THORN LIGHTING

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4:92.6

Data Sheet
Fluorescent Lamps

2D 28W and 38W Lamps Polylux 2700 and 3500

Identification

Applications

Energy saving lamps designed for use with suitable control gear. The 28 watt lamp is used in situations where 100/150 watt (or 2 x 60W) GLS lamps might otherwise be used, whilst the 38 watt (with a light output similar to a 200W GLS lamp) provides an excellent light source for use in 300 x 300 mm module ceiling systems.

Applications are in domestic, commercial, industrial and outdoor amenity lighting.

Description

A 28W and a 38W lamp based on fluorescent tube operating principles and formed into the 2D shape. Available with warm (2700K) and intermediate (3500K) Polylux phosphors for high quality colour rendering and high light output.

The 38W lamp is supplied exclusively with a 4-pin cap which permits choice of starting and ballast circuit (eg switch start, electronic start, electronic ballast, emergency lighting, dimming and transport inverter circuits).

The 28W lamp is mainly supplied with the 4-pin cap but is also available in a 2-pin cap (with integral starter switch and radio interference suppression capacitor) to fit existing, older, fittings.

Construction

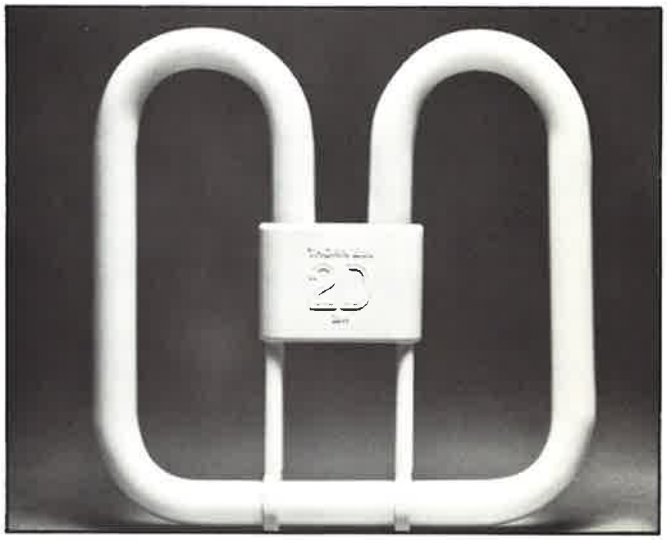
19mm glass tube formed into the 2D shape and retained by a single central plastic moulding which acts as the lamp cap.

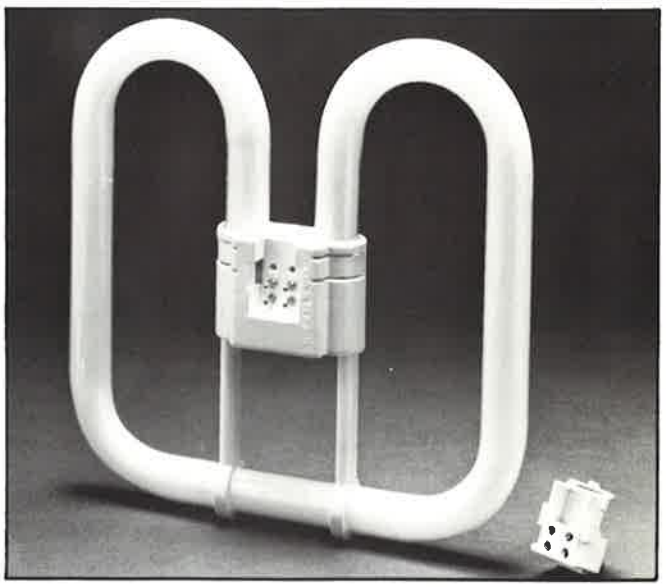
Performance

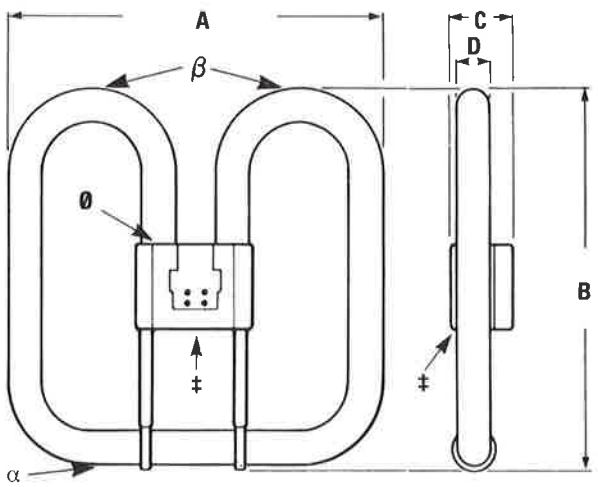
Physical Characteristics

		28W	38W
Rated lamp power			
Nominal dimensions*	A	205mm	205mm
	B	205mm	205mm
	C	35mm	35mm
	D (max)	24mm	24mm
Cap		GR10q (4 pin) or GR8 (2 pin)	GR10q (4 pin)
Weight		130g	130g
Operating position		Any	Any except where leg 'α' is higher than bends 'β' in order to keep region Ø of cap as cool as possible.
Life		10000h	10000h

*Maximum lamp outlines available on request.
Ø Area where maximum cap temperatures occur. This should not exceed 130°C as the cap material starts to soften.







Electrical Characteristics

Data for 240V 50Hz circuits tested in 25°C ambient temperature.†

	28W		38W	
Rated lamp power				
Objective lamp power	28W		38W	
Objective lamp volts	107V		110V	
Nominal lamp current	0.32A		0.43A	
Total circuit power	36W		49W	
Circuit power factor	LPF	HPF+	LPF	HPF+
Lagging power factor	0.47	0.95	0.47	0.95
Supply current	0.32A	0.16A	0.43A	0.21A
Total volt/amps	77VA	38VA	103VA	50VA
Min. starting temperature	−10°C		−10°C	

+ for high power factor, use a 4μF capacitor (CG 2428)

† The figures listed relate to stabilised lamps. During tansit and normal handling, excess mercury may be distributed within the discharge tube. Stabilisation is reached when all excess mercury has been collected at the coldest spot in the lamp. In a fitting this will usually occur within 100 hrs of lamp operation.

Details of variation of electrical and luminous characteristics with change of ambient temperature are available on request.

Luminous characteristics

Rated lamp power	28W		38W	
Nominal colour temperature	2700K	3500K	2700K	3500K
Light output – 100h lumens	2050	2050	2950	2950
2000h lumens	1850	1850	2600	2600
Chromaticity Coordinates – X	0.463	0.415	0.463	0.415
Y	0.420	0.400	0.420	0.400
Correlated colour temperature	2700K	3500K	2700K	3500K
Colour rendering index	82	82	82	82

Accessories

Ballasts

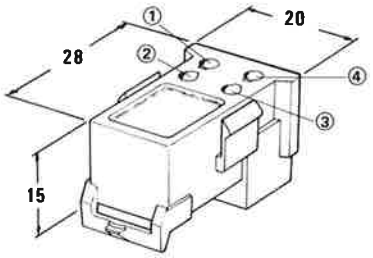
		28W	38W
Catalogue number –	220v 50Hz	G69603.2	G69545.2
	240v 50Hz	GCS28	GCS 36/40
	220v 60Hz	G69609.2	G69615.2
	240v 60Hz	G69609.4	G69545.1
Dimensions	height	28mm	28mm
	width	42mm	42mm
	fixing centres	140mm	140mm
	length	150mm	150mm
Weight		625g	625g
Temperature rating –	Tw	130	130
	Δt	50	55
Case colour		white varnish insulation	

Lampholders for 4-Pin 2D Lamps

GB 1685

Surface-mounted lampholder with housing of white polycarbonate. Push wire terminals permit back entry of 0.5–1.0 sq mm single conductor cable. This lampholder is for mounting on sheet metal 0.5–1.0 mm thick pierced as shown.

Connect suitable starter switch or electronic starter across terminals 1 and 4. Connect neutral and ballast leads to terminals 2 and 3.



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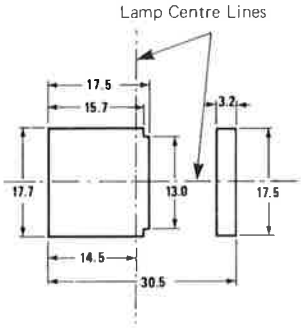
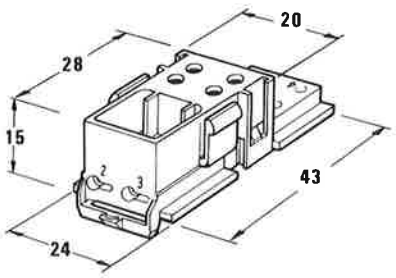
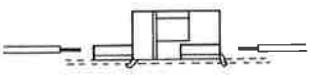


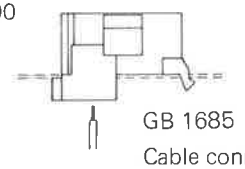
Lamp Orientation with piercing shown



GB 1690



GB 1690



GB 1685

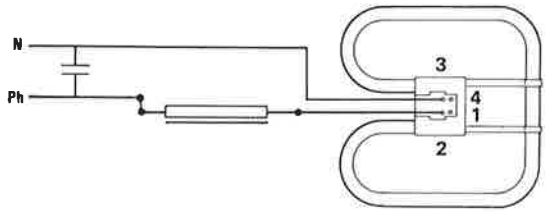
Cable connections with piercing shown

GB 1690

Surface-mounted lampholder with housing of white polycarbonate. Push wire terminals permit side entry of 0.5–1.0 sq mm single conductor cable. This lampholder is for mounting on sheet metal 0.5–1.0 mm thick pierced as for the GB 1664 lampholder for 2-pin 2D lamps.

Connect suitable starter switch or electronic starter across terminals 1 and 4. Connect neutral and ballasts leads to terminals 2 and 3.

Circuit diagram (for 4 pin cap)



Connect suitable starter switch (155/500) or electronic starter across terminals 1 and 4*.

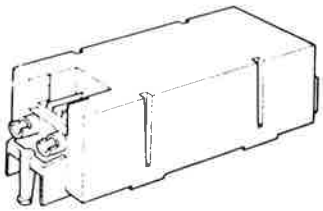
Connect neutral and ballast leads to terminals 3 and 2*.

*Terminal numbers are those marked adjacent to lampholder terminals.

Starters (for both 28W and 38W 4 pin lamps)

Vivatronic Electronic Starter

Catalogue no	– 220V	G69577.2
	– 240V	G69577.4
Dimensions –	height	28mm
	width	38mm
	fixing centres	93mm
	length	105mm
Fixing method (2 x 4.8mm dia. holes)		Snap-in

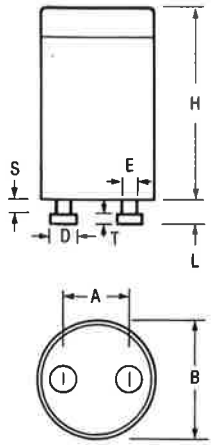


Use 4μF 250V capacitor (GC2428)
for power factor correction

Diameter – 25mm
Length – 106mm

Glowstarter Switch

Catalogue no – 200/250V 155/500



Dimensions in mm

	A	B	D	E	H	L	S	T
Max	12.9	21.5	5.0	3.2	36.0	4.3	–	2.2
Min	12.5	–	4.7	2.8	33.0	–	1.7	1.9