



The **Micro-Max** is the smaller version of the Mini-Max, retaining the market leading features of the larger model.

A prismatic diffuser gives an even light distribution from the energy efficient 2D lamp.

The option of security screws add to the impressive vandal resistant features. Time-in-a-Box and a hinged gear tray make this the 'Installers' Choice'.



GE Lighting 2D lamps are fitted as standard.

IP65



MANUFACTURED IN THE UK 

Fern Howard products are manufactured in the UK at our extensive facility in Alton, Hampshire. Fittings are manufactured and tested in accordance with BS EN 60598. They are also RoHS compliant.

Versions

- High Frequency
- Clear or Opal diffuser
- Black or White base

Options

- Self fit Photocell kit
- Security Screws



FERN-HOWARD GASKETING - POURED TO PERFECTION

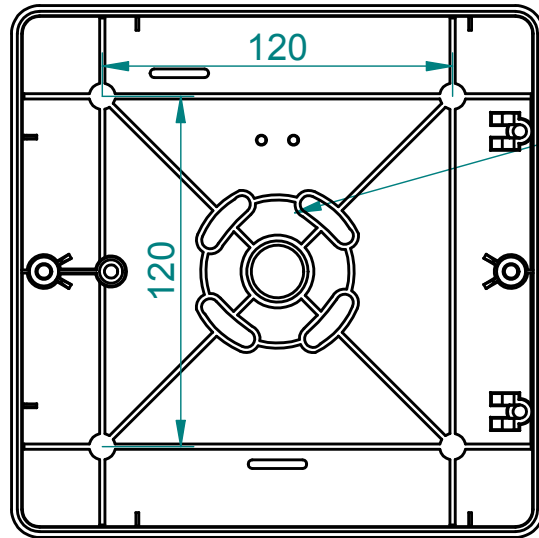
Using a PC controlled contour robot, our FIPFG (Formed In Place Foam Gasket) sealing system creates a poured gasket seal.

We use two chemically safe components which are combined and expand to form a 'poured two-part gasket' which can blend any join and fill all uneven surfaces into a one piece seal.

Whenever you 'cut and splice', the join will always be a weak point in your finished product. The distinct advantage of a 'formed in place foam gasket', compared to adding any other secondary sponge material, is that it is formed and adheres to the product as a one piece application, requiring no additional fixing.

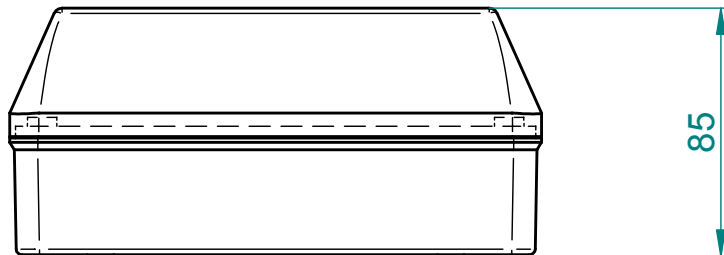
TIME-IN-A-BOX is Fern-Howard's unique packaging method, which presents component parts to the installer in exactly the order required. All parts are kept safely in the box - in protective wrappings to avoid breakages - until required, an added advantage if there is a prolonged period between first and second fix. In independently controlled and observed tests, Time-in-a-Box has been found to halve the fitting time required over a comparable luminaire, thus significantly contributing to efficiency and cost savings.

- 1**
Open the box
- 2**
Take out the base moulding
- 3**
Attach to surface
- 4**
Take out gear tray
- 5**
Present to moulding
- 6**
Tighten screws
- 7**
Connect supply
- 8**
Close gear tray
- 9**
Remove lamp from protective wrapping
- 10**
Clip in place
- 11**
Take diffuser from box
- 12**
Screw in place
- 13**
Job done

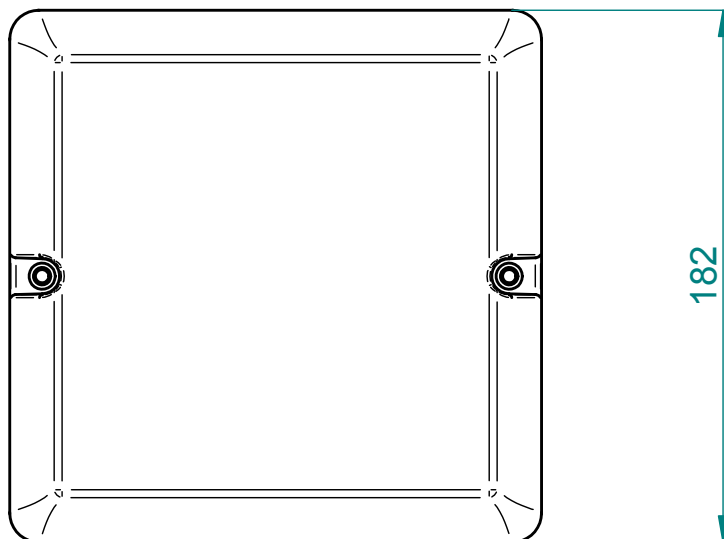


BESA BOX FIXING

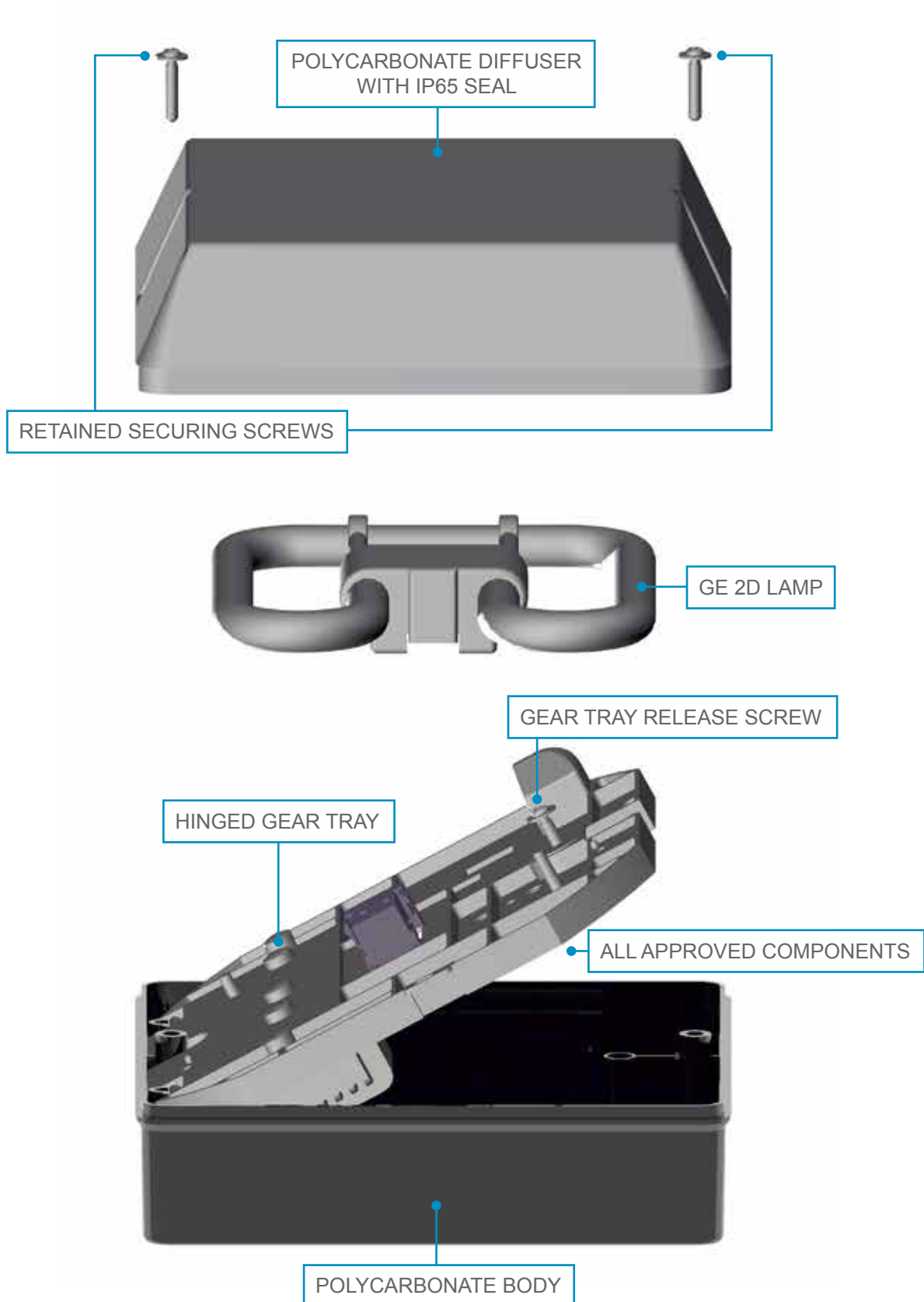
FIXING POINTS



HEIGHT



FOOTPRINT



INSTALLATION AND OPERATING INSTRUCTIONS

THIS FITTING SHOULD NOT BE USED IN AREAS EXCEEDING 25°C AMBIENT AIR TEMPERATURE

This fitting must be installed by a qualified electrician and wired in accordance with the latest edition of the IEE Electrical Regulations. Information regarding Part Number, Description, Voltage, Frequency, IP Rating and Lamp type is shown on the label affixed to the box containing the luminaire.

Pre-installation

ALWAYS TURN OFF THE MAINS SUPPLY BEFORE COMMENCING INSTALLATION

Make sure that the mains supply is compatible with the fitting.

If IP rating has to be retained a cable gland of the correct IP rating must be used and any fixing holes must be filled with a proprietary silicon sealing compound.

High voltage insulation test equipment **MUST NOT** be used on High Frequency, Emergency or Dimming luminaires.

The luminaire is suitable for use within ambient temperature range of -10°C to + 25°C ONLY.

However, particular attention should be paid to the temperature range for emergency fittings.

Installations that regularly drop below 0° C for prolonged periods, particularly when the luminaire is not illuminated are likely to result in a shortened battery life. In such applications a regular testing and battery replacement schedule is recommended.

PIR and electronic time switches are not recommended for these luminaries. If used, ensure that there is no "Leakage Current" when in the "Off" position and an "On" time of not less than 20 minutes.

Failure to ensure this could potentially impair the performance of the luminaire.

Lamp Switching Cycles / Lamp Life

CONSTANT SWITCHING REDUCES LAMP LIFE

Typical switching cycles should achieve 100% of the manufacturers stated lamp life, however, switching every 5 minutes would reduce this to 20%.

Installation

Take out the base moulding.

Drill out the cable entry and any other "Cut Outs" required.

If cut outs are required for conduit fixing (Not BESA) make sure that the hole is drilled high enough in the side of the base to allow the inside nut to be fitted.

Feed the incoming mains through the cable entry gland and secure the base to the mounting surface required using the mounting points provided (failure to do this will cause the fitting to distort) with fixings suitable to support the fitting and for the material to which the base is being attached

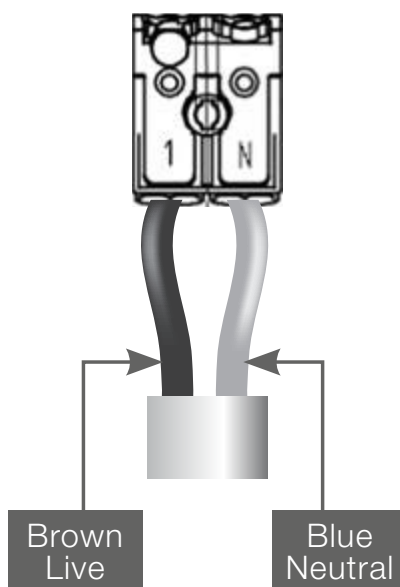
Put the gear tray into the Hinge position, tighten the two screws and allow the Gear tray to hinge open.

Make sure that the incoming mains cable is long enough to allow the Gear Tray to be completely opened.

Connect the incoming mains to the terminal block.

If using stranded cables, make sure that no stray wires are omitted from the terminal connection.

Standard Wiring



Close the Gear Tray (make sure that all cables are clear of the Gear Tray components) and secure with the screw provided.

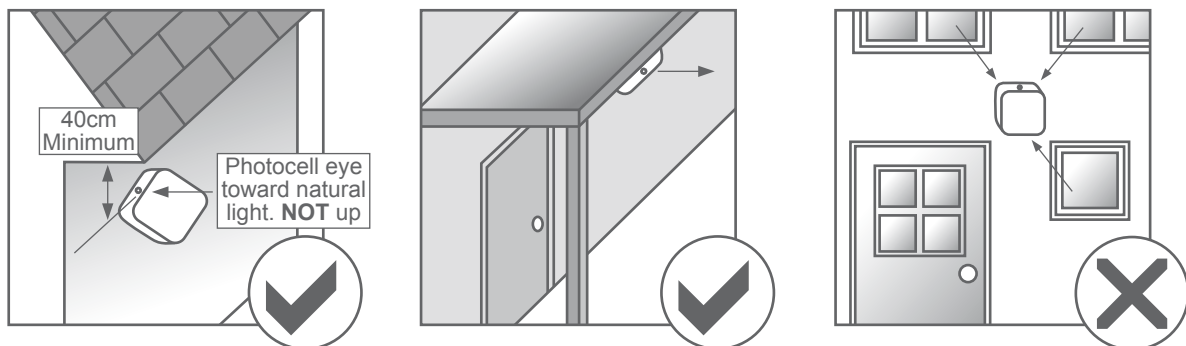
Fit the lamp making sure that it is securely clipped in.

Screw on the diffuser making sure that it is correctly tightened to locate in the seal.

PHOTOCELL VERSIONS (For External Use Only)

The photocell controlled Luminaire, automatically lights as daylight fades and switches off in the morning as the sun rises. The built-in photocell detects light levels and switches accordingly. Variation of natural light will cause the Luminaire to switch on and off at various times as light level alters.

Location



The ideal location for the unit to be mounted is on an exterior wall with an uninterrupted view of natural light. **DO NOT** use photocell luminaires in internal locations.

The fitting can be used in many locations, providing the following precautions are observed:-

- If mounting on a ceiling or wall, the photocell eye should be directed towards the best natural light. Similarly when under a canopy, eaves or porch, direct the photocell eye towards the best daylight.
- Ensure that the distance between the photocell eye side of the fitting and any adjacent surface, either wall, ceiling, eaves or soffit is a minimum of 40cm.
- The unit can be affected by adjacent light sources, including light from inside the property. Ensure the photocell eye is NOT in the light path of any other light fitting.

To Test:

Test the correct operation of the unit by switching on the mains supply and completely covering the photocell lens until the lamp strikes. Note:- There is a deliberate delay in switching on to prevent "Momentary" switching during Twilight or Dusk periods.

GENERAL ROUTINE MAINTENANCE

At commissioning and handing over of the installation, ensure that a copy of this data is presented to the authority responsible for the operation, maintenance and repair of Luminaires.

Cleaning of the Luminaire or lamp replacement must only be carried out after the fitting has been isolated from the electrical supply. **ALWAYS** check before servicing.

Cleaning should be carried out at regular intervals to ensure that contaminants do not accumulate to an extent that will impair the thermal safety of the Luminaire, or degrade the optical performance of the lamp. **DO NOT** use Spirit based cleaners.

Failed lamps must be replaced immediately, with "Lamps" of the same type, if a "Starter Switch" is fitted, this should be changed at the same time. Undetected or unattended failed lamp replacement will result in the Ballast unit overheating and ultimately will cause its' failure, rendering the fitting useless.

Notes:

This luminaire should not be modified or repaired by any persons other than those nominated by the manufacturer.

Any unauthorised modification or repair may render the luminaire unsafe and will invalidate the warranty and conformance to any safety or safety standards that may apply.

The company will accept no responsibility for any modified fittings or for any damage caused as a result of modifications. All details are given as guidance only and do not constitute a contract.

We reserve the right to change or withdraw products without notice.

Performance and Warranty

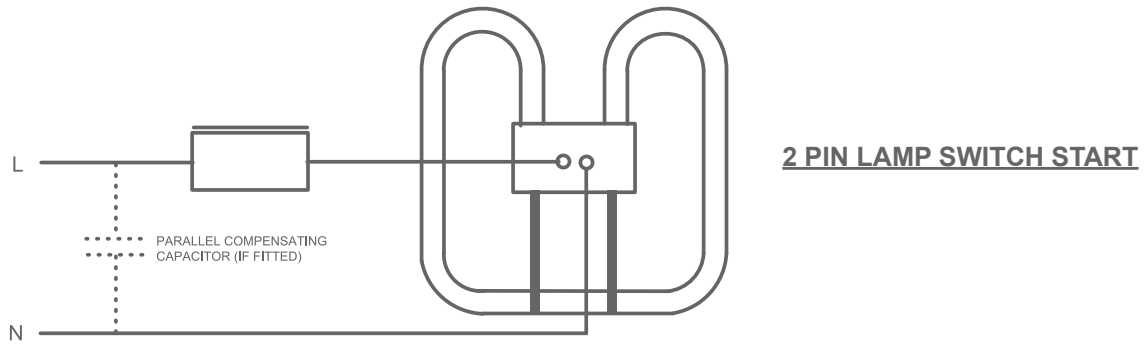
This product is warranted for twelve months from the date of installation, provided that the installation is carried out within two months of purchase, subject to the following conditions.

- This warranty will only be valid if the fittings have remained unmodified and used as per this instruction leaflet and our literature.
- Fern - Howard Ltd. shall not be liable for any consequential loss or damage caused directly or indirectly by any defective or otherwise.
- Battery packs are guaranteed for 12 months but are expected to have a life of at least four years if used within the specified temperature limits.

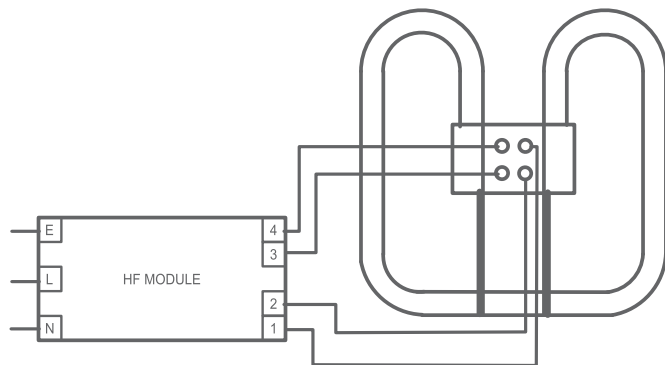
Disposal

The disposal of any electrical equipment, including this fitting may be subject to Local Authority Regulations and therefore should be consulted for specific guidance.

The batteries within this fitting are Nickel Cadmium and must be disposed of as per Local Authority Regulations for the disposal of toxic waste.



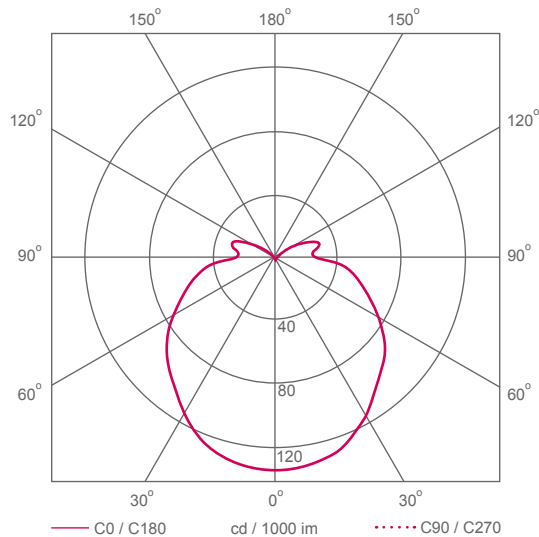
HIGH FREQUENCY



Lamp	Lumen Output (Mains-Mode)	Approx Lamp Life (Hrs)	MAGNETIC				HF	
			Nominal Lamp Current A	Parallel Correction Capacitor	Corrected Lamp Current A	Circuit Watts Corrected	HF Current A	Circuit Watts
16W	1050	10,000	0.195	2uf	0.09	27.83	0.121	18.0

Lamp	Weight SS	Weight HF	Weight EM
16W	1.07	0.67	

Size	184mm x 184 x 90 Deep
Cable Entry	Centre Rear BS Style
Body Material	Polycarbonate
Diffuser Material	Polycarbonate
Gear Tray Material	Polycarbonate
Lamp	GE 2D 3500K
Wiring	TB 2 x 2.5mm ²
Diffuser Fixing	2 Steel Screws BZP
Control Voltage	240V 50Hz



LOR = 0.58			SHR MAX = 1.63				SHR NOM = 1.50				
Room Reflectances			Room Index								
C	W	F	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
0.70	0.50	0.20	0.29	0.33	0.37	0.40	0.44	0.47	0.49	0.52	0.54
	0.30		0.24	0.28	0.33	0.36	0.40	0.43	0.46	0.49	0.51
	0.10		0.21	0.25	0.29	0.32	0.37	0.40	0.43	0.46	0.49
0.50	0.50	0.20	0.27	0.31	0.35	0.37	0.41	0.44	0.45	0.48	0.50
	0.30		0.23	0.27	0.31	0.33	0.37	0.40	0.43	0.46	0.48
	0.10		0.20	0.24	0.27	0.30	0.35	0.38	0.40	0.43	0.46
0.30	0.50	0.20	0.25	0.29	0.32	0.34	0.38	0.40	0.42	0.44	0.46
	0.30		0.22	0.25	0.29	0.31	0.35	0.38	0.40	0.42	0.44
	0.10		0.19	0.22	0.26	0.29	0.33	0.35	0.38	0.41	0.43
0.00	0.00	0.00	0.17	0.20	0.23	0.25	0.29	0.31	0.33	0.36	0.38

FIGURES BASED ON 16W CORRECTED SWITCHSTART FITTING