



Long Life Reliability
does not cost the earth

LPA Lighting Systems
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Title: 1080 Series T5 LED Tube

Doc. Ref: D04134

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02	N/A	R. Nadin	30/09/22	M. Ramsden	30/09/22
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Approved for Manufacture

By: _____ Date: _____



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Form Ref. Q01070 Issue 04

1080 Series LED T5 Fluorescent Lamp Replacement



Product Overview

- › Rolling Stock Compliant.
- › Replaces T5 Fluorescent lamps.
- › High reliability LED and driver technology.
- › Built in drive electronics for direct connection to power source.
- › Significant energy savings.
- › Zero maintenance costs.
- › Flicker free lighting with instant start.
- › No mercury content, environmentally friendly.



Safety Specification

The 1080 Series comes equipped with the following protection circuitry:

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

The 1080 series is EN45545 compliant including the Lexan EX9332T polycarbonate diffuser.

Product Codes

	Warm White	Natural White	Cool White
24V DC White 1463mm T5	10801004	10801000	-
24V DC White 1163mm T6	-	10801016	-
24V DC White 863mm T5	10801005	10801001	-
24V DC White 563mm T5	10801015	10801014	-
24V DC White 302.5mm T5	10801013	-	-
110V DC White 1463mm T5	10801006	10801002	-
110V DC White 1163mm T5	-	10801010	-
110V DC White 863mm T5	10801007	10801003	-
110V DC White 563mm T5	10801008	10801011	-
110V DC White 302.5mm T5	10801009	10801017	-
230V AC White 302.5mm T5	10801012	-	-



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Technical Overview (24V DC)

Size	T5 302.5mm	T5 563mm	T5 863mm	T5 1163mm	T5 1463mm
Input Voltage Range	16.8-32V DC				
Input Current at Nominal Supply	0.208A	0.375A	0.583A	0.792A	1.00A
Input Power at Nominal Supply	5W	9W	14W	19W	24W
Weight	167g	267g	333g	450g	527g

Technical Overview (110V DC)

Size	T5 302.5mm	T5 563mm	T5 863mm	T5 1163mm	T5 1463mm
Input Voltage Range	67-140V DC				
Input Current at Nominal Supply	0.045A	0.082A	0.127A	0.172A	0.218A
Input Power at Nominal Supply	5W	9W	14W	19W	24W
Weight	167g	267g	333g	450g	527g

Technical Overview (230V AC)

Size	T5 302.5mm				
Input Voltage Range	160-265V AC				
Input Current at Nominal Supply	0.217A				
Input Power at Nominal Supply	5W				
Weight	167g				

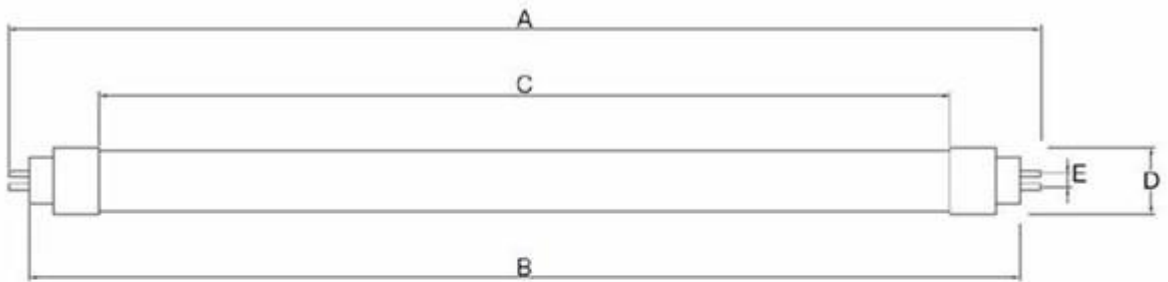


All

Line Regulation (Percentage Illuminance change oversupply range)		±5%
Colour Temperature	Warm White	3000K ±5%
	Natural White	4000K ±5%
	Cool White	6000K ±5%
CRI		>80
Beam Angle		180°
Operating Temperature Range		-25 to 55°C
Storage Temperature Range		-25 to 55°C
Operating Humidity Range		10%-80%
Lumen Maintenance (time to 70% of the initial light output)		100,000 hours
MTBF MIL-HDBK-217F (40°C) (hrs)		109,923 hours
Designed Service Life		15 years
Sealing Rating		IP40
Switch Cycles		>100,000 (UIC555)
Connector		2 x G5 bipin. Compliant with EN60081

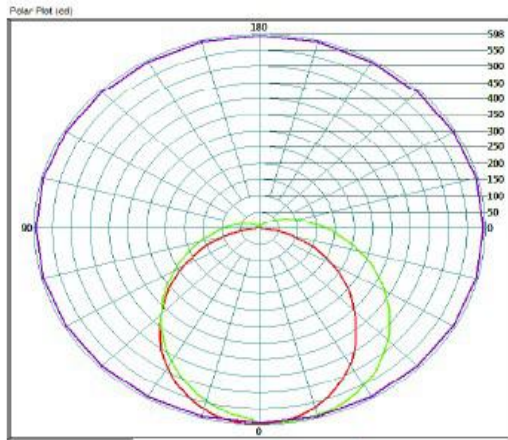


Mechanical Details



Size	A	B	C	D	E
T5 302.5mm	302.5mm	288.3mm	244.9mm	23mm	4.75mm
T5 563mm	563mm	549mm	505.6mm	23mm	4.75mm
T5 863mm	863mm	849mm	805.6mm	23mm	4.75mm
T5 1163mm	1163mm	1149mm	1105.6mm	23mm	4.75mm
T5 1463mm	1463mm	1449mm	1405.6mm	23mm	4.75mm

Photometric Data



Size	Output (Lumens)
302.5mm	600lm
563mm	1080lm
863mm	1680lm
1163mm	2280lm
1463mm	2880lm



Installation Guide

Fits existing G5 lamp holders.

Remove original fitment lighting ballast.

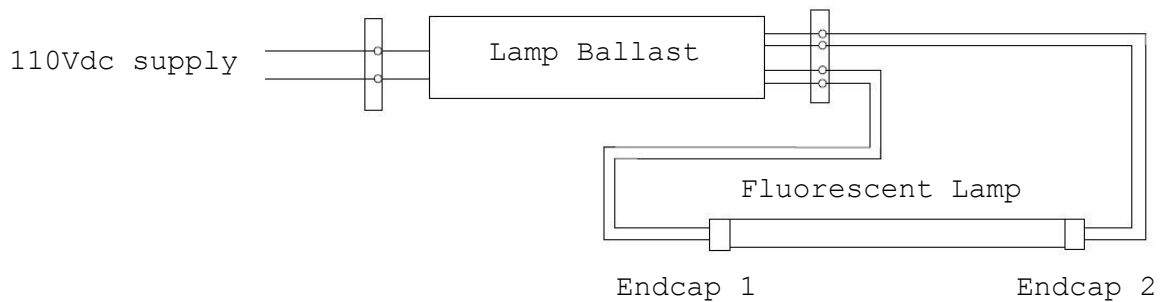
Link supply connections over to lamp holder connections.

Positive (24V DC or 110V DC) and Negative (0V) to endcap 2

Endcap 1 = No Connection

Unit will operate correctly on either polarity.

ORIGINAL LAMP CONNECTION DETAILS



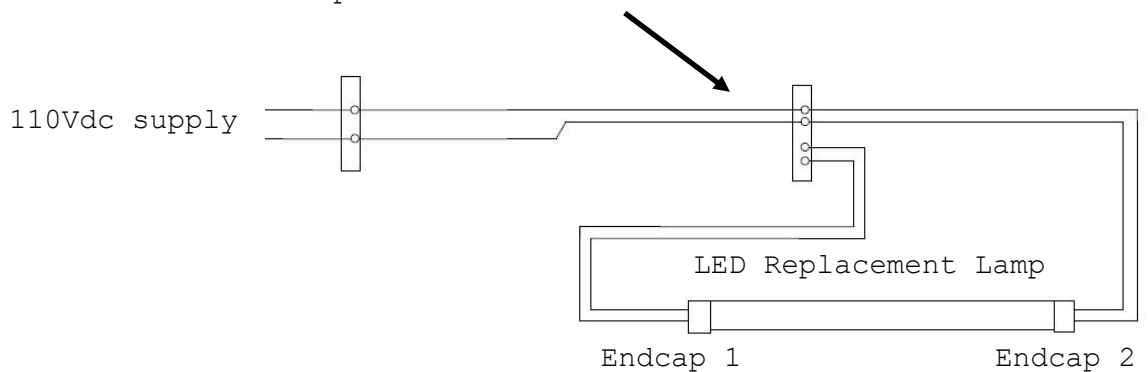
LED REPLACEMENT LAMP CONNECTION DETAILS

Ballast removed.

Supply linked over to lamp wiring.

Lamp supply on end cap 2.

End cap 1 - No connection.



UK
CA

CE



Compliance

The 1080 Series product complies with the following standards and directives:

- › EN61373:2010 Rolling stock equipment. Shock and vibration.
- › EN50121-3-2:2016 Rolling stock equipment. Electromagnetic compatibility.
- › EN50155:2017 Electronic equipment used on rolling stock.
- › BRB/LUL RIA12 Surge and transient requirements.
- › EN45545-2:2013+A1:2015
(HL1, 2 & 3) Fire protection on railway vehicles.
- › EN61347-2-13
with EN61347-1 LED Control Gear
- › EN62031
with EN62471: Photobiological Safety of Lamps.
- › RoHS Restriction of Hazardous Substances.

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

