



LPA Lighting Systems
Ripley Drive, Normanton,
West Yorkshire. WF6 1QT

Title: 1084 Series 2D LED LAMP

Doc. Ref: D04137

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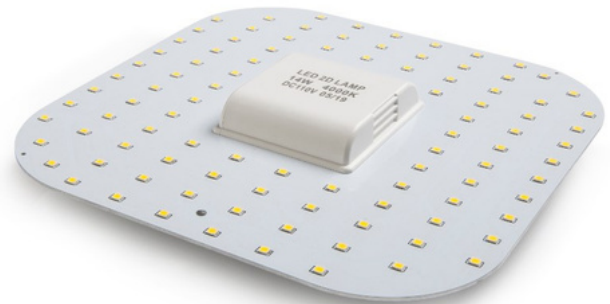


1084 Series- 2D LED LAMP



Product Overview

- ñ Rolling Stock Compliant.
- ñ Replaces 2D Fluorescent lamp.
- ñ High reliability LED and driver technology.
- ñ Built in drive electronics for direct connection to power source.
- ñ Significant energy savings.
- ñ Zero maintenance costs.
- ñ Flicker free lighting with instant start.
- ñ No mercury content, environmentally friendly.
- ñ



Safety Specification

The 1084 Series comes equipped with the following protection circuitry:

- ñ DC input voltage reversal (Non destructive).
- ñ Input transient protection.
- ñ Under voltage protection.
- ñ Built in multiple LED circuit redundancy.
- Protected against power supply interruptions (EN50155 Class S2 and C2)

Product Codes

	Warm	Natural	Cool
110VDC LED 2D LAMP 14W	-	10841000	-
24VDC LED 2D LAMP 8W	-	10821002	-



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Technical Overview

Size		191x191x32mm (110V Version) 140x140x32mm (24V Version)
Input Voltage Range		67 - 140V DC (110V Nominal) 16.8V–34V DC (24V Nominal)
Input Current at Nominal Supply		114mA (110V), 330mA (24V) $\pm 5\%$
Input Power at Nominal Supply		12.5W (110V), 8W (24V)
Line Regulation (Percentage Illuminance change oversupply range 67 - 140VDC for 110V, 16.8 to 34VDC for 24V)		$\pm 5\%$
Colour Temperature	Warm White	3000K $\pm 5\%$
	Natural White	4000K $\pm 5\%$
	Cool White	6000K $\pm 5\%$
CRI		>80
Beam Angle		200°
Operating Temperature Range		-25 to 55°C
Storage Temperature Range		-40 to 55°C
Operating Humidity Range		10%-80%
Lumen Maintenance (time to 70% of the initial light output)		50,000 hours
MTBF MIL-HDBK-217F (40°C) (hrs)		100,000 hours
Designed Service Life		15 years
Sealing Rating		IP40
Switch Cycles		>100,000 (UIC555)
Connector/Lamp holder		GR10Q
Weight		166g (110V), 137g (24V)

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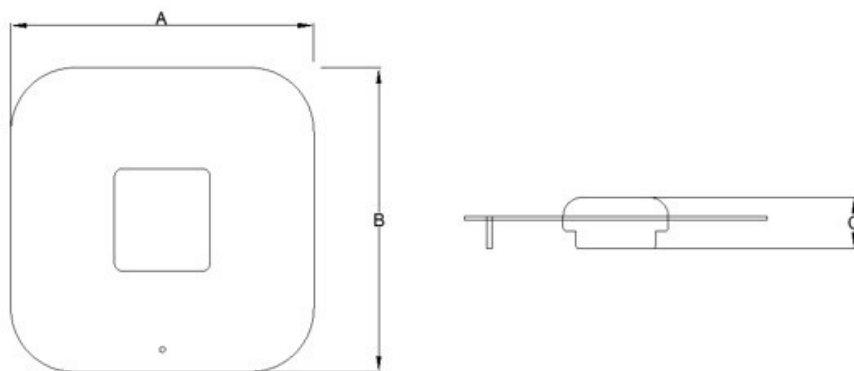
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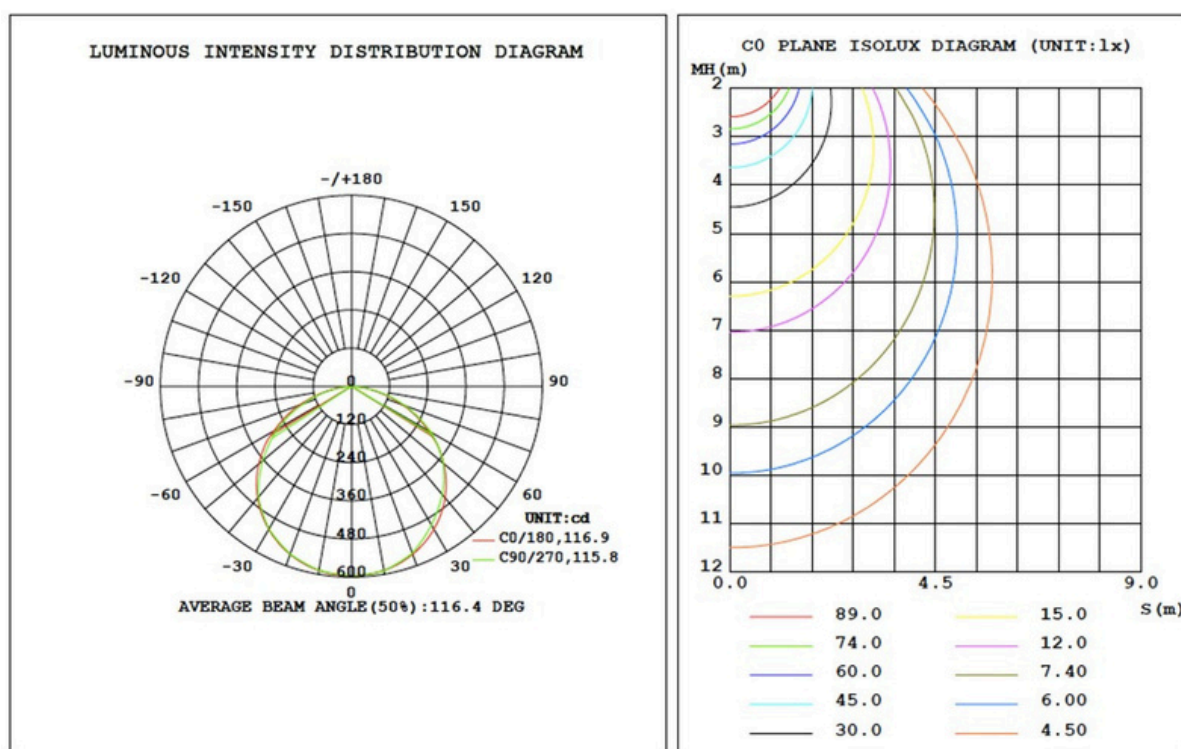
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Mechanical Details



Unit Dimensions			
	A	B	C
110VDC 2D LED Lamp	191mm	191mm	32mm
24VDC 2D LED Lamp	140mm	140mm	32mm

Photometric Data



Size	Output (Lumens)
191x191x32mm	1800lm
140x140x32mm	1080lm

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Installation Guide

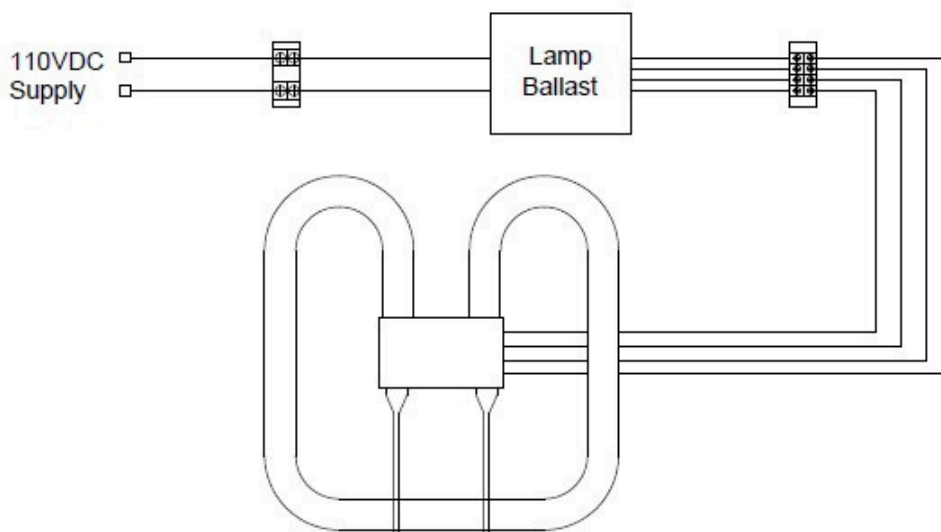
Mounts using existing 2D lamp holders.

Remove original fitment lighting ballast and replace it with either 110VDC or 24VDC LED 2D LAMP.
(NOTE: Diagram below shows the 110V DC variant).

Unit will operate correctly in either polarity.

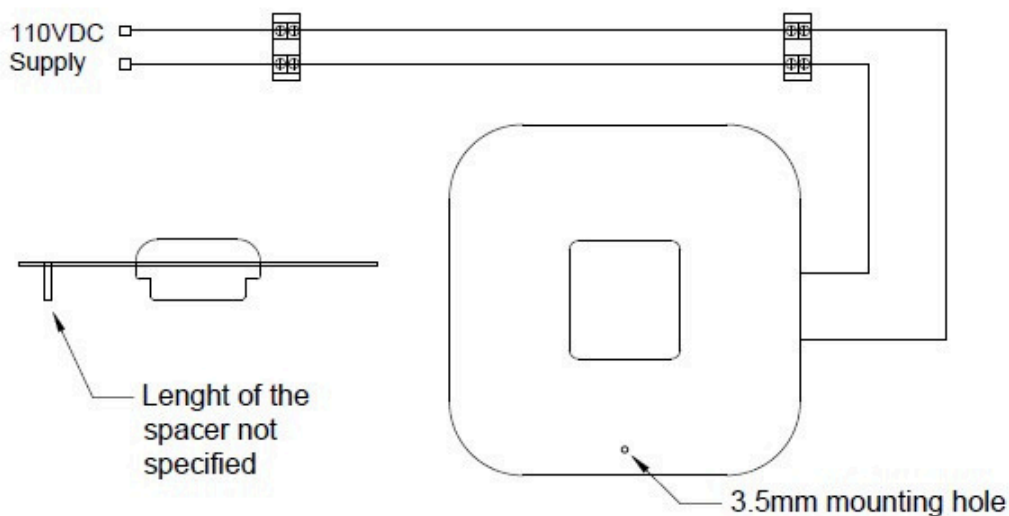
In addition to the standard 2D lamp holder, a secondary mounting point with appropriate spacer (length dependent on the specific distance from lamp panel to the mounting base) must be used to

ORIGINAL LAMP CONNECTION DETAILS



LED REPLACEMENT LAMP CONNECTION DETAILS

Ballast removed.
Supply linked over to lamp wiring.
Spacer fitted.
DC input voltage reversal.



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Compliance

The 1084 Series product complies with the following standards and directives:

ñ	EN61373:2010	Rolling stock equipment. Shock and vibration.
ñ	EN50121-3-2:2016	
	+A1:2019	Rolling stock equipment. Electromagnetic compatibility.
ñ	EN50155:2017	Electronic equipment used on rolling stock.
ñ	EN45545	Fire protection on railway vehicles.
ñ	EN61347-2-13	
	with EN61347-1	LED Control Gear
ñ	EN62031	
	with EN62471:	Photobiological Safety of Lamps
ñ	ROHS	Restriction of Hazardous Substances

This is a draft specification, figures may change due to further testing.

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