

SubstiTUBE® IPS LED T8



Compatible LED T8 for use with instant start and select programmed rapid start (parallel wiring) electronic T8 ballasts



Key Features & Benefits

- Available in 2, 3 and 4ft
- CCT: 3000K, 3500K, 4100K, 5000K
- Beam angle: 150°
- Compatible with instant start and select programmed rapid start (parallel-wiring) electronic T8 ballasts with input voltage of 120-277V and 347V
- THD <20%, power factor >0.90
- G13 medium bi-pin base
- Long life: 50,000 hour life (L₇₀)
- 6 year limited system warranty with purchase of new QHE IS ballast (16/7 operation)
- 5 year limited lamp warranty (24/7 operation)
- Reduces energy consumption up to 35%
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- Glass free, vibration and impact resistant
- No UV emission
- Suitable for dry and damp locations (cannot come in direct contact with water)
- Maximize energy savings with occupancy sensors

OSRAM SubstiTUBE IPS LED T8 lamps are an energy saving alternative, designed to replace traditional fluorescent T8 lamps. These shatter-resistant LED T8 lamps contain no mercury, provide instant light and a uniform light distribution.

Engineered to operate on existing instant start and select programmed rapid start electronic T8 ballasts, these lamps minimize labor and recycling costs. Because the SubstiTUBE IPS LED T8 is not affected by switching cycles, the use of occupancy or vacancy sensors can be installed with the existing instant start ballasts for optimal energy savings.

Install a new QHE Instant start ballast with the SubstiTUBE IPS LED T8 lamp for optimal performance and to take advantage of the QUICK 72SUB+ System warranty. (See website for details.)

Product Offering

| Length | Color Temperature | CRI |
|------------------------|----------------------------|-----|
| 24in., 36in. and 48in. | 3000K, 3500K, 4100K, 5000K | 82 |

Application Information

Applications

- Cove lighting
- Display case
- General illumination
- Parking garage
- Tunnels

Specifications and Certifications



Specification Data

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

Specifications

Energy Data

Ambient Operating Temperature: -4°F to 122°F (-20°C to 50°C)

EMI/RFI: FCC Title 47 CFR, Part 18, Non-Consumer

Lighting Data

Lumen Output: See specification table (output is dependent on operating ballast)

Lumens per Watt: Up to 127

Correlated Color Temperature (CCT): 3000K, 3500K, 4100K, 5000K

Color Rendering Index (CRI): 82

R9: Up to 21

Ordering Information

| Item Number | Ordering Abbreviation | Length | Lamp Power (W) ¹ | Lamp Lumens (lm) ¹ | Color Temp. | CRI | Beam Angle (°) | Package Quantity | DLC (Y/N) |
|-------------|--------------------------|--------|-----------------------------|-------------------------------|-------------|-----|----------------|------------------|-----------|
| 75181 | LED15T8/L48/F/830/SUB/G5 | 4ft | 15.5 | 2200 | 3000K | 82 | 150 | 10 | Y |
| 75182 | LED15T8/L48/F/835/SUB/G5 | 4ft | 15.5 | 2200 | 3500K | 82 | 150 | 10 | Y |
| 75183 | LED15T8/L48/F/841/SUB/G5 | 4ft | 15.5 | 2200 | 4100K | 82 | 150 | 10 | Y |
| 75184 | LED15T8/L48/F/850/SUB/G5 | 4ft | 15.5 | 2200 | 5000K | 82 | 150 | 10 | Y |
| 75084 | LED12T8/L48/F/830/SUB/G5 | 4ft | 12 | 1600 | 3000K | 82 | 150 | 10 | Y |
| 75085 | LED12T8/L48/F/835/SUB/G5 | 4ft | 12 | 1600 | 3500K | 82 | 150 | 10 | Y |
| 75086 | LED12T8/L48/F/841/SUB/G5 | 4ft | 12 | 1600 | 4100K | 82 | 150 | 10 | Y |
| 75087 | LED12T8/L48/F/850/SUB/G5 | 4ft | 12 | 1600 | 5000K | 82 | 150 | 10 | Y |
| 75150 | LED12T8/L36/F/830/SUB/G5 | 3ft | 12.5 | 1600 | 3000K | 82 | 150 | 10 | N/A |
| 75151 | LED12T8/L36/F/835/SUB/G5 | 3ft | 12.5 | 1600 | 3500K | 82 | 150 | 10 | N/A |
| 75152 | LED12T8/L36/F/841/SUB/G5 | 3ft | 12.5 | 1600 | 4100K | 82 | 150 | 10 | N/A |
| 75153 | LED12T8/L36/F/850/SUB/G5 | 3ft | 12.5 | 1600 | 5000K | 82 | 150 | 10 | N/A |
| 75146 | LED08T8/L24/F/830/SUB/G5 | 2ft | 8.5 | 1100 | 3000K | 82 | 150 | 10 | * |
| 75147 | LED08T8/L24/F/835/SUB/G5 | 2ft | 8.5 | 1100 | 3500K | 82 | 150 | 10 | * |
| 75148 | LED08T8/L24/F/841/SUB/G5 | 2ft | 8.5 | 1100 | 4100K | 82 | 150 | 10 | * |
| 75149 | LED08T8/L24/F/850/SUB/G5 | 2ft | 8.5 | 1100 | 5000K | 82 | 150 | 10 | * |

¹Lamp Power and Lamp Lumens rated on QHE1x32T8/UNV ISN

*Lamps are in DLC approval process.

Please contact OSRAM SYLVANIA for additional information.

Ordering Guide

| LED | 15 | T8 | / | L | 48 | / | F | / | 8 | 41 | / | SUB | / | G5 |
|-----|--------------------------|--------------|---|--------|---|---|---------|---|--------|--|---|---|---|------------|
| LED | Wattage (ISN ballast) | Lamp Type | | Length | 48 Inches 24 Inches 36 Inches Overall Length | | Frosted | | CRI 82 | Color Temperature 41 = 4100K 30 = 3000K 35 = 3500K 50 = 5000K | | SubstiTUBE® IPS (Compatible LED T8 for use with instant start and select programmed rapid start - parallel wiring -T8 electronic ballasts) | | Generation |

Application Information

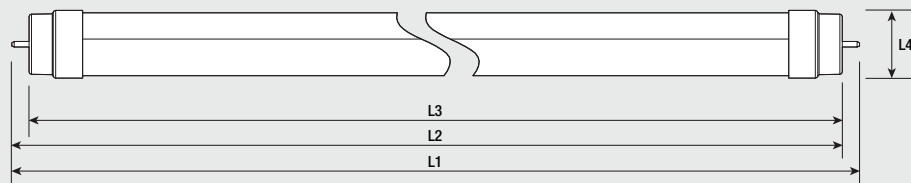
Application Notes

- Due to numerous ballast designs and topologies, this lamp should be tested on existing ballasts before mass quantities are installed.
- 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.
- 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.
- 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.
- For instant start ballasts, use lamp holders with an internal shunt or ensure that lamp holders are wired in a shunt configuration
- Operating temperature range between -4°F and 122°F (-20°C and 50°C).
- Suitable for use in dry and damp environments.
- Maximum mounting distance between tube and ballast is 20 feet.
- NSF certified Food Zone (Non-Contact), Splash Zone and Non-Food Zone.
- Please read all installation instructions before attempting installation.
- For detailed warranty information, please see www.osram-america.com

Specifications & Lighting Data

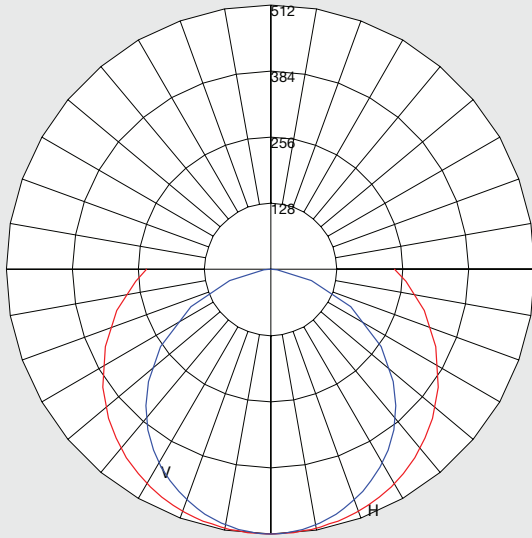
| Lamp | Ballast | Current (AMPS) | System Power (W) | System Lumens (lm) | System Efficacy (lm/W) | No. of Lamps | |
|-------------------|-------------------|-------------------|------------------|--------------------|------------------------|--------------|---|
| LED15T8/L48 | QHE1X32T8/UNV ISL | 0.13 / 0.06 | 15.0 | 1,900 | 127 | 1 | |
| | QHE2X32T8/UNV ISL | 0.26 / 0.12 | 30.0 | 3,800 | 127 | 2 | |
| | QHE3X32T8/UNV ISL | 0.38 / 0.17 | 45.0 | 5,700 | 127 | 3 | |
| | QHE4X32T8/UNV ISL | 0.51 / 0.23 | 60.0 | 7,600 | 127 | 4 | |
| | QHE1X32T8/UNV ISN | 0.15 / 0.07 | 18.0 | 2,200 | 122 | 1 | |
| | QHE2X32T8/UNV ISN | 0.30 / 0.13 | 36.0 | 4,400 | 122 | 2 | |
| | QHE3X32T8/UNV ISN | 0.43 / 0.19 | 52.5 | 6,400 | 122 | 3 | |
| | QHE4X32T8/UNV ISN | 0.57 / 0.26 | 69.5 | 8,500 | 122 | 4 | |
| | QHE1X32T8/UNV ISH | 0.20 / 0.09 | 23.0 | 2,800 | 122 | 1 | |
| | QHE2X32T8/UNV ISH | 0.40 / 0.19 | 47.5 | 5,800 | 122 | 2 | |
| | QHE3X32T8/UNV ISH | 0.57 / 0.27 | 66.5 | 8,100 | 122 | 3 | |
| | QHE4X32T8/UNV ISH | 0.77 / 0.34 | 91.0 | 11,000 | 121 | 4 | |
| | LED12T8/L48 | QHE1X32T8/UNV ISL | 0.11 / 0.05 | 12.5 | 1,400 | 112 | 1 |
| | | QHE2X32T8/UNV ISL | 0.22 / 0.10 | 26.0 | 2,900 | 112 | 2 |
| QHE3X32T8/UNV ISL | | 0.34 / 0.15 | 40.0 | 4,500 | 113 | 3 | |
| QHE4X32T8/UNV ISL | | 0.44 / 0.20 | 52.0 | 5,800 | 112 | 4 | |
| QHE1X32T8/UNV ISN | | 0.12 / 0.06 | 14.5 | 1,600 | 110 | 1 | |
| QHE2X32T8/UNV ISN | | 0.25 / 0.11 | 29.0 | 3,200 | 110 | 2 | |
| QHE3X32T8/UNV ISN | | 0.36 / 0.16 | 42.0 | 4,600 | 110 | 3 | |
| QHE4X32T8/UNV ISN | | 0.48 / 0.21 | 56.5 | 6,200 | 110 | 4 | |
| QHE1X32T8/UNV ISH | | 0.15 / 0.07 | 17.5 | 1,800 | 103 | 1 | |
| QHE2X32T8/UNV ISH | | 0.30 / 0.13 | 35.0 | 3,600 | 103 | 2 | |
| QHE3X32T8/UNV ISH | | 0.90 / 0.19 | 51.5 | 5,300 | 103 | 3 | |
| QHE4X32T8/UNV ISH | | 0.60 / 0.27 | 70.0 | 7,200 | 103 | 4 | |
| LED12T8/L36 | | QHE1X32T8/UNV ISL | 0.11 / 0.05 | 12.0 | 1350 | 113 | 1 |
| | | QHE2X32T8/UNV ISL | 0.22 / 0.10 | 25.5 | 2900 | 114 | 2 |
| | QHE3X32T8/UNV ISL | 0.34 / 0.15 | 39.5 | 4500 | 114 | 3 | |
| | QHE4X32T8/UNV ISL | 0.44 / 0.20 | 51.5 | 5850 | 114 | 4 | |
| | QHE1X32T8/UNV ISN | 0.13 / 0.06 | 14.5 | 1650 | 114 | 1 | |
| | QHE2X32T8/UNV ISN | 0.24 / 0.11 | 28.0 | 3200 | 114 | 2 | |
| | QHE3X32T8/UNV ISN | 0.35 / 0.16 | 41.0 | 4650 | 113 | 3 | |
| | QHE4X32T8/UNV ISN | 0.48 / 0.21 | 56.0 | 6300 | 113 | 4 | |
| | QHE1X32T8/UNV ISH | 0.15 / 0.07 | 17.0 | 1800 | 106 | 1 | |
| | QHE2X32T8/UNV ISH | 0.30 / 0.14 | 34.0 | 3600 | 106 | 2 | |
| | QHE3X32T8/UNV ISH | 0.34 / 0.16 | 51.0 | 5400 | 106 | 3 | |
| | LED08T8/L24 | QHE1X32T8/UNV ISL | 0.08 / 0.04 | 9.5 | 1050 | 111 | 1 |
| | | QHE2X32T8/UNV ISL | 0.16 / 0.08 | 19.0 | 2100 | 111 | 2 |
| | | QHE3X32T8/UNV ISL | 0.24 / 0.11 | 28.5 | 3150 | 111 | 3 |
| QHE4X32T8/UNV ISL | | 0.32 / 0.14 | 38.0 | 4200 | 111 | 4 | |
| QHE1X32T8/UNV ISN | | 0.09 / 0.04 | 10.0 | 1100 | 110 | 1 | |
| QHE2X32T8/UNV ISN | | 0.17 / 0.08 | 20.0 | 2200 | 110 | 2 | |
| QHE3X32T8/UNV ISN | | 0.26 / 0.11 | 30.0 | 3300 | 110 | 3 | |
| QHE4X32T8/UNV ISN | | 0.34 / 0.16 | 39.5 | 4350 | 110 | 4 | |
| QHE1X32T8/UNV ISH | | 0.11 / 0.05 | 12.5 | 1350 | 108 | 1 | |
| QHE2X32T8/UNV ISH | | 0.21 / 0.10 | 24.5 | 2600 | 106 | 2 | |
| QHE3X32T8/UNV ISH | 0.29 / 0.14 | 34.0 | 3600 | 106 | 3 | | |

Assembly Diagram



| Product Description | L1 End of Base Pin to End of Opposite Pin End | L2 Base Face to End of Opposite Base Pin | L3 Base Face to Base Face | L4 Bulb Outside Diameter |
|---------------------|--|---|------------------------------|--------------------------------|
| LED15T8L48 (4ft) | 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) |

Photometric Information



Maximum Candela = 512
H - Horizontal Axial Candela
V - Vertical Axial Candela

Total Lumen Distribution

| Zone | Lumens |
|-------|--------|
| 0-30 | 404 |
| 0-40 | 671 |
| 0-60 | 1256 |
| 0-90 | 1930 |
| 60-90 | 902 |
| 0-180 | 2382 |

Photometric information for LED15T8L48F/835/SUB/G5

Warranty

SubstiTUBE® IPS LED T8 lamps are covered by the LED T8 Lamp Limited Warranty and the QUICK 72SUB+ System Warranty, a comprehensive system warranty. For additional details, please visit www.osram-america.com/warranty

OSRAM

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