# SYLVANIA Lamps SubstiTUBE® IPS LED T8

#### Application

SubstiTUBE IPS LED T8 lamps are an energy saving alternative, designed to replace traditional fluorescent T8 lamps. These LED T8 lamps contain no mercury, and provide instant light and a uniform light distribution. Engineered to operate on existing instant start and select program rapid start electronic T8 ballasts, these lamps minimize labor and recycling costs.

#### **Benefits and Features**

- DLC listing allows for rebates in areas where applicable, saving on overall project cost
- Optimized glass optics with shatter-resistant PET coating
- Greater than 145 system LPW
- CRI >80
- Offered in 10 watts
- Available beam angle: 220°
- Light emitting angle: 340°
- Energy savings up to 44%

#### Electrical

- Compatible with instant start and select programmed rapid start electronic T8 ballasts with input voltage of 120-277V and 347V
- 0-10V dimmable with compatible 0-10V dimming ballast\*
- Power Factor >90%
- THD <20%

\*Limited stock dimmable product available. Please contact LEDVANCE for details.

#### **Rated Life**

- 50,000 hours (L<sub>70</sub>)

#### Warranty

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

#### **Ambient Operating Range**

-4°F to +104°F (-20°C to +40°C)

#### Wattage Comparison

| Traditional                        | Traditional    | LED System | Energy  |
|------------------------------------|----------------|------------|---------|
| Source                             | System Wattage | Wattage    | Savings |
| 4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC | 55W            | 26W        | 53%     |

- DLC 5.1

- NSF Listed: NSF/ANSI

Standard 2 - Food

Equipment

#### **Certifications and Listings**

- cULus 1993
- RoHS
- FCC\*
- Lead Free
- Mercury Free

\*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 (G13 medium bi-pin base).





LED574R2 12-23

## **Specification Data**

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

## **Ordering Guide**

| LED | 10                       | T8              | L48           | FGP                           | DIM            | 8              | XX  | SUB            | G10           |
|-----|--------------------------|-----------------|---------------|-------------------------------|----------------|----------------|---|----------------|---------------|
| LED | Wattage<br>10 = 10 Watts | Lamp Type<br>T8 | Length<br>48" | Frosted Glass,<br>PET coating | DIM = Dimmable | CRI<br>8 = >80 | Color Temperature<br>35 = 3500K<br>41 = 4100K | SubstiTUBE IPS | Generation 10 |
|     |                          |                 |               |                               |                |                | 50 = 5000 K                                   |                |               |

## **Ordering Information**

| Item   | Ordering                  | Power            | Base |            | Average<br>Life |       | Typical<br>Lumens |     | Power  | Case | DLC    |
|--------|---------------------------|------------------|------|------------|-----------------|-------|-------------------|-----|--------|------|--------|
| Number | Abbreviation              | (W) <sup>1</sup> | Туре | Replaces   | (hrs)           | CCT   | (Im)              | CRI | Factor | Qty  | Listed |
| 41402  | LED10T8L48FGPDIM835SUBG10 | 10               | G13  | F032835EC0 | 50,000          | 3500K | 1800              | >80 | >.90   | 25   | 5.1    |
| 41403  | LED10T8L48FGPDIM841SUBG10 | 10               | G13  | F032841EC0 | 50,000          | 4100K | 1800              | >80 | >.90   | 25   | 5.1    |
| 41404  | LED10T8L48FGPDIM850SUBG10 | 10               | G13  | F032850EC0 | 50,000          | 5000K | 1800              | >80 | >.90   | 25   | 5.1    |

1. Average Lamp Power and Average Lamp Lumens rated on QHE2X32T8/UNV ISN.

## **Specifications & Lighting Data**

|  |   | Current                   | System Power                      | System Lumens | System Efficacy |             |
|--|---|---------------------------|-----------------------------------|---------------|-----------------|-------------|
| Lamp   | Ballast                                 | (AMPS)                    | (W)                               | (Im)          | (Im/W)          | No of Lamps |
| LED10T8L48FGPDIM8XXSUBG10                            | QHE 2X32T8/UNV ISN                      | 0.22/0.10                 | 26                                | 3900          | >145            | 2           |
| Nata: Custana usluse seau slightly differ with slips | mable ballante. Fau complete sustem inf | monthing refer to LED 405 | Nulsati TLIDE Quatara Information |               |                 |             |

Note: System values may slightly differ with dimmable ballasts. For complete system information refer to LED495 - SubstiTUBE System Information.

## **Physical Information**

|   |    |   | L4 |
|---|----|---|----|
| 4 | L3 | - |    |
| • | L2 | - |    |
| 4 | Li |   |    |

|                           | L1                               | L2                              | L3                    | L4                         |
|---------------------------|----------------------------------|---------------------------------|-----------------------|----------------------------|
| Lamp                      | End of Base Pin to               | Base Face to                    | Base Face to          | Bulb Outside               |
| Description               | End of Opposite Pin End          | Opposite Base Pin               | Base Face             | Diameter                   |
| LED10T8L48FGPDIM8XXSUBG10 | 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) |

### **Application Information**

- 1. Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. For instant start ballasts, use lamp holders with an internal shunt or ensure that lamp holders are wired in a shunt configuration.
- 6. For Programmed Rapid Start ballasts, use rapid-start lamp holders (non-shunted lamp holders).
- 7. 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).
- 8. Suitable for use in dry and damp environments.
- 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.

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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