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28 Watt LED Bulb - 4 Foot T8 Lamp - 3500 Lumens - Low Voltage DC - Sub Zero Temperatures - -40C

LEDT8-48-LV-SZT

Please see last page for supporting documentation for this product(certificates, CAD files & drawings, IES files, wiring diagrams, etc).

LEDT8-48-LV-SZT 28 watt T-series Fluorescent Style LED Tube

Listing: United States & Canada

Lamp Type: LED T8-Style Tube
Base: G13 Bi-Pin
Dimensions: 47"-L x 1.03"-OD
Weight: 0.77 lbs (350 grams)
Voltage: 11-25 Volts DC
Watts: 28 watts
Total Lumens: 3,500
Luminous Efficiency: 125 lm/w
Lamp Life Expectancy: 50,000+ Hours
Color Temperature: 3000K, 4500K or 5600K
Color Rendering Index: 80
Beam angle: 150°
Lighting Configuration: Flood Pattern
Lens: Clear, Frosted, Heavy Frosted
Power Efficiency: 90%
Power Factor: >0.95
Ambient Temperature Rating: -40°C to +50°C
Materials: Aluminum housing, polycarbonate lens
Ingress Protection: IP20

Ratings/Approvals

Listed for United States and Canada
UL-1993
CAN/CSA C22.2 No 1993
125 lm/w efficiency
IP20 Rated
80% Lumen Retention @ 50,000+ Hours
Internal Driver
Single End Powered
Cold Weather Rated
LEL Listed

Special Orders- Requirements

Contact us for special requirements
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The Larson Electronics LEDT8-48-LV-SZT 28 watt low voltage T-series LED tube lamp is an excellent choice for upgrading existing T8 fluorescent lamp fixtures to LEDs in cold weather environments. This LED lamp is LEL listed, providing 125 lumens per watt for a total of 3,500 lumens per lamp, and is designed to withstand sub freezing temperatures as low as -40°C. These T8 LED replacement lamps offer 50,000 hour lamp life, over twice that of T8 or T5HO fluorescent lamps, while offering impact and vibration resistance far exceeding traditional light sources.

This 28 Watt T-series LED Bulb works with any T8 fluorescent light fixtures, can be configured for any low voltage T series fluorescent lamp fixture with G13 bi-pin tombstones or sockets, and requires no ballast for operation. To increase safety during installation and routine maintenance, these lamps are wired for single sided power with internal integrated LED driver housed within the tube. Internally, you simply bring the black wire to one pin and the white wire to the other. The

polycarbonate lens diffuses the light and makes this bulb ideal for food safe environments as there is no glass. The aluminum housing serves as a heat sink and provides rigidity and strength for this LED bulb.
This specially designed low voltage LED T8 tube is made for cold weather applications and sub zero conditions. The LEDT8-48-LV-SZT will hold up to harsh environments with temperatures as low as -40°C. This includes but is not limited to arctic conditions, cold rooms, and industrial freezers.

Click Photo to Enlarge

Click Photo to Enlarge

In fluorescent light fixtures with electronic ballasts, the operator needs to bypass the ballast and wire the power directly to one end of the LED tube (black wire to one pin and white wire to the other). Thus, this is an ideal upgrade for 4 foot fixtures with failed ballasts. These LED fluorescent style bulbs are universal voltage and run directly off any low voltage ranging from 11 volts to 25 volts DC. The internal LED driver is a "smart" driver, sensing the incoming voltage and adjusting accordingly to provide the current required by the lamp. This allows operators to simply wire the fixture to voltage within the 11-25 volt DC range, no modifications required. These cold weather low voltage fixtures require no modifications between 12V and 24V direct current power sources.
Unlike gas burning and arc type lamps that have glass bulbs, LEDs have no filaments or fragile housings to break during operation. Instead of heating a small filament or using a combination of gases to produce light, light emitting diodes (LEDs) use semi-conductive materials that illuminate when electric current applied and emitting light. With LED lights, there is no warm up time or cool down time before re-striking and provide instant illumination when powered on, adding to the reliability of LED technology. By nature, LED light sources run significantly cooler than traditional lamps, reducing the chance of accidental burns and increased temperatures due to heat emissions. This solid state design of light emitting diodes provides a more reliable, stable, durable, and energy efficient light source over traditional lighting.
The LEDT8-48-LV-SZT features specially designed rotating end caps. Fluorescent lamps provide a full 360° beam coverage around the lamp. Since most fluorescent fixtures require directional lighting, reflectors have to be used to bounce the light back towards the intended target area for illumination. LED lamps are directional, which eliminates the need for back mounted reflectors and reduces wasted and lost light. However, the tombstones for existing fixtures may position the face of the LED lamp in a direction facing away from the target illumination area. With the rotating pins, operators can reposition the lamp so the face of the LED tube is positioned properly within existing fixtures. This also allows for fine tune adjustment of each individual lamp within fixtures containing multiple lamps.
These are the second generation of our 28 watt LED tubes. Efficiency for this LED lamp is 125 lumens per watt, for a total of 3,500 lumens per bulb. We offer a choice of 3000K warm white, 4500K natural white, and 5600K cool white color temperatures and clear, frosted, or heavy frosted lenses. The LEDT8 series of LED lamps are designed for direct replacement of 4ft fluorescent fixtures with G13 bases for replacing four foot T8, T8 high output, T12, T12 high output, and T12 very high output florescent lamps. Additionally, these lamps can be used in fixtures that currently use a G5 to G13 adapter socket using T5 lamps. Please note, this tube is 47" in length and will not fit properly in fixtures designed to accept 45" T5 lamps without adapters.
These LED fluorescent tube replacements can be used as upgrades or replacements to our own explosion proof fluorescent lights, explosion proof paint

spray booth lights as well as any other T series light fixture the operator already has in house. We have specially designed these for our explosion proof light fixtures, however, they can be used as replacements in standard fluorescent light fixtures. In our facilities, we replaced worn or spent fluorescent bulbs with these LED bulbs by removing the ballasts and bringing the white wire to one end and the black wire to the other end of the LED tube.

LED Lamp Benefits

1. 50,000 hour lifespan.
2. Can SAVE 50% or more on energy.
3. Qualifies retrofit projects for financial incentives, including utility rebates, tax credits and energy loan programs.
4. Reduces energy use and prolongs life-spans of peripheral cooling units (A/C, refrigeration)
5. 100% recyclable.
6. No toxins-lead, mercury.
7. No UV light, infrared radiation or CO2 emissions.
8. Qualifies buildings for LEED and other sustainable business certifications.
9. Bright, even light maintains consistent color over time.
10. Instant on/off – No flickering, delays or buzzing.
11. Very good color rendering.
12. Vibration/impact resistant.
13. Significantly cooler operation.
14. Less frequent outages, higher output improves workplace safety.
15. Brings out natural appearance of products in sales or manufacturing applications.
16. Preserves integrity of retail products... no heat damage to formulations or thermal fade of branded packaging in display cases.
17. Unlimited indoor applications for overhead lighting, retail fixtures, signage, custom lighting accents, manufacturing and general area illumination.
18. Easily retrofit existing conventional light fixtures, simplifies troffers since no ballasts. needed Durable enough for portable use in exhibitions and trade shows.

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Frequently Asked Questions (FAQ)

Warranty: 12 Months

Options:

LEDT8-48-LV-SZT-Color Temp-Diffusion

Example: LEDT8-48-LV-SZT-3000K-CLR

Color Temp	
3000K	-3000K
4500K	-4500K
5600K	-5600K
7500K	-7500K

Diffusion	
CLEAR	-CLR
FROSTED	-FRST
HEAVY FROST	-HIFRST

Links (Click on the below items to view):

- **Canadian CEC Certificate (Commonly referred to as CSA Certificate)**
- **Operations Manual**
- **USA NEC Certificate (Commonly referred to as UL Certificate)**
- **HigResPic1**
- **HigResPic2**
- **HigResPic9**
- **Video1**
- **ISO 9001 Certification**
- **Business Certificate**
- **Shipping Time Map**