



Electra

High intensity LED lighting



Introduction

Marl effectively combine the world's brightest LED arrays with over 30 years of UK based design and manufacturing expertise, to offer an extensive range of high quality, efficient and durable LED lighting products.

The Electra high intensity light module is a pioneering product development, that can be used with current MR16 and GU10 fittings, providing an intensely pure white and warm white lighting effect by utilising the very latest, cutting edge LED technology.

This powerful luminaire enables accurate and brilliant illumination in numerous applications from mood and display lighting to task lighting and benefits from all the advantages familiar with LED technology that include long lifetime and exceptional reliability.

The Electra comes as a complete module with heatsink, driver, cable clamp and wiring block attached for ease of installation.

Light modules come with a choice of optic; Medium, Wide or Linear. All products are available in warm white or cold white.



Specifications (typical)

Material

Body: Black Anodised Aluminium

Lens: Clear Polycarbonate

Termination: Screw Terminals

Operating

LED Tj = 55°C

Input Range: 12-40Vdc

Input Power: 6W typical

Efficiency: 85% typical

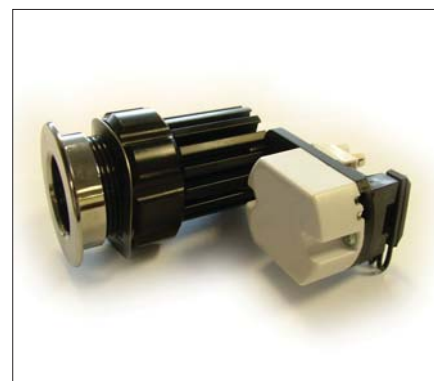
LED Forward Voltage: 7.6Vdc typical

Operating Temp: -40°C to +50°C

Storage Temp: -40°C to +85°C

MTBF (typical 25°C): >70,000 hours

LED Regulated Current: 350 / 700mA



Part Number	Colour	Optic	Typical Total Beam Divergence (DEG) (1)	Typical Luminance Characteristic at 1 metre (lux)	Driver Current (mA)	Power (W)
725-616-08-51	Warm White	Medium	30	142	350	3
725-616-09-51	Warm White	Medium	30	215	700	6
725-616-08-52	Warm White	Wide	40	97	350	3
725-616-09-52	Warm White	Wide	40	149	700	6
725-616-08-53	Warm White	Linear	4 x 25	n/a	350	3
725-616-09-53	Warm White	Linear	4 x 25	n/a	700	6

(2) Colour	Colour Temp	Luminous Flux	Luminous Intensity	Luminous Efficacy	C.R.I	Lumen Maintenance	Beam Pattern
Warm White	3050K	120lm	32.1Cd	23 lm/W	80	70% after 50,000 hours	30° typical

Part Number	Colour	Optic	Typical Total Beam Divergence (DEG) (1)	Typical Luminance Characteristic at 1 metre (lux)	Driver Current (mA)	Power (W)
725-615-08-51	Cold White	Medium	30	248	350	3
725-615-09-51	Cold White	Medium	30	414	700	6
725-615-08-52	Cold White	Wide	40	131	350	3
725-615-09-52	Cold White	Wide	40	207	700	6
725-615-08-53	Cold White	Linear	4 x 25	n/a	350	3
725-615-09-53	Cold White	Linear	4 x 25	n/a	700	6

(2) Colour	Colour Temp	Luminous Flux	Luminous Intensity	Luminous Efficacy	C.R.I	Lumen Maintenance	Beam Pattern
Cold White	4700K	175lm	46.8Cd	33 lm/W	63	70% after 50,000 hours	30° typical

(1) The typical total divergence is the full angle measured where the luminous intensity is half of the peak value.

(2) Typical test data taken at 700mA drive current. Tj=25°C

Fixtures

For a simple yet effective way of mounting the Electra Light Module you can order a front bezel which is available in three finishes; Black Anodised, Chrome Plated or Brass Plated. Each option comes complete with a retaining nut and wavy washer. Marl is able to offer customers specific finishes on the bezel if required.

We also supply a more classic style in the form of an 80° adjustable fixture. This is available in Chrome, Brass and White.

Part Number	Description
725-000-00-50	Bezel + Nut Chrome Kit
725-000-00-51	Bezel + Nut Brass Kit
725-000-00-52	Bezel + Nut Black Kit
725-000-00-60	80° Fixture, Bezel + Nut Chrome Kit
725-000-00-61	80° Fixture, Bezel + Nut Brass Kit
725-000-00-62	80° Fixture, Bezel + Nut Black Kit
725-000-00-63	80° Fixture, Bezel + Nut White Kit Please note this kit has a white fixture and chrome bezel.



Illustrated above are two possible ways that the Electra light module can be fitted.

fig 1. Simple Bezel

fig 2. Classic 80° adjustable fixture



Power Supply

Input range: 90 to 264Vac, Full range

Frequency: 47 to 63 Hz

Power Factor: >0.90 at full load, 115Vac

Inrush current: 40.0Amps maximum at 230Vac, cold start, 25°C

Input current: 1.0Amp maximum at 90Vac

Efficiency: 80% typical at 230Vac and maximum load

EMI filtering: 47CFR, Part 2, Part 15 and Cispr PUB, 22 Class A

Maximum power: 60W

Current Accuracy: $\pm 1\%$

Load regulation: $\pm 3\%$

Ripple/Noise: 1%

Leakage Current: 500uA typ.

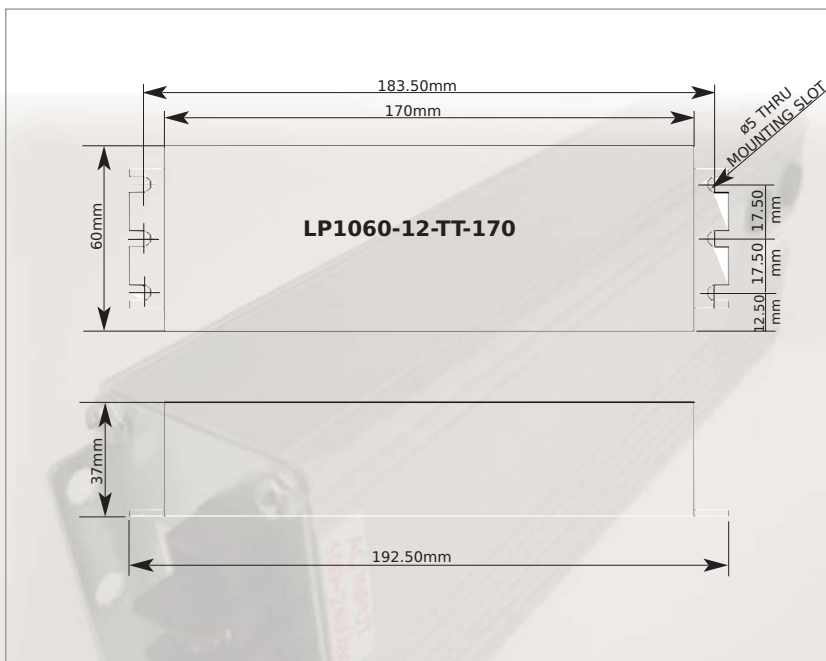
Hold up time: Half cycle minimum at 120Vac and 80% of rated load

Protection: Over-voltage, Over current and

Short circuit protection. Auto-recovery

This unit will run: 16 Electra Modules at 350mA

8 Electra Modules at 700mA

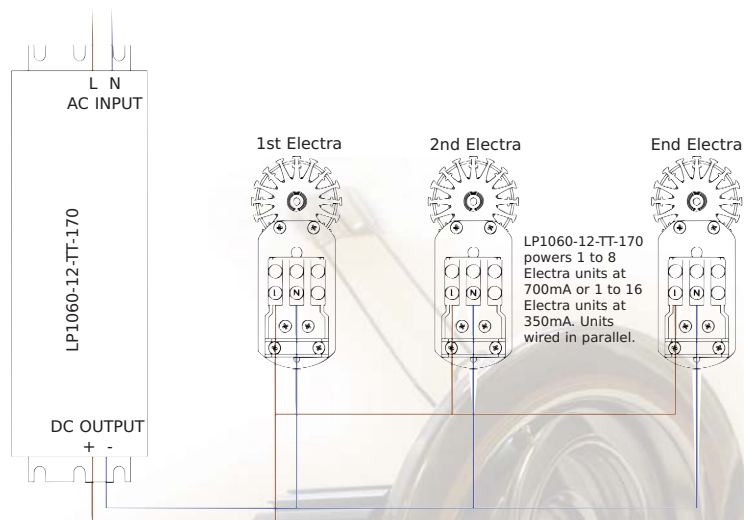


Wiring Procedure

1. Wire the mains supply (100-240Vac) to the AC input terminals of the PSU.
2. The PSU should be positioned as close to the first Electra as possible. No more than 0.5m away.
3. Using standard 2 core flex (0.75mm²) wire the + DC output from the PSU to terminal marked L on Electra.
4. Wire the - DC output from PSU to terminal marked N on Electra.
5. The terminal marked with an earth symbol on the Electra is not used.
6. Additional Electra units can be wired into the system upto a maximum of 8 @ 700mA or 16 units @ 350mA.
7. Using standard core flex (0.75mm²) wire additional Electra units linking L to L and N to N of additional units.

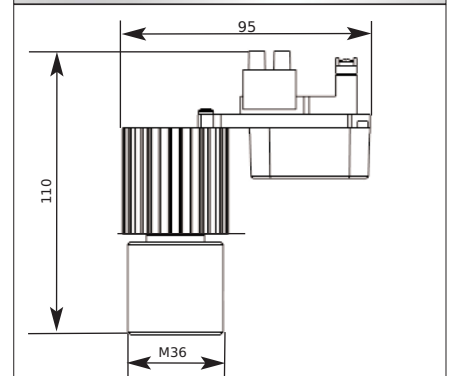
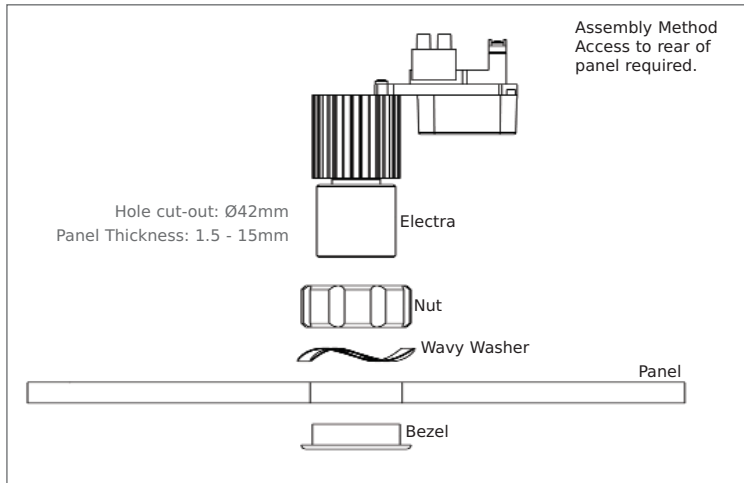


(PSU refers to our Power Supply Unit part number: LP1060-12-TT-170)

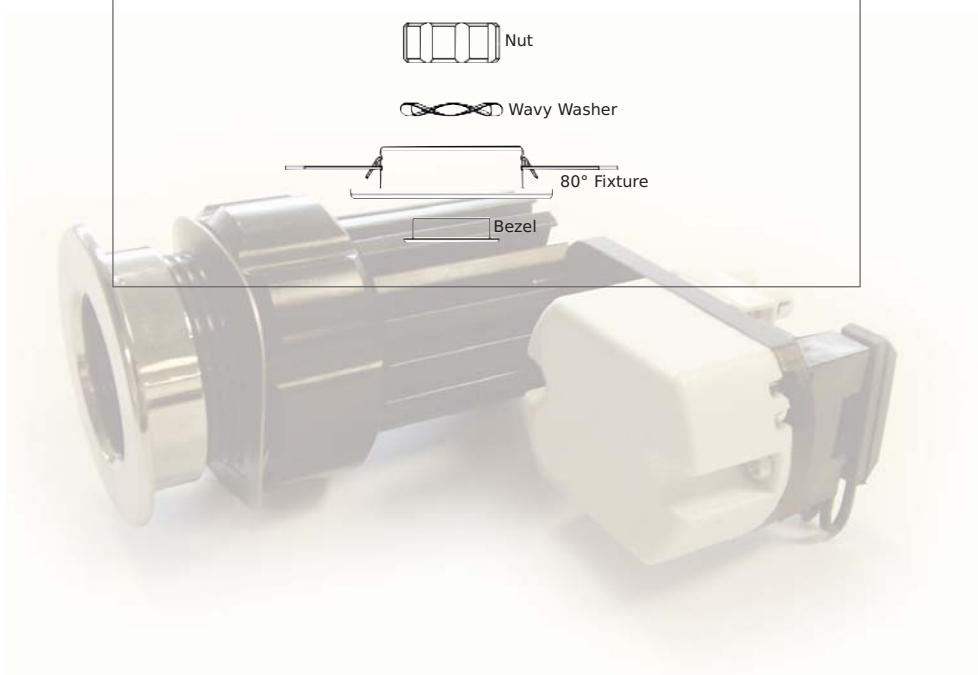
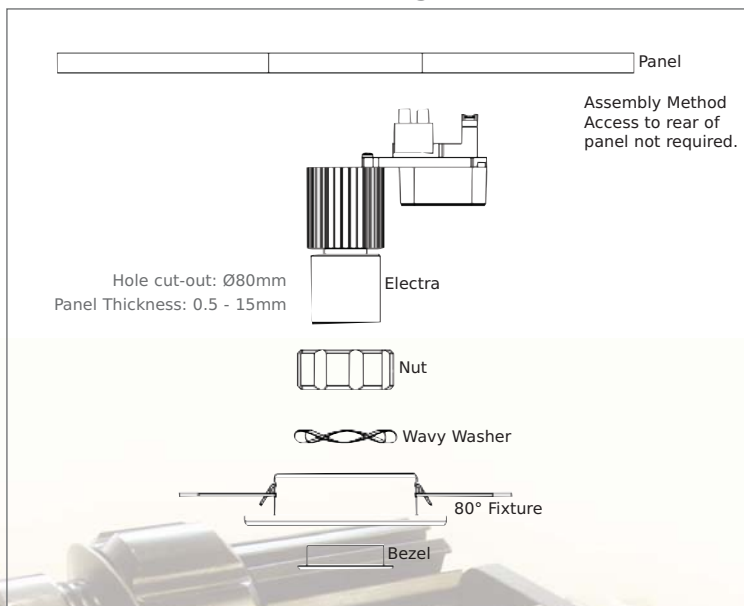


Cut-Out Detail

Electra Light Module with Bezel Fixture



Electra Light Module with 80° Fixture



Build Your Electra Light Module

1st: Choose your Electra Light Module and decide how many you require.
Refer to page 3.



2nd: Choose your fixtures.
Refer to page 4.



3rd: Ensure you have enough power supplies for your application.
Refer to page 5.



Notes





Distribution Network

UK

Aerco

01403 260 206

Architectural FX Ltd

01344 307 601

Foremost Electronics Ltd

01371 811 171

Europe

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0032 1223 1031

JK Defence & Security Products GmbH

Germany

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