

SubstiTUBE® IPS LED T8

Compatible glass LED T8 for use with instant start and select programmed rapid start electronic T8 ballasts



SubstiTUBE IPS LED T8 lamps are an energy saving alternative, designed to replace traditional fluorescent T8 lamps. These 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.

Application Information

Applications

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

Key Features & Benefits

- Optimized glass optics available in:
 - Dimmable on 0-10V 4ft/15.5W
 - Non-dimmable 4ft/12W, 3ft/12W, 2ft/8.5W
- Optimized plastics optics available in:
 - Non-dimmable 4ft/15.5W
- CCT: 3000K, 3500K, 4100K, 5000K
- Beam angle: 220°
- Compatible with instant start and select programmed rapid start 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)
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- No UV emission
- Suitable for dry and damp locations (cannot come in direct contact with water)
- Maximize energy savings with occupancy sensors
- Suitable for open and enclosed fixtures

Product Offering

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

Specifications and Certifications



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
Max Case Temperature: LED15T8/L48 = 158°F (70°C),
 LED12T8/L48 = 149°F (65°C)

Lighting Data

Lumen Output: See specification table (output is dependent on operating ballast)
Lumens per Watt: Up to 122
Correlated Color Temperature (CCT): 3000K, 3500K, 4100K, 5000K
Color Rendering Index (CRI): 82
R9: Up to 14

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)
Glass									
75286	LED15T8/L48/DIM/830/SUB/G6	4ft	15.5	2100	3000K	82	220	10	Y
75287	LED15T8/L48/DIM/835/SUB/G6	4ft	15.5	2100	3500K	82	220	10	Y
75288	LED15T8/L48/DIM/841/SUB/G6	4ft	15.5	2200	4100K	82	220	10	Y
75297	LED15T8/L48/DIM/850/SUB/G6	4ft	15.5	2200	5000K	82	220	10	Y
79526	LED12T8/L48/FG/830/SUB/G6	4ft	12	1650	3000K	82	220	10	Y
79527	LED12T8/L48/FG/835/SUB/G6	4ft	12	1650	3500K	82	220	10	Y
79528	LED12T8/L48/FG/841/SUB/G6	4ft	12	1650	4100K	82	220	10	Y
79529	LED12T8/L48/FG/850/SUB/G6	4ft	12	1650	5000K	82	220	10	Y
75128	LED12T8/L36/FG/830/SUB/G6	3ft	12.5	1650	3000K	82	220	10	N/A
75129	LED12T8/L36/FG/835/SUB/G6	3ft	12.5	1650	3500K	82	220	10	N/A
75130	LED12T8/L36/FG/841/SUB/G6	3ft	12.5	1650	4100K	82	220	10	N/A
75131	LED12T8/L36/FG/850/SUB/G6	3ft	12.5	1650	5000K	82	220	10	N/A
75064	LED8T8/L24/FG/830/SUB/G6	2ft	8.5	1100	3000K	82	220	10	N
75065	LED8T8/L24/FG/835/SUB/G6	2ft	8.5	1100	3500K	82	220	10	N
75066	LED8T8/L24/FG/841/SUB/G6	2ft	8.5	1100	4100K	82	220	10	N
75070	LED8T8/L24/FG/850/SUB/G6	2ft	8.5	1100	5000K	82	220	10	N
Plastic									
75132	LED15T8/L48/FP/830/SUB/G6	4ft	15.5	2100	3000K	82	150	10	Y
75133	LED15T8/L48/FP/835/SUB/G6	4ft	15.5	2100	3500K	82	150	10	Y
75134	LED15T8/L48/FP/841/SUB/G6	4ft	15.5	2200	4100K	82	150	10	Y
75135	LED15T8/L48/FP/850/SUB/G6	4ft	15.5	2200	5000K	82	150	10	Y

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

Ordering Guide

LED	15	T8	/	L	48	/	DIM	/	8	41	/	SUB	/	G6
LED	Wattage (ISN ballast)	Lamp Type		Length	48 Inches		DIM = frosted glass dimmable FG = frosted glass non-dimmable FP = frosted plastic non-dimmable		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 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.
- For Programmed Rapid Start ballasts, use rapid-start lamp holders (non-shunted lamp holders).
- 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).

Application Notes (continued)

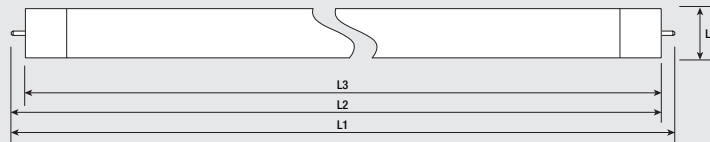
8. Operating temperature range between -4°F and 122°F (-20°C and 50°C).
9. Suitable for use in dry and damp environments.
10. Maximum mounting distance between tube and ballast is 20 feet.
11. Please read all installation instructions before attempting installation.

Specifications & Lighting Data

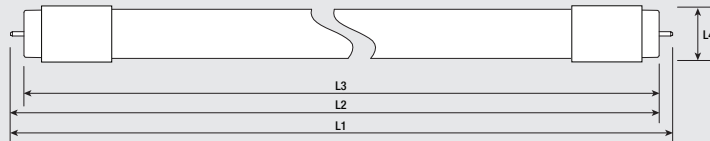
Lamp	Ballast	Current (AMPS)	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)	No. of Lamps
LED15T8/L48	QHE2X32T8/UNV ISN	0.33 / 0.14	36.0	4400	122	2
LED12T8/L48	QHE2x32T8/UNV ISN	0.27 / 0.12	29.0	3300	114	2
LED12T8/L36	QHE2x32T8/UNV ISN	0.24/0.11	28.0	3300	117	2
LED8T8/L24	QHE2x32T8/UNV ISN	0.17/0.08	20.0	2200	110	2

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

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
LED15T8/L48/DIM (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)
LED12T8L36 (3ft)	35.72" ± 0.055" (907.4mm ± 1.4mm)	35.45" ± 0.05" (900.45mm ± 1.25mm)	max 35.22" (894.6mm)	1.02" ± 0.08" (25.9mm ± 2.0mm)
LED08T8L24 (2ft)	23.72" ± 0.055" (602.6mm ± 1.4mm)	23.45" ± 0.05" (595.65mm ± 1.25mm)	max 23.22" (589.8mm)	1.02" ± 0.08" (25.9mm ± 2.0mm)



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
LED15T8/L48 (4ft)	47.725" ± 0.055" (1212.2mm ± 1.4mm)	47.45" ± 0.05" (1205.25mm ± 1.25mm)	max 47.22" (1199.4mm)	1.08" ± 0.08" (27.5mm ± 2.0mm)
LED12T8/L48 (4ft)	47.725" ± 0.055" (1212.2mm ± 1.4mm)	47.45" ± 0.05" (1205.25mm ± 1.25mm)	max 47.22" (1199.4mm)	1.09" ± 0.08" (27.9mm ± 2.0mm)

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.

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