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, 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.

Benefits and Features

- Shatterproof Frosted Nano Plastic lamps do not break in the manner of glass LED or fluorescent lamps
- CCT: 3000K, 3500K, 4100K, 5000K
- Beam angle: 160°
- Light emitting area: 340°
- G13 medium bi-pin base
- 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

Electrical

- Compatible with instant start and select programmed rapid start (IPS) electronic T8 ballasts with input voltage of 120-277V and 347V
- 0-10V dimmable with compatible 0-10V dimming ballast
- Power Factor >0.90
- THD <20%

Rated Life

- 50,000 hours (L_{70})

Ambient Operating Range

- -4°F to +104°F (-20°C to +40°C)

Wattage Comparison

Traditional Source	Traditional System Wattage	LED System Wattage	Energy Savings
2ft 17W T8 w/QHE 2X32T8/UNV ISN-SC	29	20	31%
3ft 25W T8 w/QHE 2X32T8/UNV ISN-SC	43	26	40%
4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	25	55%
4ft 32W T8 w/QHE 2X32T8/UNV ISN-SC	55	32	42%

Warranty

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

Certifications and Listings

- cULus
- RoHS
- Lead Free
- Mercury Free
- DLC 5.1
- NSF Listed: NSF/ANSI Standard 2 – Food Equipment

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).
- For proper use and warranty coverage, installer must consult the ballast compatibility list to ensure that the lamp and ballast combination is deemed compatible and will operate as intended.

Ballast Compatibility Guide

LED498R16 9-25

Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

Ordering Guide

LED	XX	T8	/	L48	/	FP	DIM	/	8	XX	SUB	/	G8
LED	Wattage (ISN Ballast) 8, 10, 11 or 13 watts	Lamp Type T8		Length L24 = 24" L36 = 36" L48 = 48"		FP = Frosted Nano Plastic	DIM = dimmable		CRI 8 = >80	Color Temperature 30 = 3000K 35 = 3500K 41 = 4100K 50 = 5000K	SubstiTUBE IPS (Compatible LED T8 for use with instant start and select programmed rapid start T8 electronic ballasts		Generation 8

Ordering Information

Item Number	Ordering Abbreviation	Length	Lens Material*	Lamp Power (W)[1]	Initial Lumens (lm)[1]	Bare Lamp Efficacy (LPW)	Color Temp. (CCT)	CRI	Life (L_{70}) Hours	Beam Angle (°)	Package Quantity	DLC
40491	LED8T8/L24/FP/830/SUB/G8	2ft	Nano Plastic	8	1250	156	3000K	83	50,000	160	25	5.1
40492	LED8T8/L24/FP/835/SUB/G8	2ft	Nano Plastic	8	1250	156	3500K	83	50,000	160	25	5.1
40493	LED8T8/L24/FP/841/SUB/G8	2ft	Nano Plastic	8	1250	156	4100K	83	50,000	160	25	5.1
40494	LED8T8/L24/FP/850/SUB/G8	2ft	Nano Plastic	8	1250	156	5000K	83	50,000	160	25	5.1
40495	LED11T8/L36/FP/830/SUB/G8	3ft	Nano Plastic	11	1625	148	3000K	83	50,000	160	25	5.1
40496	LED11T8/L36/FP/835/SUB/G8	3ft	Nano Plastic	11	1625	148	3500K	83	50,000	160	25	5.1
40497	LED11T8/L36/FP/841/SUB/G8	3ft	Nano Plastic	11	1625	148	4100K	83	50,000	160	25	5.1
40498	LED11T8/L36/FP/850/SUB/G8	3ft	Nano Plastic	11	1625	148	5000K	83	50,000	160	25	5.1
40999	LED10T8L48FP830SUBG8	4ft	Nano Plastic	10	1600	160	3000K	82	50,000	180	25	5.1
41001**	LED10T8L48FP841SUBG8	4ft	Nano Plastic	10	1600	160	4100K	82	50,000	180	25	5.1
41002**	LED10T8L48FP850SUBG8	4ft	Nano Plastic	10	1600	160	5000K	82	50,000	180	25	5.1
40591	LED13T8/L48/FP/DIM/830/SUB/G8	4ft	Nano Plastic	13	2100	162	3000K	83	50,000	160	25	5.1
40592	LED13T8/L48/FP/DIM/835/SUB/G8	4ft	Nano Plastic	13	2100	162	3500K	83	50,000	160	25	5.1
40593	LED13T8/L48/FP/DIM/841/SUB/G8	4ft	Nano Plastic	13	2200	169	4100K	83	50,000	160	25	5.1
40594	LED13T8/L48/FP/DIM/850/SUB/G8	4ft	Nano Plastic	13	2200	169	5000K	83	50,000	160	25	5.1

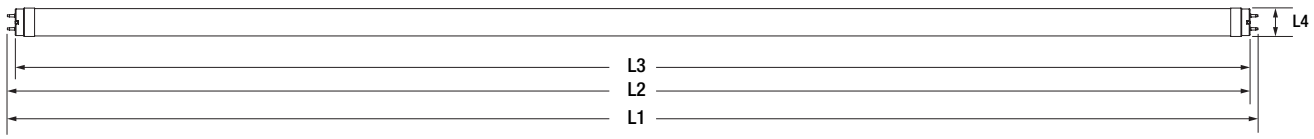
*Frosted
**Limited inventory available. Product will become obsolete when inventory is depleted.
1. Average Lamp Power and Average Lamp Lumens rated on QHE2x32T8/UNV ISN.

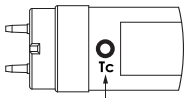
Specifications & Lighting Data

Lamp	Ballast	Current (AMPS)	System Power (W)	System Lumens (lm)	System Efficacy (lm/W)	No of Lamps
LED8T8/L24/FP	QHE 2X32T8/UNV ISN	0.17/0.08	20	2400	120	2
LED11T8/L36/FP	QHE 2X32T8/UNV ISN	0.22/0.10	26	3300	127	2
LED13T8/L48/FP/DIM	QHE 2X32T8/UNV ISN	0.26/0.12	32	4400	138	2

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

Physical Information





Tc point location next to label

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
LED8T8/L24/FP (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)
LED11T8/L36/FP (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)
LED13T8/L48/FP/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)

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. Not for use with ballasts more than ten years old.
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.
9. 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).
10. Operating temperature range between -4°F and 113°F (-20°C and 45°C).
11. Suitable for use in dry and damp environments.
12. Maximum mounting distance between tube and ballast is 20 feet.
13. Not for use with other LED or fluorescent lamps on the same ballast.
14. Not for use with magnetic ballasts.
15. Please read all installation instructions before attempting installation.
16. For detailed warranty information, please see www.ledvanceUS.com.

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