

SYLVANIA Lamps

SubstiTUBE® IPS TruWave® Technology LED T8

TruWave® Technology

TruWave Technology offers the best alternative to natural light by mimicking the natural light spectrum, all while saving energy.

Benefits and Features

- Controls blue wavelengths for lower glare and reduced eye strain to improve readability and supports an improved sleep-wake cycle
- Perfect fit where clean light color rendering is needed for seeing realistic, vivid colors without sacrificing light output
- Properly saturates red to make building spaces and flesh tones accurate and vibrant, without oversaturating which compromises energy efficiencies
- Exceptional color quality without the loss of efficacy typical of most 90+ CRI solutions
- Familiar form factor of shatter-proof nano-plastic with plastic endcaps
- Up to 162 LPW (Lamp efficacy)
- 3000K, 3500K, and 5000K color temperatures
- Dimmable down to 10% with compatible 0-10V ballast
- CRI 90; R9 >50, average R9-R12 ≥78; IES TM-30-18 R_f >91 & R_g >95 exceptional color quality
- Beam angle: 220°, Light emitting area: 340°
- Can be used in enclosed (lens or diffuser) luminaire. Not approved for use in vapor tight or sealed luminaire.

Electrical

- Compatible with instant start and select programmed rapid start electronic T8 ballasts with input voltage of 120-277V and 347V
- Power factor >0.90
- THD <10%

Rated Life

- 70,000 hours (L₇₀)*

Warranty

- 5 year limited lamp warranty (24/7 operation)
- NLB Trusted Warranty Program

*Tested to B50 L₇₀ requirement with a ballast factor ≤0.88.



TruWave®

Wattage Comparison

| | System Power ¹ | Traditional System Power F032T8 (with QHE2x32 ISN) | Energy Savings/Year ² |
|------------|---------------------------|--|----------------------------------|
| LED13T8L48 | 32W | 55W | 42% |

1. With QHE2x32 ISN
2. 24 hours a day

Ambient Operating Range

- -4°F to 113°F (-20°C to 45°C)

Max Case Temperature

- 147°F (64°C)

Certifications and Listings

- cULus (UL 1993, CSA 22.2)
- ETL
- RoHS
- Lead Free
- FCC*, ICES
- NSF (ANSI 2 – Food Equipment)

*FCC Title 47 CFR, Part 18, Non-Consumer

Installation

- Please refer to the installation manual included inside the packaging and the applications information listed below for more information.



LED531R5 11-24



| | |
|-------------|------|
| Catalog # | Type |
| Project | |
| Comments | |
| Prepared by | |

Ordering Guide

| | | | | | | | | | | | | | | |
|------------|--------------------------|-----------------|---|---------------|---|------------------------------|---|-------------------|---------------|---|--|-----------------------------|---|-----------------|
| LED | 13 | T8 | / | L48 | / | FP | / | DIM | 9 | XX | | TL | / | SUB |
| LED | Wattage 13 = 13 Watts | Lamp Type T8 | | Length 48" | | FP = Frosted Nano Plastic | | DIM = Dimmable | CRI 9 = 90 | Color Temperature 30 = 3000K 35 = 3500K 50 = 5000K | | TL = TruWave® Technology | | SubstiTUBE® IPS |

Ordering Information

| Item Number | Ordering Abbreviation | Power (W) ¹ | Length | Lamp Efficacy (LPW) | Typical Lumens (lm) ¹ | CCT | CRI | Case Qty |
|-------------|-----------------------------|------------------------|--------|---------------------|----------------------------------|-------|-----|----------|
| 40891 | LED13T8/L48/FP/DIM930TL/SUB | 13 | 4ft | 154 | 2000 | 3000K | 90 | 25 |
| 40892 | LED13T8/L48/FP/DIM935TL/SUB | 13 | 4ft | 154 | 2000 | 3500K | 90 | 25 |
| 40894 | LED13T8/L48/FP/DIM950TL/SUB | 13 | 4ft | 162 | 2100 | 5000K | 90 | 25 |

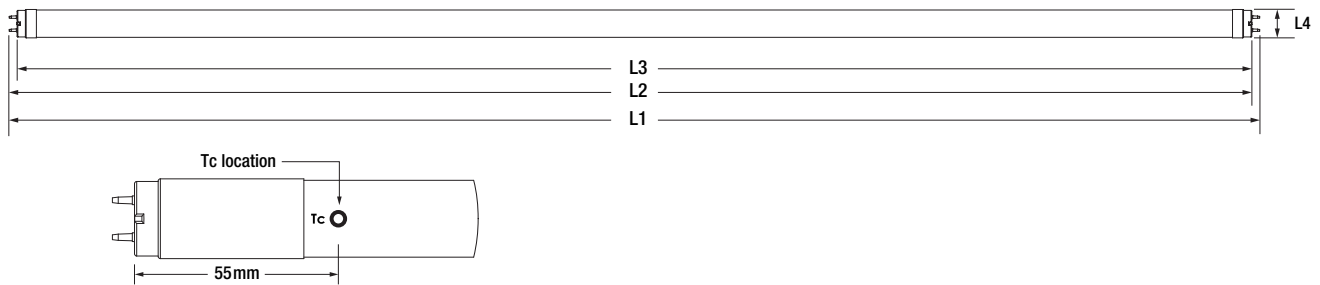
1. Average Lamp Power and Average Lamp Lumens rated on QHE2x32T8/UNV ISN.

Specifications & Lighting Data

| Lamp | Ballast | Current (Amps) | System Power (W) | System Lumens (lm) | System Efficacy (lm/W) | No of Lamps |
|-------------|--------------------|----------------|------------------|--------------------|------------------------|-------------|
| LED13T8/L48 | QHE 2X32T8/UNV ISN | 0.26/0.12 | 32 | 4200 | 130 | 2 |

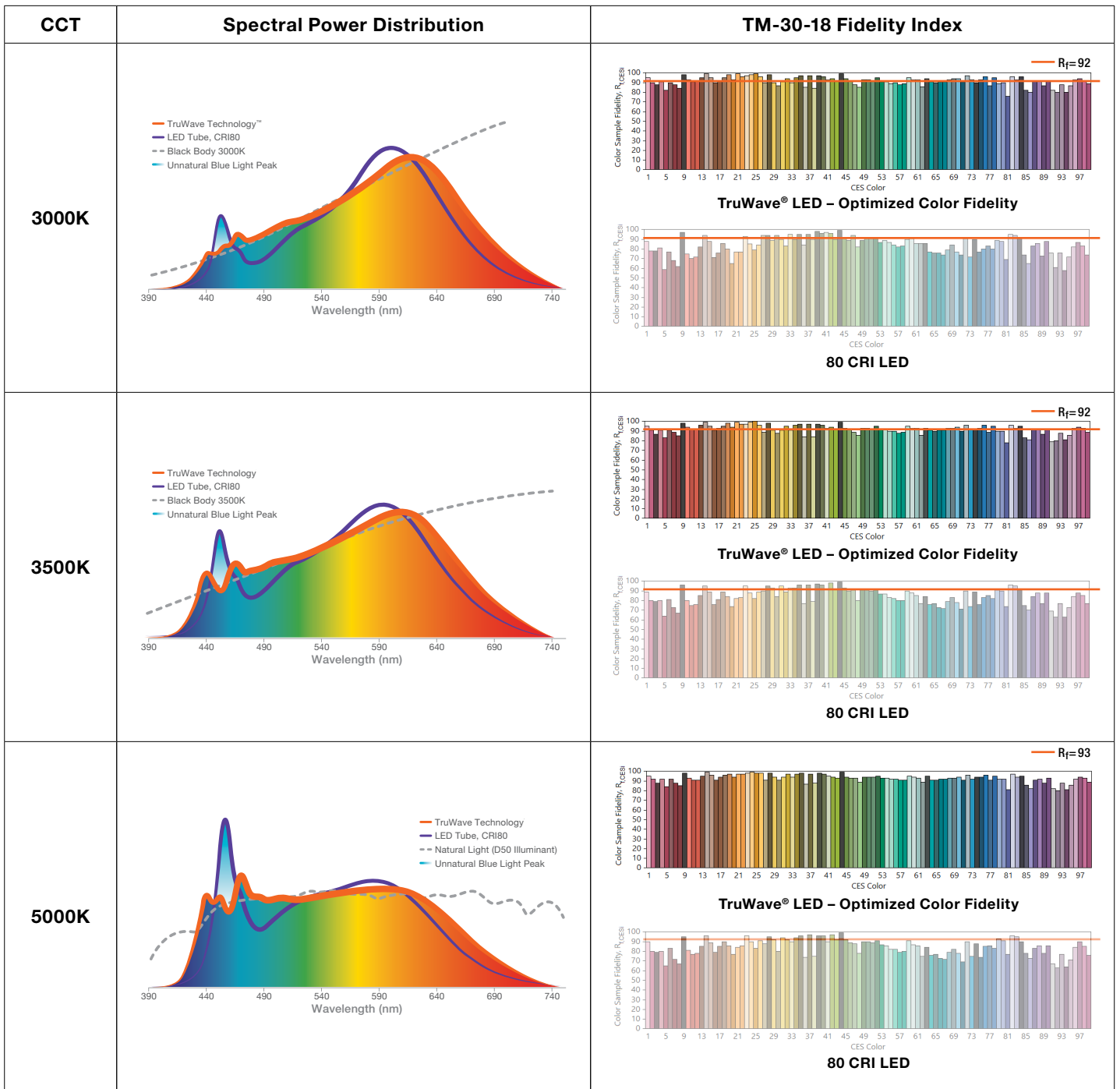
Note: For complete system information refer to LED495 – SubstiTUBE System Information.

Physical Information



| Lamp Description | L1 End of Base Pin to End of Opposite Pin End | L2 Base Face to Opposite Base Pin | L3 Base Face to Base Face | L4 Bulb Outside Diameter |
|------------------|---|---|---------------------------------|--------------------------------|
| LED13T8/L48 | 47.725"±0.055" (1212.2mm ±1.4mm) | 47.45"±0.05" (1205.25mm±1.25mm) | max 47.22" (1199.4mm) | 1.02"±0.08" (25.9mm±2.0mm) |

Color Quality Comparison



Application Information

1. Suitable for use in dry and damp environments; cannot come in direct contact with water.
2. Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
3. Not intended for use with older dedicated voltage (120V or 277V) ballasts. These ballasts have electronic components that degrade over time and may become unsuitable for the new LED T8 lamp.
4. All installation, inspection, and maintenance of lighting fixtures should be done with the power to the fixture turned off. Lamps should be installed and operated in compliance with the National Electrical Code (NEC), Underwriters Laboratories Inc. (UL) requirements, and all applicable codes and regulations.
5. Insert and align tubes properly in lamp holders. Partial insertion results in a poor or intermittent electrical contact that can result in short lamp life and arcing. Arcing at the lamp holder can result in localized overheating.
6. For instant start ballasts, use lamp holders with an internal shunt or ensure that lamp holders are wired in a shunt configuration.
7. For Programmed Rapid Start ballasts, use rapid-start lamp holders (non-shunted lamp holders).
8. De-lamp is not allowed for ISH ballasts. For approved ISN and ISL ballasts, de-lamp is allowed for only 1 lamp so long as the ballast factor remains below 1.20 (for example, 4 lamp ballast can de-lamp to 3 lamps).
9. Maximum mounting distance between tube and ballast is 20 feet.
10. Not for use with other LED or fluorescent lamps on the same ballast.
11. Not for use with magnetic ballasts.
12. Please read all installation instructions before attempting installation.
13. For detailed warranty information, please see www.ledvanceUS.com.

Additional Specifications

- The SubstiTUBE® IPS LED T8 is not affected by switching cycles, occupancy or vacancy sensors, and thus can be installed with the existing instant start ballasts for optimal energy savings
- Optimized nano-plastic optics with medium bi-pin G13 base
- No warm-up time, instant-on with full light output and stable lamp-to-lamp color
- No UV emission

LEDVANCE LLC
181 Ballardvale Street, Suite 203
Wilmington, MA 01887 USA
Phone 1-800-LIGHTBULB (1-800-544-4828)
www.ledvanceUS.com

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