

L E D. LIGHT RAIL LIGHTING

RLO SERIES - 37.5VDC HIGH UNIFORMITY LIGHT

for use in light rail vehicles interior lighting

PATENTED



RL Premium T10 Series LED Lamp

DESCRIPTION

These RLO Series lamps are designed for use in the low profile train lighting fixtures. These lamps tolerate voltage spreads characteristic of light rail train car systems without fluctuating in light intensity.

The LED Lighting tube can be used in new or to retrofit fluorescent installations.

The Premium lighting system offers customers the best in new technology.

The patented RLO light tubes use the latest high power premium LEDs while providing a more superior, reliable and efficient light source than conventional fluorescent systems.

FEATURES

The special features of the LED Light Tube are:

- Solid state lighting device, works well in harsh environments of hot or cold temperatures
- Instant on, no warm up time required
- Lasts at least 5 times longer than fluorescent
- Low EMI emissions, to eliminate radio interference
- Designed to replace conventional fluorescent lamps
- Vibration proof features
- Lead Free Compliant, Mercury Free



STANDARD FEATURES

- 24", 36", 48" and 60" lengths
- Cool White LEDs
- 28V or 37.5V Operating Voltage
- Milk White or Clear lens
- Bi-Pin (G13), Instant start connection type
- T10 Fluorescent replacement (fits T8 size)

OPTIONAL FEATURES

- Other lengths upon special request
- Colors: Warm White, Neutral White (*other colors upon request*)
- Operational voltages for special applications

NOTES & PATENT INFORMATION

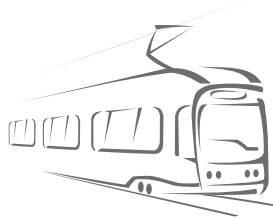
US Patent # 7,307,391

China Patent # ZL200780001427.1

International Patents Pending

Designed and Manufactured in North America



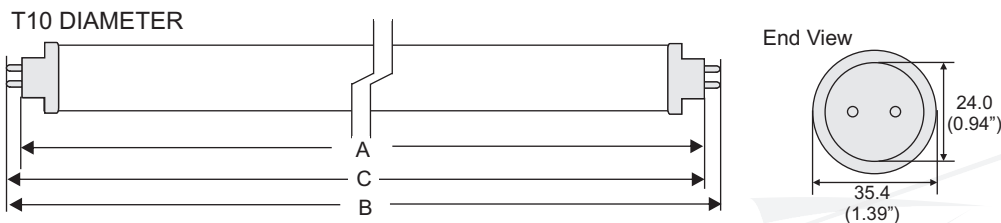


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DIMENSIONS



| Standard Length | A | | B | | | | C | | | | Estimated Finished Weight | | | |
|-----------------|-----|-------|-----|--------|-------|-------|--------|---------|-------|-------|---------------------------|--------|-----|-----|
| | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | g | lbs | | |
| 24 | - | 23.22 | - | 589.8 | 23.67 | 23.78 | 601.2 | 604.00 | 23.40 | 23.50 | 594.4 | 596.9 | 252 | 0.6 |
| 36 | - | 35.22 | - | 894.6 | 35.67 | 35.78 | 906.0 | 908.80 | 35.40 | 35.50 | 899.2 | 901.7 | 378 | 0.8 |
| 48 | - | 47.22 | - | 1199.4 | 47.67 | 47.78 | 1210.8 | 1213.60 | 47.40 | 47.50 | 1204.0 | 1206.5 | 504 | 1.1 |
| 60 | - | 59.05 | - | 1499.9 | 59.50 | 59.61 | 1511.3 | 1514.10 | 59.24 | 59.33 | 1504.7 | 1507.0 | 630 | 1.4 |

Follows: ANSI C78.1d-1986 & 1988

ELECTRICAL SPECIFICATION

| Type | Nominal Length (inch) | Lens Type | Input Voltage (DC Volts) | | | Input Current (mA) | Luminous Intensity (Estimated Lumens) | | Power Consumption (Watts) @ TYP Voltage |
|------|-----------------------|------------|--------------------------|------|------|--------------------|---------------------------------------|--------|---|
| | | | MIN | TYP | MAX | | COOL* | WARM** | |
| RLO | 24" | MILK WHITE | 23 | 37.5 | 42.5 | 347 | 823 | 641 | 13 |
| | 36" | | | | | 507 | 1203 | 937 | 19 |
| | 48" | | | | | 665 | 1583 | 1233 | 25 |
| | 60" | | | | | 827 | 1963 | 1529 | 31 |
| | 24" | CLEAR | 23 | 37.5 | 42.5 | 347 | 1117 | 870 | 13 |
| | 36" | | | | | 507 | 1633 | 1272 | 19 |
| | 48" | | | | | 665 | 2149 | 1674 | 25 |
| | 60" | | | | | 827 | 2665 | 2075 | 31 |

Conforms to:



Cool White Color Temperature:
Typical 5000K
Range (4745K - 5310K)

Ambient Operating Temperature:
Typical: 25°C (77°F)
Range -30°C (-22°F) to 50°C (122°F)

ORDERING INFORMATION

| SERIES | TYPE | DIAMETER | PIN TYPE | LENGTH | VOLTAGE | COLOR | LENS TYPE | INTENSITY |
|--------|------|----------|----------|--------|------------|--|-------------------------------------|----------------------|
| RL | O | T10 | G13 | XX | XX | X | X | X |
| | | | | 24 | 37 = 37.5V | COOL S = Super White (6000K) C = Cool White (5000K) D = Mid-Neutral White (4100K) N = Neutral White (3500K) H = Mid-White (3000K) W = Warm White (2800K) | C = Clear, Ribbed M = Milk White | S = Single Intensity |
| | | | | 36 | | | | |
| | | | | 48 | | | | |
| | | | | 60 | | | | |

Example:

RLO-T10-G13-48-37-C-M-S = Premium Train/Rail Fluorescent Lamp Replacement, 1.25" (T8 Compatible Size), G13 Base, 48" 37V, Cool White, Milk White Lens, Single Intensity

WARNINGS & SAFETY

* Cool White Range 4260K - 6990K sorted according to US Department of Energy, EnergyStar®, and ANSI C78.377-2008 standards

** Warm White Range 2580K - 4259K sorted according to US Department of Energy, EnergyStar®, and ANSI C78.377-2008 standards

High power LEDs have a high intensity of light in a single point. Avoid looking directly at the source of light for any prolonged time as it could cause retinal damage. This light source should be shielded with the lens as provided by LED Smart Inc. The removal of the lens would void all warranties and liability from the manufacturer and distributor of this product.

LED Smart Inc. works to continually improve our products, we reserve the right to change or modify the designs or specifications of this product at any time without prior notice. All rights reserved. This product is under a patent and patent pending protection.

