to BS. range of colours
CLL 2048	Leaf-Lite main channel, 4ft white finish
CLL 2148	Leaf-Lite main channel, 4ft gold
CLL 2248	Leaf-Lite main channel, 4ft to BS. range of colours
CLL 2001	Leaf-Lite hanger coupler

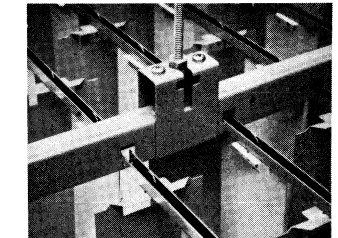
Leaf-Lite is manufactured in this country under licence from Integrated Lighting Canada Limited.



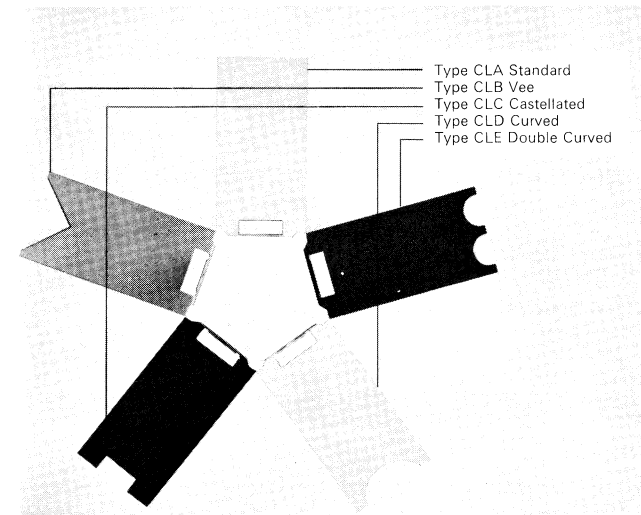
Leaf Channel 3ft or 4ft complete with leaves
CLA 1036 CLA 1136 CLA 1236
CLA 1048 CLA 1148 CLA 1248



Spring-locked self-aligning leaves



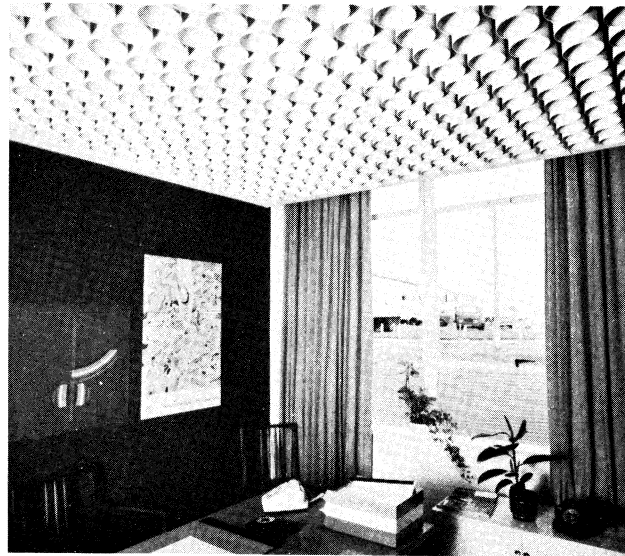
Completed system



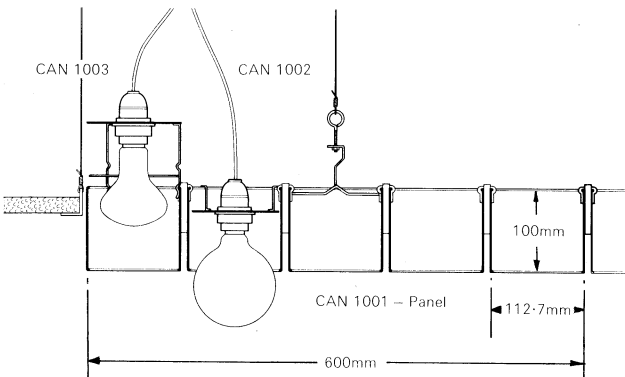
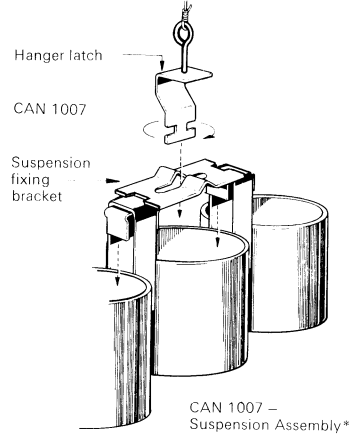
Standard CLA and special leaf shapes which can be supplied to order

Cancan

CANCAN is a metal open louvered ceiling system based on a pre-assembled 600 x 600mm module of 25 cans. These are suspended from a centrally located hanger and adjoining panels can be connected together by means of a specially designed clip to complete the ceiling treatment. To complement the ceiling a number of lampholder attachments have been created to incorporate decorative lighting with the system.



SUSPENSION ASSEMBLY



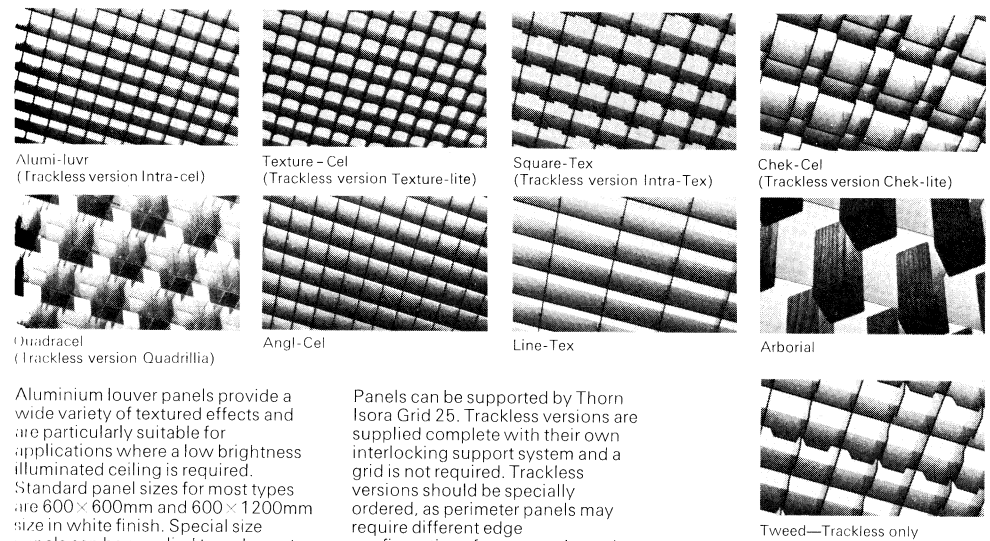
*Note: Suspension Assembly is supplied with panel CAN 1001

RANGE

Catalogue no.	Description
CAN 1001	600 x 600mm Cancan panel—white (c/w 4 sets of joining clips and suspension assembly)
CAN 1002	Lampholder & mounting assembly for 100mm Decor Round lamp
CAN 1003	Lampholder & mounting assembly for Decor Spot lamp (R80)
CAN 1004	Lampholder & mounting assembly for 100W internally silvered Reflector lamp
CAN 1005	Individual white can
CAN 1006	Pair of joining clips
CAN 1007	Suspension assembly (1 Hanger latch & 1 suspension fixing bracket)

Approximate weight of panel CAN 1001 is 2.9 kg.

Aluminium louver



Aluminium louver panels provide a wide variety of textured effects and are particularly suitable for applications where a low brightness illuminated ceiling is required. Standard panel sizes for most types are 600 x 600mm and 600 x 1200mm size in white finish. Special size panels can be supplied to order up to a maximum 1500 x 1200mm. Other colours can also be supplied to special order.

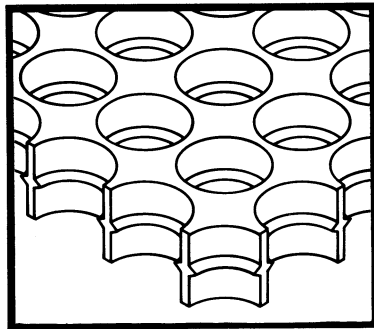
Panels can be supported by Thorn Isora Grid 25. Trackless versions are supplied complete with their own interlocking support system and a grid is not required. Trackless versions should be specially ordered, as perimeter panels may require different edge configurations from central panels. Technical advice can be provided by The Isora Division of Thorn Lighting Ltd.

Description	Catalogue no	Cell sizes (mm)			Blade Thickness (mm)	Shielding angle	Panel size (mm)	Weight (kg/m ²)
		W	L	H				
Alumi-luvr	CWA 2201	13	13	13	0.6	45°	600 x 600	3.7
Alumi-luvr	CWA 2401	13	13	13	0.6	45°	600 x 1200	3.7
Alumi-luvr	CWA 4401	13	13	13	0.6	45°	1200 x 1200	3.7
Alumi-luvr	CWA 2203	25	25	25	0.8	45°	600 x 600	4.9
Alumi-luvr	CWA 2403	25	25	25	0.8	45°	600 x 1200	4.9
Alumi-luvr	CWA 2405	50	50	50	1	45°	600 x 600	6.2
Alumi-luvr	CWA 2405	50	50	50	1	45°	600 x 1200	6.2
Texture-Cel	CWT 2201	13	13	13	0.6	45°	600 x 600	3.4
Texture-Cel	CWT 2401	13	13	13	0.6	45°	600 x 1200	3.4
Texture-Cel	CWT 2203	25	25	25	0.8	45°	600 x 600	4.4
Texture-Cel	CWT 2403	25	25	25	0.8	45°	600 x 1200	4.4
Texture-Cel	CWT 2205	50	50	50	1	45°	600 x 600	5.6
Texture-Cel	CWT 2405	50	50	50	1	45°	600 x 1200	5.6
Square-Tex	CWS 2201	13	13	13	0.6	45°	600 x 600	3.4
Square-Tex	CWS 2401	13	13	13	0.6	45°	600 x 1200	3.4
Square-Tex	CWS 2203	25	25	25	0.8	45°	600 x 600	4.4
Square-Tex	CWS 2403	25	25	25	0.8	45°	600 x 1200	4.4
Square-Tex	CWS 2205	50	50	50	1	45°	600 x 600	5.6
Square-Tex	CWS 2405	50	50	50	1	45°	600 x 1200	5.6
Chek-Cel	CWC 2205	65	65	50	1	Varies	600 x 600	7.0
		minor cell (50 x 15)						
Quadracel	CWQ 2120	65	65	50	1	Varies	600 x 600	7.2
		minor cell (50 x 15)						
Angl-Cel	CWG 2202	20	20	20	0.6	—	600 x 600	4.0
Line-Tex	CWL 2207	40	20	30/20	0.8	28°/56°	600 x 600	4.6
Line-Tex	CWL 2407	40	20	30/20	0.8	28°/56°	600 x 1200	4.6
Line-Tex	CWL 4207	40	20	30/20	0.8	28°/56°	1200 x 600	4.6
Arboreal	CWR 2206	75	75	75	Block size 20 x 20 x 50		600 x 600	12.0
Tweed (Trackless only)	CRW 2203	25	25	30	0.8	45°/50°	600 x 600	4.7

Circlgrid and Paragrid luminous ceiling system

Circlgrid

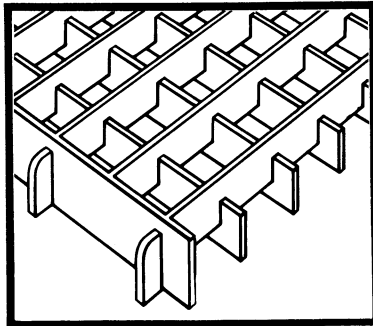
A unique louvered PVC lighting diffuser with circular cell configuration. The sandwich construction of vacuum-formed, sonically welded sheets gives rigid three-dimensional shape with great strength but minimum weight. Suitable for part or wholly luminous ceilings in prestige areas and shops, and for use in illuminated display areas. The material meets the requirements of the Building Regulations 1972. The panels are simple and quick to install. Standard panel sizes are 610mm (2ft) square.



Circlgrid

Paragrid

Paragrid panel is a one-piece precision injection moulded louvre with an open-grid bi-planar construction. It will effectively screen overhead services and permit free air circulation, thereby simplifying integration with heating and ventilation services. The panels are treated with an anti-static solution after manufacture to repel dust. This is easily renewed during cleaning operations. Standard panels are 610mm (2ft) square.



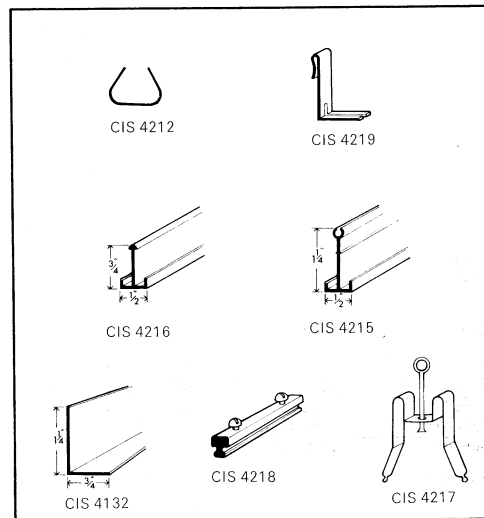
Paragrid

CIRCLGRID and PARAGRID are manufactured under licence from the WILSON RESEARCH CORPORATION of USA.

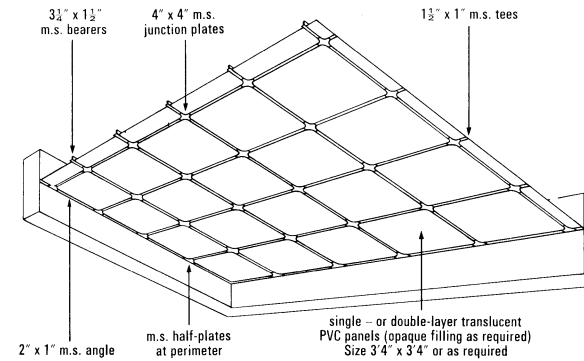
Range

Catalogue no	Description
CIRCLGRID PANELS	
CCG 4200	White perforated circular cell, 2 x 2ft louvre panel
CCG 4202	White unperforated circular cell, 2 x 2ft louvre panel
PARAGRID PANEL	
CPG 4140	Bi-planar opal louvre (1/2 in cell), polystyrene 2 x 2ft
CIRCLGRID AND PARAGRID GRID	
CIS 4215	Main track, anodized aluminium, 8ft long, 1 1/2 x 1/2 in
CIS 4216	Cross track, anodized aluminium, 2ft long (with jointing sleeve)*
CIS 4217	Hanger assembly for wire suspension
CIS 4218	Joiner for main track
CIS 4219	Wall angle end clip*
CIS 4132	Wall angle end trim, anodized aluminium, 8ft long, 1 1/2 x 1/2 in
CIS 4129	Suspension wire, 2mm gauge, 20m length
CIS 4212	Panel retaining clip*

*Items required for Circlgrid only



Thermalucet ceiling panels



View of underside of ceiling with Thermalucet panels mounted in Spaceliner Grid.

Thermalucet is a double-layer PVC film luminous ceiling panel with a 30mm (1.18in) still air space between the translucent films, which gives a high degree of thermal insulation. The panel consists of a channel frame over which the PVC skins are stretched. The skins can be easily removed for replacement.

The Thermalucet skin is made from 0.004in thick PVC with a welded perimeter bead. CTH catalogue numbers apply to the Thermalucet panels and CVT numbers to the corresponding replacement skins.

Besides the natural PVC film with 90% transmission, the following colours are available:

Daylight Blue	78% transmission
Daylight Blue, high diffusion	57% transmission
Rose Pink	57% transmission
Golden Yellow	62% transmission
Powder Blue	49% transmission
Black	—

Where colours are used, normally the upper skin is 'natural' and the lower coloured.

Grid

Two suitable grids recommended for use with Thermalucet panels are:

- 1) Spaceliner Grid (Section 1:109)
- 2) Isora-grid 40 (Section 1:110)

THERMALUCET PANELS (Double skin)

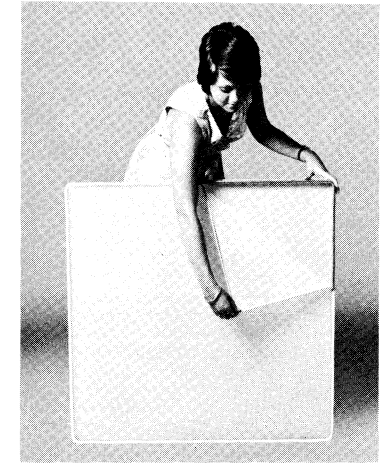
CTH 2424	Double skin Thermalucet panel 24 x 24in
CTH 3636	Double skin Thermalucet panel 36 x 36in
CTH 4010	Double skin Thermalucet panel 40 x 10in
CTH 4020	Double skin Thermalucet panel 40 x 20in
CTH 4030	Double skin Thermalucet panel 40 x 30in
CTH 4040	Double skin Thermalucet panel 40 x 40in
CTH 4824	Double skin Thermalucet panel 48 x 24in
CTH 4848	Double skin Thermalucet panel 48 x 48in
CTH 6040	Double skin Thermalucet panel 60 x 40in
CTH 1005	Double skin Thermalucet panel 1 x 0.5m
CTH 1010	Double skin Thermalucet panel 1 x 1m
CTH 1015	Double skin Thermalucet panel 1 x 1.5m
CTH 2000	Special size panels up to 10 sq ft
CTH 3000	Special size panels over 10 sq ft

REPLACEMENT SKINS

CVT 2424	PVC skin for Thermalucet panel 24 x 24in
CVT 3636	PVC skin for Thermalucet panel 36 x 36in
CVT 4010	PVC skin for Thermalucet panel 40 x 10in
CVT 4020	PVC skin for Thermalucet panel 40 x 20in
CVT 4030	PVC skin for Thermalucet panel 40 x 30in
CVT 4040	PVC skin for Thermalucet panel 40 x 40in
CVT 4824	PVC skin for Thermalucet panel 48 x 24in
CVT 4848	PVC skin for Thermalucet panel 48 x 48in
CVT 6040	PVC skin for Thermalucet panel 60 x 40in
CVT 1005	PVC skin for Thermalucet panel 1 x 0.5m
CVT 1010	PVC skin for Thermalucet panel 1 x 1m
CVT 1015	PVC skin for Thermalucet panel 1 x 1.5m
CVS 2000	Special sizes for Spaceliner panels
CVX 2000	Special sizes for Thermalucet panels

OTHER ITEMS

CTH 5001	Self-adhesive polyurethane foam plastic, 13ft roll, 1/2 in wide
CTH 5002	Special clip for Spaceliner
CTH 5003	Special clip for Thermalucet



Showing how the detachable PVC skins are fitted to the m.s. panel frames.

The PVC film used in Thermalucet meets the performance requirements for "flame resistance" to Clause 21 of BS1763:1967 when tested to Method 508C of BS2782:1970. The material meets the requirements of The Building Regulations 1972, Section E16, Subsection 3(a).

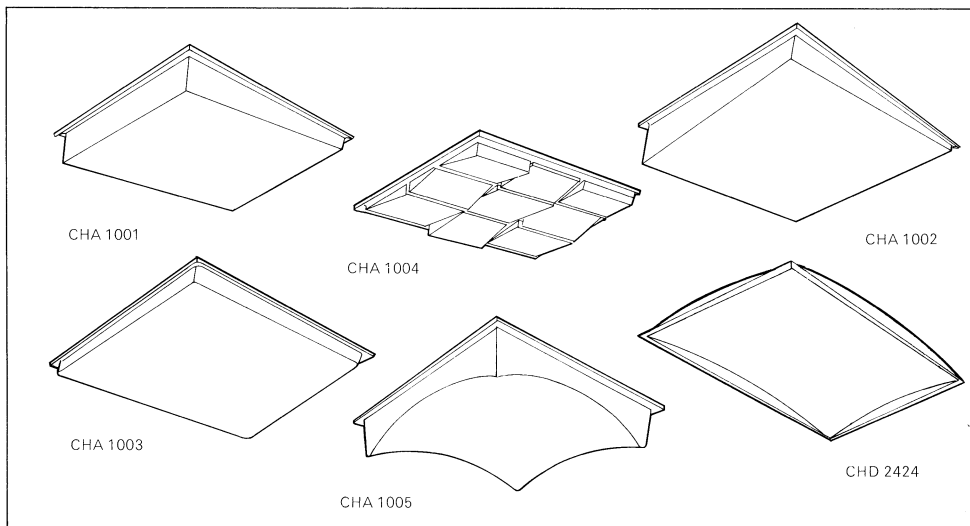
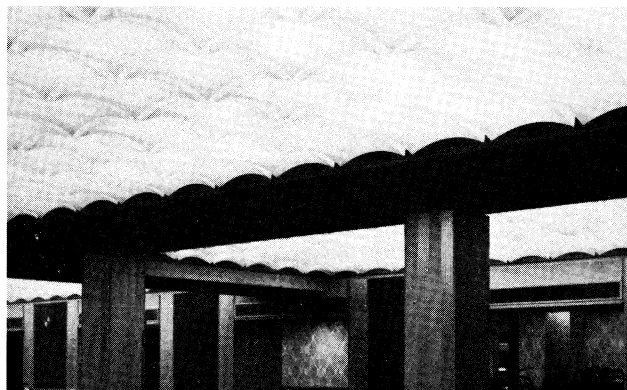
Rear projection screens

Rear projection screens are made from the same PVC film as used in Thermalucet panels and are tailored to meet individual requirements. Screen sizes up to 60ft wide and with a 50ft drop can be supplied to order and larger sizes can also be considered.

Architectural range

This range of vacuum-formed diffusing panels provides an almost unlimited variety of sculptured ceiling forms which can be re-arranged whenever a new effect is required. The panels are of light-stabilising rigid vinyl available in a number of forms: Wedge, Tilted Wedge, Multi-Wedge, Minaret, and Flat Pan. They can be installed in any suitably-sized ceiling grid. Standard panels are a nominal 609mm (2ft) square.

The Architectural range can be used either as an overall ceiling or arranged in attractive groupings when combined with other ceiling elements. It is particularly suitable for commercial interiors such as banking halls, hotel foyers and public buildings.



RANGE

Catalogue no	Description
CHA 1001	Wedge design in rigid PVC
CHA 1002	Tilted Wedge design in rigid PVC
CHA 1003	Flat Pan design in rigid PVC
CHA 1004	Multiwedge design in rigid PVC
CHA 1005	Minaret design in rigid PVC
CHD 2000	Clip for dust cover
CHD 2424	Dust cover for Architectural panels

Polrized Ceiling Panels

Polrized Ceiling panels are available in two patterns each with a nominal 2ft x 2ft panel size. Plaza is a flat dished panel and Dome, as its name suggests is formed upwards into a small dome, rising approximately 2in in the centre. In addition a softly textured surface combines both visual interest of the ceiling and improved control of reflected glare beneath.

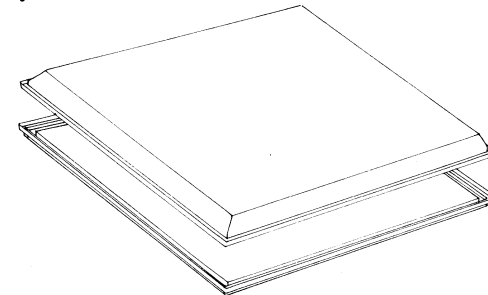
Support Grid

These panels can be used with any 25mm lay-in grid. Isora Grid 25 is recommended set out as a 2ft x 2ft module.

Dust Cover
(White)



DUST COVER
CPZ 2002

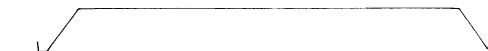


PLAZA
POLRIZED
PANEL CPZ 1002

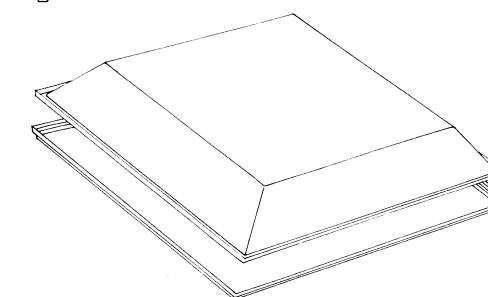
Plaza
Polrized Panel



Cover
(White)



DUST COVER
CPZ 2001



POLRIZED
PANEL
CPZ 1001
(DOME)

Polrized Dome



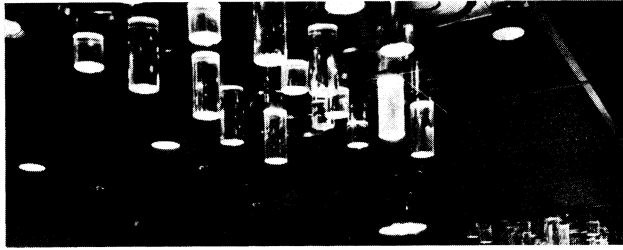
Catalogue no.	Description	Approx. weight gms	Nominal size ft.
CPZ 1001	Dome Panel (Polrized)	190	2 x 2
CPZ 1002	Plaza Panel (Polrized)	176	2 x 2
CPZ 2001	Dust cover for Dome Panel	176	2 x 2
CPZ 2002	Dust cover for Plaza Panel	156	2 x 2

Grid: Isora-grid 25.

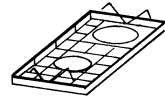
Celestial and Lightframe

Celestial

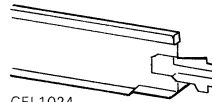
Celestial expresses in terms of today's materials something of the opulence of the traditional crystal chandelier and is ideally suited for use in prestige areas. It consists of an inverted 'T'-bar grid supporting a 610mm x 305mm (2ft x 1ft) suspended ceiling of die-cast aluminium panels. The panels can be fly-cut to accept a variety of lighting and other services such as public address, sprinklers, air diffusers and downlighters. Celestial gives a non-modular appearance and will fit virtually any size or shape of ceiling area.



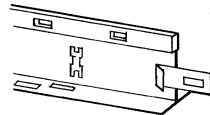
Catalogue no.	Description
CELESTIAL	
CEL 1224	1 x 2ft Celestial panel, complete with torsion-ease springs
CEL 1120	Main 'T', 10ft long, pre-slotted to accept springs
CEL 1024	Cross 'T', 2ft long
CEL 2503	2 1/2 in diameter, 3in long cast and polished acrylic lens
CEL 2506	2 1/2 in diameter, 6in long cast and polished acrylic lens
CEL 2509	2 1/2 in diameter, 9in long cast and polished acrylic lens
CEL 2512	2 1/2 in diameter, 12in long cast and polished acrylic lens



CEL 1224



CEL1024



CEL1120



CEL 2503/6/9/12

Lightframe

Lightframe is a profiled frame with 45° mitred corners which can be used in conjunction with a range of luminous ceiling panels. Standard finish is plain aluminium silver; a simulated wood grain finish can be produced to order. Lightframe can be used with any standard interlocking exposed tee grid system. The standard sizes fit 2ft x 2ft, 2ft x 4ft, 3ft x 3ft and 4ft x 4ft openings and other sizes can be made to order.

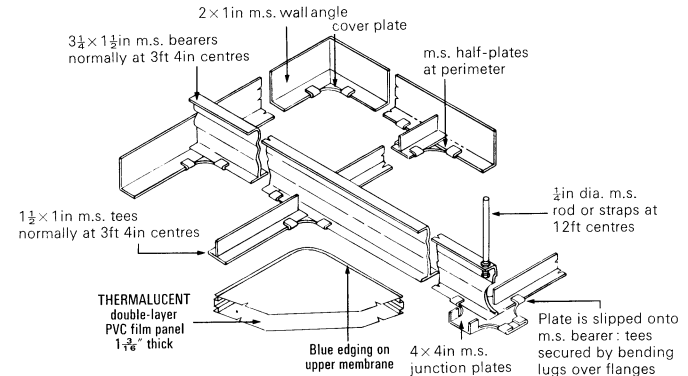
When Thermalucient panels are used in conjunction with Lightframe, special sizes are required to fit within the top flange of Lightframe. Panels will be produced compatible with Lightframe requirements on request.



Range

CFR 2424	2 x 2ft roll formed section, 45° mitred corner
CFR 2448	2 x 4ft roll formed section, 45° mitred corner
CFR 3636	3 x 3ft roll formed section, 45° mitred corner
CFR 4848	4 x 4ft roll formed section, 45° mitred corner
CFR 2000	Non-standard sizes to order

Spaceliner grid



DETAIL OF ASSEMBLY OF COMPONENT PARTS

Spaceliner grid

Spaceliner grid has been specially designed for use with Thermalucient panels. It consists of:

1. The main bearer, 3 1/2 in deep x 1 1/2 in wide, which is the principal item of the grid.

2. Tee Bar, 1 in deep x 1 1/2 in wide, a cross tee forming a support grid.
3. Wall Angle, 2 in deep by 1 in wide or 1 in deep by 1 in wide.
4. Cover Plates (4 in x 4 in). These have a cruciform clamp-type junction plate used at grid intersections.

5. Fishplates for joining lengths of main bearer.

Components

CSP 1120	Main bearer, 10ft long, Etch prime finish
CSP 1144	Main bearer, 12ft long, Etch prime finish
CSP 1004	Main bearer, 4m long, Etch prime finish
CSP 1240	Main bearer, 20ft long, special heavy duty (14swg) 5 1/2 x 1 1/2 in
CSP 2024	Tee Bar, 24in Etch prime finish
CSP 2036	Tee Bar, 36in Etch prime finish
CSP 2040	Tee Bar, 40in Etch prime finish
CSP 2048	Tee Bar, 48in Etch prime finish
CSP 2060	Tee Bar, 60in Etch prime finish
CSP 2001	Tee Bar, 1m Etch prime finish
CSP 3120	Wall angle, 10ft long, 2 x 1 in Etch prime finish
CSP 3144	Wall angle, 12ft long, 2 x 1 in Etch prime finish

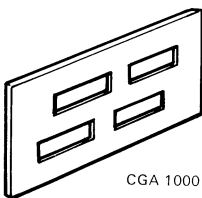
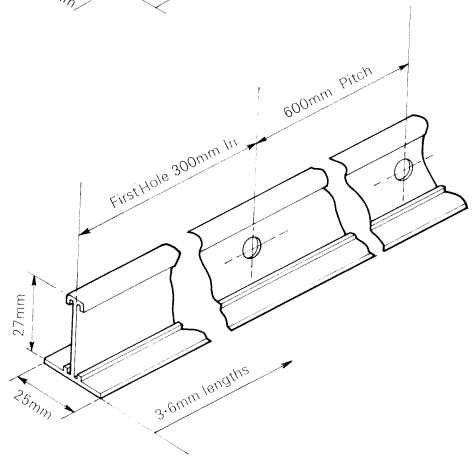
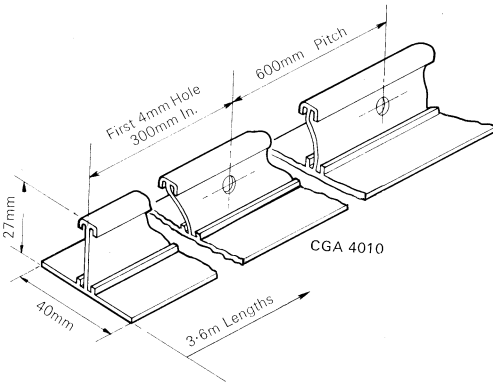
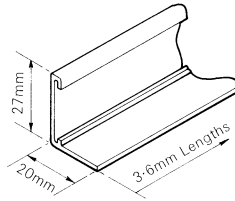
CSP 3004	Wall angle, 4m long, 2 x 1 in Etch prime finish
CSP 4120	Wall angle, 10ft long, 1 x 1 in Etch prime finish
CSP 4144	Wall angle, 12ft long, 1 x 1 in Etch prime finish
CSP 5001	Cover plate: full, Etch prime finish
CSP 5002	Cover plate: 3/4, Etch prime finish
CSP 5003	Cover plate: 1/2, Etch prime finish
CSP 5004	Cover plate: corner, Etch prime finish
CSP 5005	Cover plate: full (for sprinkler heads) Etch prime finish
CSP 5006	Fishplate, 18in long, drilled for pop riveting to join bearers
CSP 5007	Fishplate, 18in long, for HD bearer
CSP 5008	Fishplate, 18in long, for sprinklers

Isora-Grid

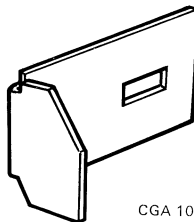
Thorn Isoragrid is available in two table sizes, 25mm and 40mm. Main tees and wall angle are supplied in anodised aluminium in standard 3·6m lengths. Tees can be supplied cut to other lengths (based on 3·6m max. size) to special order, or alternatively cut on site as required. Straight connectors are used to join lengths of main tee and a pair of left-hand and right-hand connectors (one connector each end of a cross tee) are required to connect cross tees to main tees. The same grid section is used for both main and cross tees, the latter being cut to size as required. Connectors are common to both grid sizes. Main tees are punched at 600mm intervals for wire suspension. The 25mm grid is suitable for use with the following products :
 Aluminium louvers (lay-in grid versions)
 Architectural range of panels
 Polrized ceiling panels
 Any standard acoustic board
 The 40mm grid is designed for use with Thermalucet ceiling panels

Catalogue no.	Description	Length (m)
CGA 2510	Main Tee, 25mm table	3·6
CGA 2514	Wall angle	3·6
CGA 4010	Main Tee, 40mm table	3·6
CGA 1000	Straight connector for 25mm & 40mm tees	
CGA 1001	Left-hand connector	
CGA 1002	Right-hand connector	

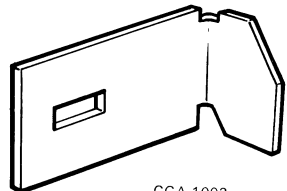
Note: Suspension wire CIS 4129 can be used with this grid.



CGA 1000



CGA 1001



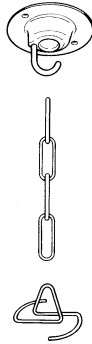
CGA 1002

Suspension Sets and Trakline

Suspension sets are available for all Thorn lighting fittings. Reference should be made to maximum loading table and respective weight of fitting to determine the type of suspension required. Standard lengths of rod or chain sets is 30in. Other lengths in multiples of 6in will be supplied on request. Half sections of the suspension sets are illustrated. Catalogue number relates to complete set.

Max. loading table

Maximum loading per set		
Catalogue no.	kg	lb
A.30	18.2	40
B.30	30.9	68
H.30	123.0	270
K.30	27.3	60



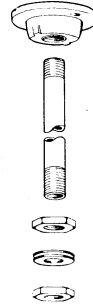
Suspension Set A.30 (Light Duty)

Two malleable iron hooked ceiling plates two 30in lengths of chain, two spring loops.



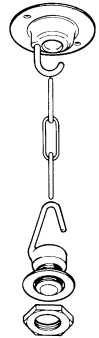
Suspension Set B.30

Two pressed ceiling plates, two 1/2in by 30in rods screwed 26 T.P.L., grommets, locknuts, washers. White finish.



Suspension Set H.30

Heavy duty conduit suspension including two 3/4in by 30in rods with ball joint ceiling plates and back-nuts. White finish.



Suspension Set K.30 (Heavy Duty)

Two dome hook plates, two 30in lengths of chain, two 3/4 E.T. suspension hooks, back nuts and washers.

The Trakline system is based on a PVC extrusion which contains two copper conductors for line and neutral and an aluminium earth strip. These assemblies (TK) are then housed in one of five metal trunking types.

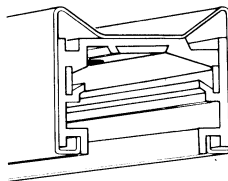
TKS 1200 (1.2 metres long) } TK in white painted rolled steel section, complete with metal end caps.
TKS 2400 (2.4 metres long)
TKS 3600 (3.6 metres long)

TKN 1200 (1.2 metres long) } TK in anodised aluminium section, complete with metal end caps.
TKN 2400 (2.4 metres long)
TKN 3600 (3.6 metres long)

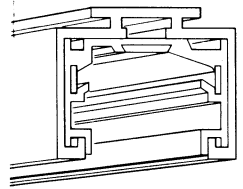
TK 4500 (4.5 metres long) TK for installation in either LTN 4500, LTR 4500, LTF 4500 or AL 4500, all of which are also 4.5 metres long. (See sections dealing with Trunking).

Mains Connectors, Adaptors and Couplers

TK 1021 L	Mains connector, left handed
TK 1021 R	Mains connector, right handed
TK 1031	Track coupler
TK 1051	Fittings adaptor box (white)
TK 106	Straight mechanical coupler (TKN, LTN, LTF & LTR)
TK 1121	Fluorescent fittings suspension set
TK 1121 F	Fluorescent fittings suspension set with cut lead fuse
TK 127	Earth Continuity Strip (TKS)
TK 111	Clip-on cover (TKN only)
TK 1201	Spare end caps (TKN)
TK 128	Spare end caps (TKS)



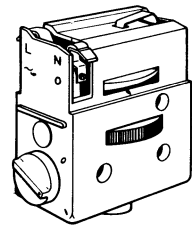
TKS SECTION



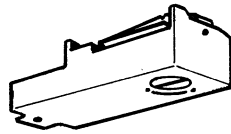
TKN SECTION

Elbows & Wiring Boxes

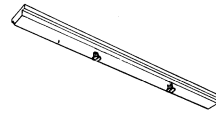
TK 107	Horizontal elbow assembly (TKN or LTN with TK)
TK 108	Vertical internal elbow assembly (TKN or LTN with TK)
TK 109	Vertical external elbow assembly (TKN or LTN with TK)
TK 115	End wiring box assembly (TKN or LTN with TK)
TK 116	Top entry wiring box (continuous runs, TKN or LTN with TK)
TK 1171	End wiring box assembly (TK in LTR Trunking)
TK 1181	Top entry wiring box assembly (continuous runs of TK in LTR Trunking)
TK 121	End wiring box assembly (TKN or TKS surface mtd.)
TK 122	Top entry wiring box 2 way at 90° (TKN or TKS Surface mtd.)
TK 124	Top entry wiring box 4 way "X" (TKN or TKS surface mtd.)
TK 123	Top entry wiring box 3 way "T" (TKN or TKS surface mtd.)
TK 126	Top entry wiring box 2 way in line (TKN or TKS surface mtd.)



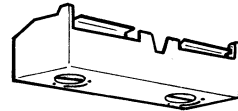
TK1051
Adaptor Box



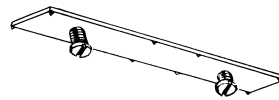
TK1021 L&R
Mains connector



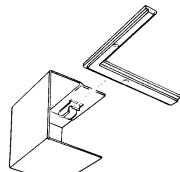
TK106
Mechanical Coupler
(TKN, LTN, LTR, LTF)



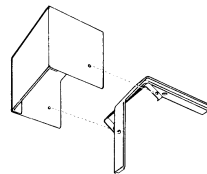
TK1031
Track Coupler



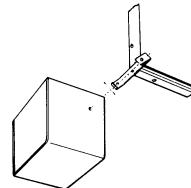
TK127
Earth Continuity Strip (TKS)



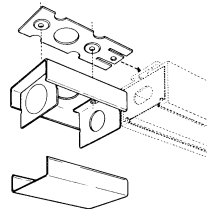
TK107 Horizontal Elbow
(TKN)



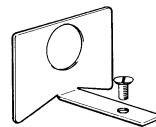
TK108 Vertical
Int. Elbow
(TKN)



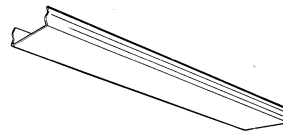
TK109 Vert. Ext.
Elbow (TKN)



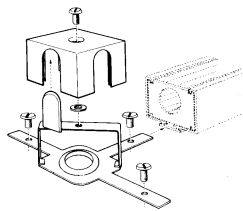
TK115 Wiring box
End Entry (TKN)



TK128
Spare end cap
metal (TKS)

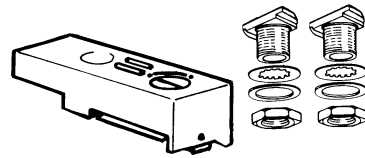


TK111
Clip-on
Cover



TK123 Wiring box (TKN and TKS)

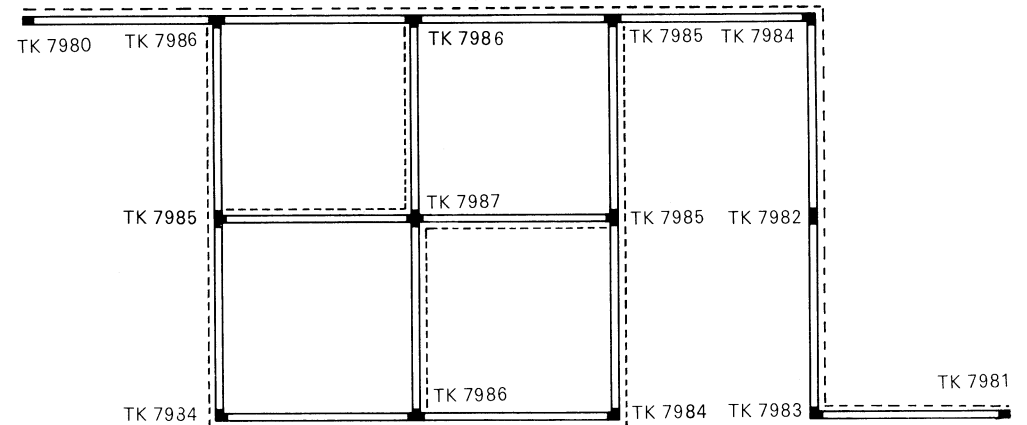
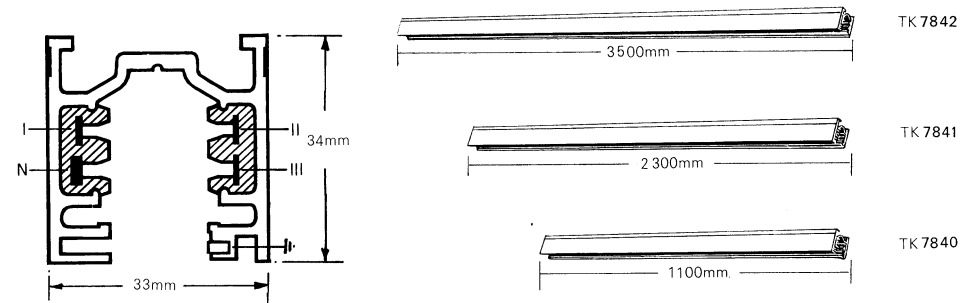
TK121 as TK123 W for end entry } TKS
TK122 as TK123 2 way at 90° } and
TK124 as TK123 4 way "X" } TKN
TK126 as TK123 2 way in line }



TK1121 Fluorescent Suspension Set
FK1121/F as TK1121 but
includes cut lead fuse

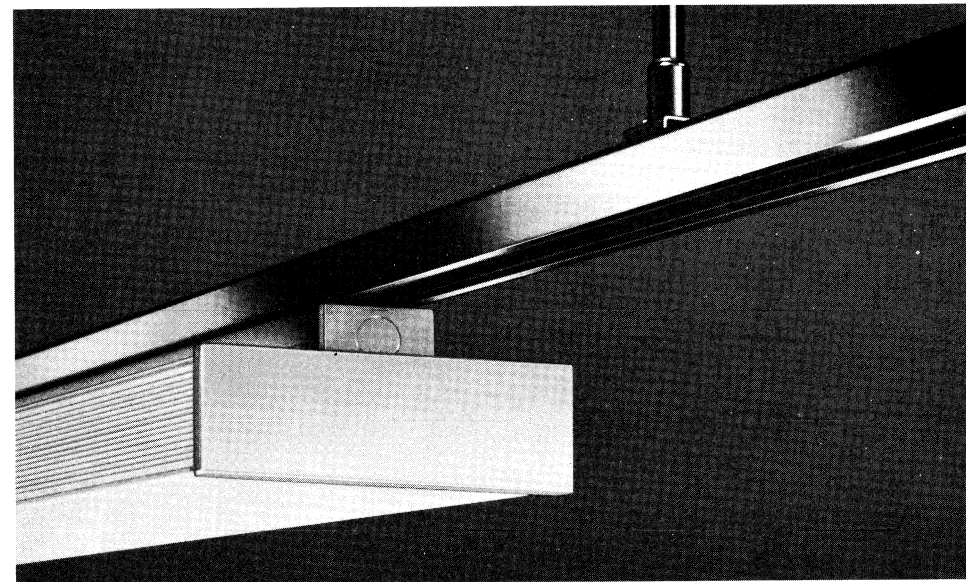
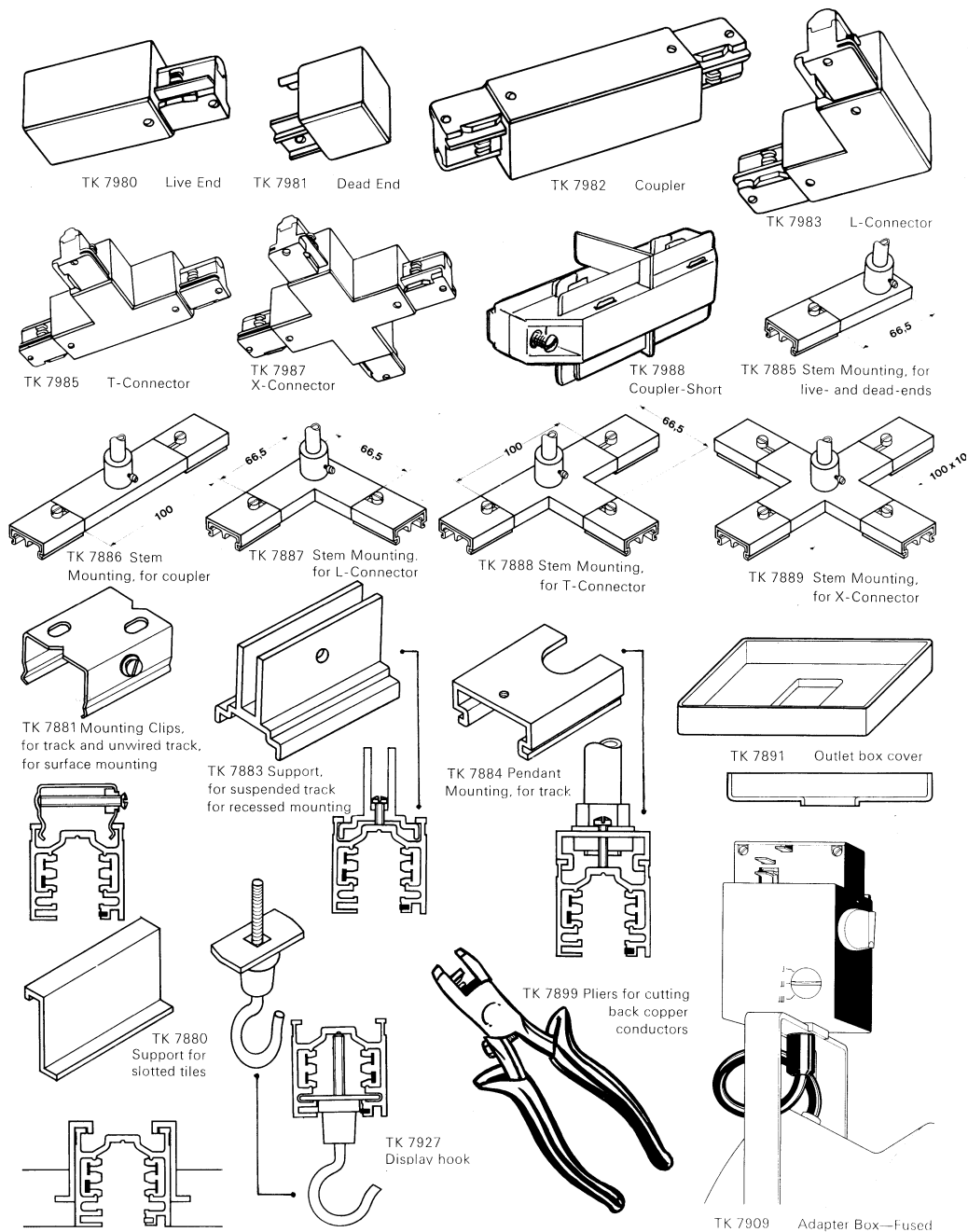
The Thorn Multi-trak consists of a neat lighting track system containing three separate circuits (I, II and III). The adaptor is switchable between these three circuits. The only wiring

required is to the initial input, all subsequent connections being plug-in. Three track lengths are available.



The diagram indicates the variety of possible layouts with Multi-trak. When planning layouts note the position of the earth conductor in

regard to "L", "T" and "X" connectors. The dotted line indicates the earth.



This ultra-slim section anodized aluminium trunking is particularly suitable for office, store and display lighting applications where more industrial forms are too bulky and may present an unsatisfactory appearance.

Three types of trunking section are available – one for surface mounting or conduit suspension and two other types for recessing into suspended ceilings. (See illustrations on next page).

The trunking suspension assembly is used to connect the trunking section to the 19mm/3/4in conduit down-drop.

Suspension of trunking by means of chains is not normally recommended.

The fitting is connected to the trunking section by means of the fittings suspension assembly. By this means extreme flexibility of suspension centres for the trunking and spacing of the fittings along the trunking is achieved.

The coupling piece to join the lengths of trunking together is fitted internally and is locked with set-screws without drilling the trunking.

A four-way coupling (Catalogue no. LTN 4510) enables continuous runs of Trakline to be used. (See perspective view on next page).

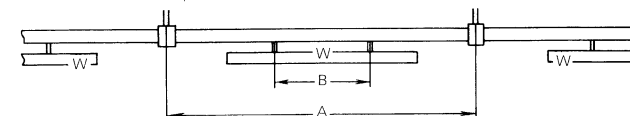
A PVC cover closes the open mouth of the trunking between fittings and a black finished end plate closes the end of the

trunking. This end plate incorporates a knock-out to receive conduit which is used to feed into the trunking and make bends, or clear obstacles, etc. between the trunking runs.

Through-wiring cables are retained in the trunking by fibre support-pieces.

Maximum recommended trunking suspension centres 2.44m/8ft

NOTE: A gap of at least 6.35mm/0.25in must be left between trunking lengths during installation to allow for expansion.



Deflections for new lightweight trunking

A	B	Weight W	Deflection
2.44m	0.61m	9kg	5.7mm
8ft	24in	20lb	0.225in
2.44m	1.22m	13.6kg	5.7mm
8ft	48in	30lb	0.225in

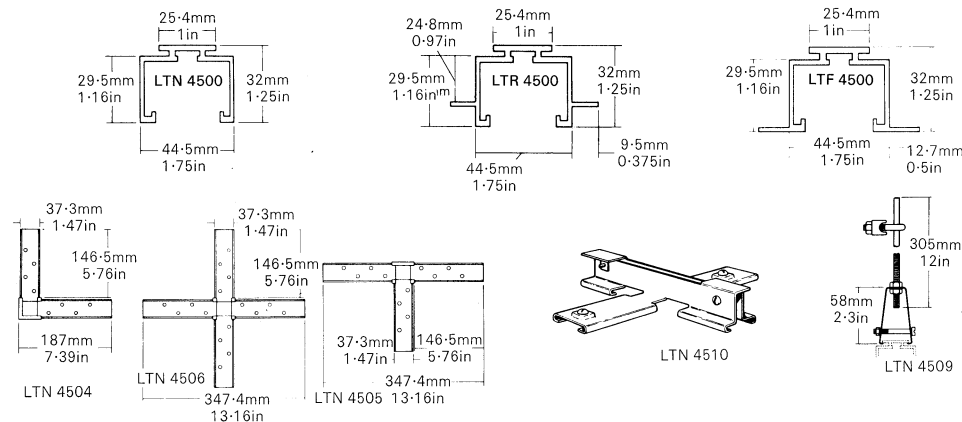
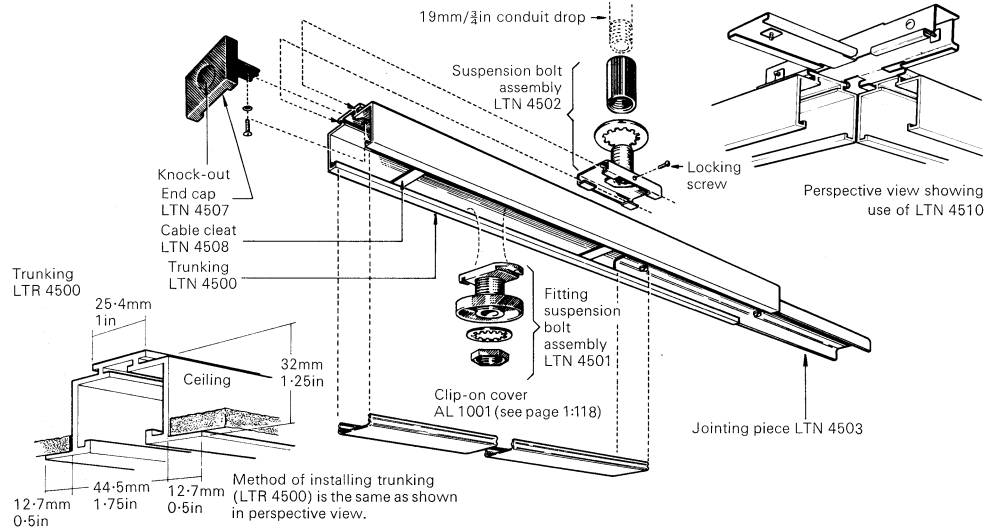
The above deflections were measured using maximum weight Popular Pack fittings. These figures assume that all loads are counter-balanced and the final trunking span will be

adequately supported at the termination point.

It is important when designing trunking installations to ensure that the deflection between spans does not exceed 1/300th of the total span.

For example, an installation requires trunking to be suspended at 2.44m/8ft spans. Therefore maximum deflection = $\frac{2440}{300} = 8.1\text{mm}/0.32\text{in}$.

New lightweight trunking

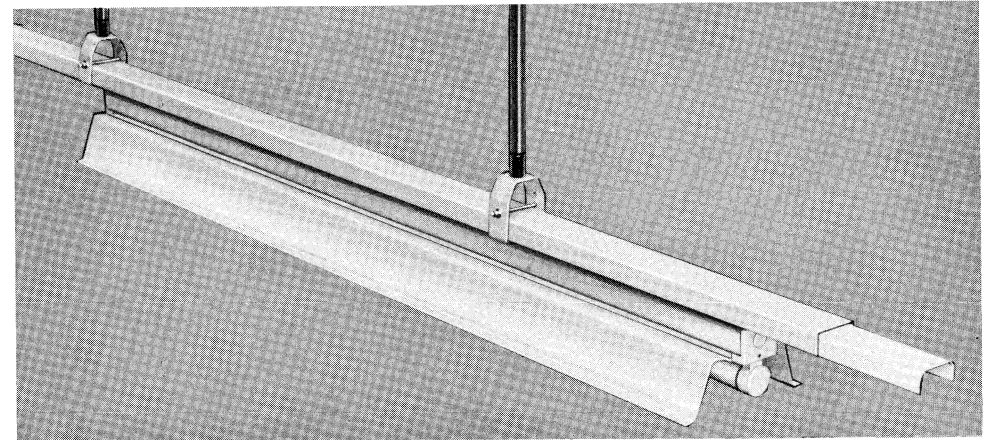


Components table

Catalogue no.	Description	Weight	
		kg	lb
LTN 4500	4.5 metre length trunking	3.175	7
LTR 4500	4.5 metre length trunking for recessing	3.63	8
LTF 4500	4.5 metre length trunking for recessing	3.63	8
LTN 4501	Fittings hanger assembly	0.085	0.19
LTN 4502	Trunking hanger assembly	0.085	0.19
LTN 4503	Jointing piece	0.34	0.75
LTN 4504	Two-way coupling	0.23	0.5
LTN 4505	Three-way coupling	0.28	0.61
LTN 4506	Four-way coupling	0.51	1.125
LTN 4507	End cap	0.028	0.063
LTN 4508	Cable cleats	0014 (Pack of 10)	0.031
LTN 4509	New adjustable suspension	0.17	0.375
LTN 4510*	Four-way coupling	0.17	0.375
AL 1001	1.8 metre PVC cover (also used with Liteline trunking)	0.17	0.375

*Enables continuous runs of Trakline to be used with new lightweight trunking

Liteline trunking



Liteline trunking is a universal system for carrying overhead lighting, electric fittings or cables for industrial and commercial buildings. Liteline trunking can either be suspended, fixed flush to a ceiling or, by means of the top hat section, incorporated into a suspended ceiling. Having a cross section of only 66 x 32mm/2.625 x 1.25in, it is available in 4.5m/14.75ft lengths of 18 gauge cold rolled steel. The paint surface is a single dip coat finish and is light grey in colour to BS.2260.9-094. In certain circumstances it may be necessary to apply a final finishing coat for increased durability. Simple jointing by slide-in straight coupling pieces secured by eight screws ensuring earth continuity, and removable clip-in PVC cover fillets enable easy installation.

Neat and rigid

The trunking is small and compact in design and suitable for surface mounting installations. The design of the channel section ensures maximum rigidity and weight carrying capacity over unsupported spans up to 3.35m/11ft.

Easy to wire

When trunking is erected, there are no obstructions whatever and, therefore, cable can be fed into the trunking with ease. Up to two lighting fittings can be supplied from any point by fitting a Parablock connector.

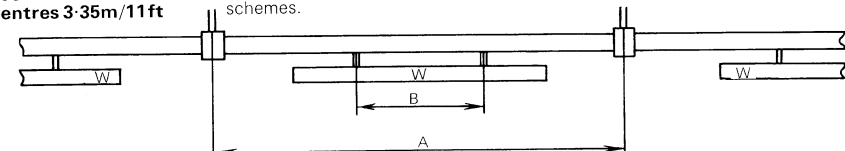
Flexible

The numerous junction pieces enable horizontal diversions of 90° to be made from the main trunking run.

Colour

The BS.2260.9-094 light grey colour is attractive yet unobtrusive and is therefore ideal for commercial office schemes.

Maximum recommended suspension centres 3.35m/11ft



Deflections for Liteline trunking

A	B	Weight W	Deflection
3.35m/11ft	0.61m/24in	18kg/40lb	6.35mm/0.25in
A	B	Weight W	Deflection
3.35m/11ft	1.22m/48in	25kg/55lb	5.1mm/0.20in

The above deflections were measured using Atlantic 4 fittings (Catalogue no. A4B/4685) at 0.61m/24in suspension centres and A4Z/T4885 at 1.22m/48in centres and suspended as detailed above.

These figures assume that all loads are counter-balanced and the final trunking span will be adequately supported at the termination point. It is important when designing trunking installations to ensure that the deflection between spans does

Simple installation

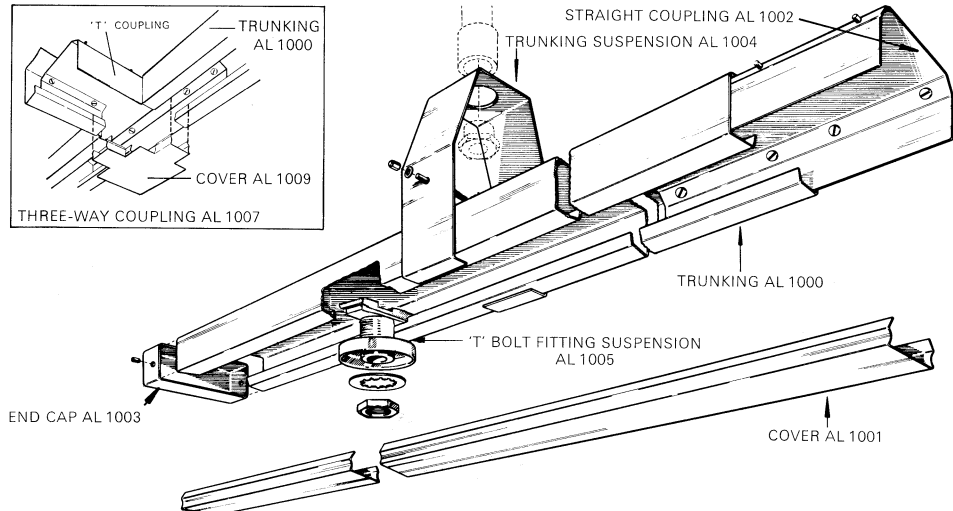
Simple jointing by slide-in straight coupling piece secured by eight screws ensuring earth continuity. Easily removable clip-in PVC cover fillet. 'Clip-over' suspension stirrup suitable for chain or conduit. Universal girder clamps for RSJ mounting.

Versatile

Any type of fitting with 19mm $\frac{3}{4}$ in conduit hole fixing can be suspended from any point by means of a special 'T' bolt assembly, which also facilitates alterations to lighting layouts. Fittings with larger conduit fixings can be mounted by means of a suitable reducer. A top hat section can be supplied where it is required to fit a flush mounted suspended ceiling.

$\frac{3350}{300} = 11.2\text{mm}/0.44\text{in}$

Liteline trunking



Catalogue no. AL 4500
Trunking sections
 4.5m/14.75ft length
 Weight 6.3kg/13lb 14oz
 66mm/2.6in wide x
 32mm/1.3in deep

Catalogue no. AL 1003
End cap
 Weight 0.01kg/1/3oz

Catalogue no. AL 1006
Horizontal coupling
 Weight 0.5kg/1lb 3oz

Catalogue no. AL 1009
Cover assembly
 Weight 0.06kg/2oz

Catalogue no. AL 4512
Top hat section
 4.5m/14.75ft length
 Weight 3.5kg/7lb 10oz
 106mm/4.1875in wide x 43mm/1.6875in deep

Catalogue no. AL 1015
Vertical-horizontal coupling (external)
 Weight 0.7kg/1lb 10oz

Catalogue no. AL 1001
PVC cover fillet
 1.8m/71in length
 Weight 0.17kg/6oz

Catalogue no. AL 1004
Trunking suspension
 Weight 0.11kg/4oz
 38mm/1.5in wide x
 86mm/3.375in deep

Catalogue no. AL 1007
'T' coupling
 Weight 0.7kg/1lb 10oz

Catalogue no. AL 1010
Girder clamp assembly
 Weight 0.14kg/5oz

Catalogue no. AL 1013
Parablock connector
 Weight 0.03kg/1oz
 takes cable up to 7/036

Catalogue no. AL 1002
Straight coupling
 Weight 0.5kg/1lb 3oz

Catalogue no. AL 1005
'T' bolt (fitting suspension)
 Weight 0.09kg/3oz

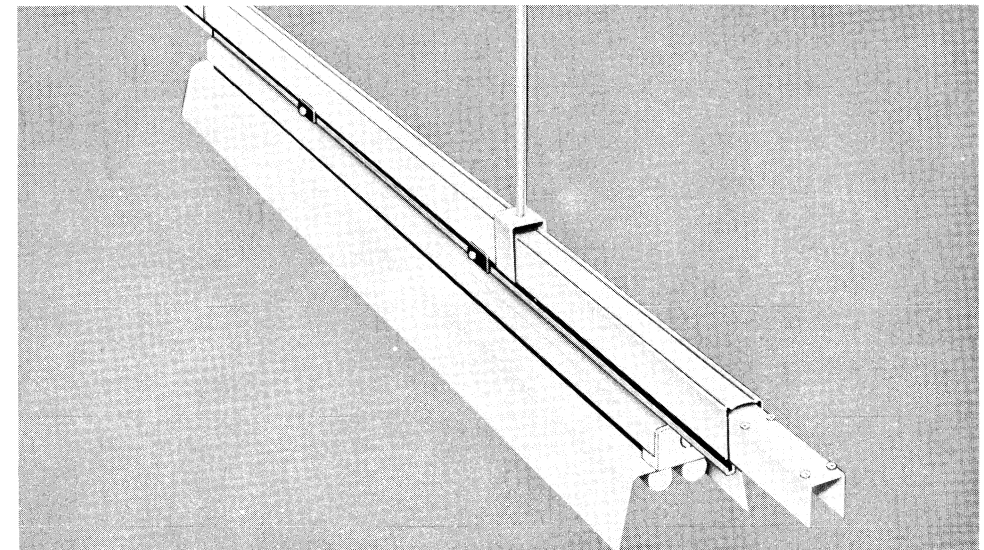
Catalogue no. AL 1008
Four-way coupling
 Weight 0.9kg/2lb 1oz

Catalogue no. AL 1011
Suspension bracket
 Weight 0.03kg/1oz

Catalogue no. AL 1014
Vertical-horizontal coupling (internal)
 Weight 0.7kg/1lb 10oz

Catalogue no. AL 1016
Stop-end junction
 Weight 0.5kg/1lb 3oz

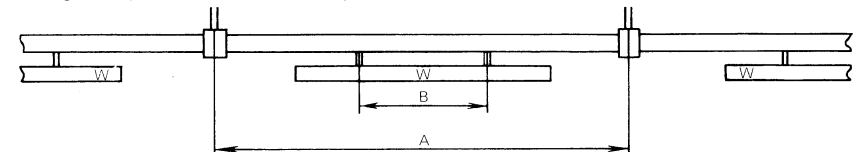
Atlantic trunking



The Atlantic trunking system is adapted to receive lighting fittings on its underside, and provides structural support for the fittings with adequate through-wiring capacity. The system reduces installation time to the minimum. The close-top trunking is suspended by saddle brackets attached to down-drops from the ceiling or roof structure, and joint pieces hold the sections rigidly in line and provide earth continuity. The suspension of trunking by means of chains is not normally recommended. Close ceiling mounting is also possible.

Brackets are attached to the fittings by means of the threaded bush, nut and washer supplied. The brackets engage with the batten flanges of the trunking and allow the fitting to be hinged from the trunking during installation, maintenance or subsequent modification of the through-wiring in the trunking. Clip-in, 15 amp terminal blocks are available for inter-connection and looping in. Cable carriers are included in each trunking length to retain the cables neatly in position. The trunking mouth is closed by a black snap-on PVC cover strip

which is easily cut to length on site to fit between fittings. This part is not required when the fittings are continuously mounted. To ensure satisfactory earth continuity between the fittings and the trunking an earth screw is provided on the jointing piece, a jumper cable being necessary to complete the bond. Standard trunking is made from 18 swg galvanized sheet steel. **Maximum recommended trunking suspension centres 4.5m/14.75ft**



Deflections for Atlantic trunking

A	B	Weight W	Deflection
4.5m/14.75ft	0.61m/24in	18kg/40lb	2.54mm/0.1in
A	B	Weight W	Deflection
4.5m/14.75ft	1.22m/48in	25kg/55lb	4.32mm/0.17in

For spans less than 4.5m the deflection on this trunking was not measurable

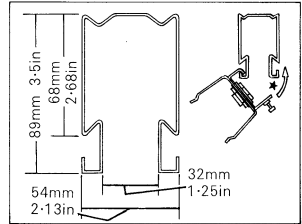
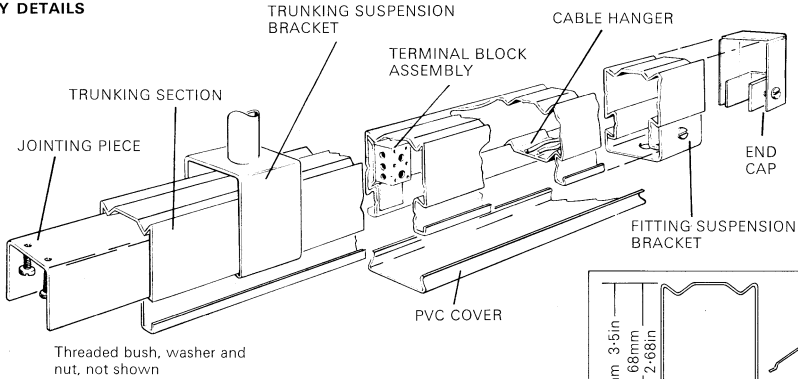
The above deflections were measured using Atlantic 4 fittings (Catalogue no. A4B/4685) at 0.61m/24in suspension centres and A4Z/T4885 at 1.22m/48in centres and suspended as detailed above.

These figures assume that all loads are counter-balanced and the final trunking span will be adequately supported at the termination point. It is important when designing trunking installations to ensure that the deflection between spans does

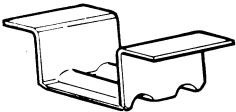
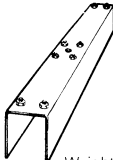
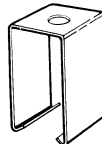
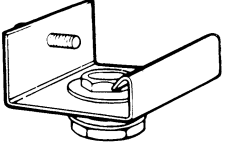
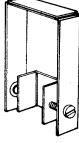
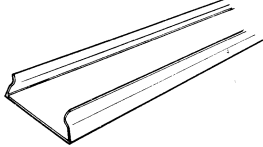
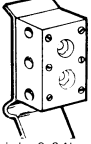
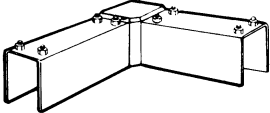
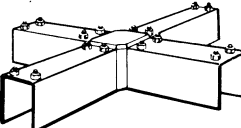
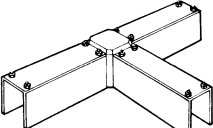
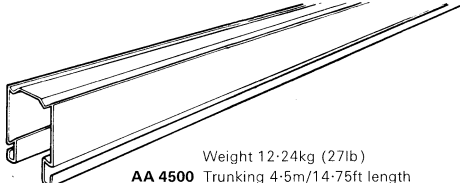
not exceed 1/300th of the total span. For example, an installation requires trunking to be suspended at 4.5m/14.75ft spans. Therefore maximum deflection $= \frac{4500}{300} = 15\text{mm}/0.6\text{in}$.

Atlantic trunking

ASSEMBLY DETAILS



COMPLETE PARTS LIST

 <p>Weight 0-01kg (0-03lb) AA 4702 Cable support</p>	 <p>Weight 0-49kg (1-1lb) AA 4703 Straight coupling</p>	 <p>Weight 0-14kg (0-32lb) AA 4704 Trunking suspension</p>
 <p>Weight 0-05kg (0-12lb) AA 4705 Fitting suspension</p>	 <p>Weight 0-141kg (0-3lb) AA 4706 End cap</p>	 <p>Weight 0-20kg (0-45lb) AA 4707 PVC cover 2.4m/7-87ft</p>
 <p>Weight 0-04kg (0-1lb) AA 4708 Terminal block assembly</p>	 <p>Weight 0-11kg (0-25lb) AA 4709 Horizontal coupling</p>	 <p>Weight 0-45kg (1-0lb) AA 4712 Four-way coupling</p>
 <p>Weight 0-56kg (1-25lb) AA 4713 'T' coupling</p>	 <p>Weight 12-24kg (27lb) AA 4500 Trunking 4.5m/14-75ft length</p>	