Norman Lamps, Inc. • Product Data • 48” Tube • Type “A+B”

HYBRID™ T8 LED Lighting

17 Watts • 2,200 Lumens

*The HYBRID™ T8 is the premium universal retrofit **LED** tube that outperforms all others.*

- ***Ballast Compatible & Direct Line Voltage Compatible. A+B*** *(Patented, Internal dual mode driver)*
- Dual Mode internal driver allows for either ballast compatible or direct voltage install formats.
- Compatible with electronic ballasts for quick and easy, ***“plug & play”*** installation.
- Operates also on direct line voltage input where ballast bypass is the desired format. (Optimal Format)
- Bypassing the ballast optimizes lamp life and efficiency by eliminating any ballast anomalies that may exist.
- Operating temperature range is -25°C ~ +40°C
- Direct voltage Input range is 120VAC ~ 277VAC
- Operates using Shunted or Non-Shunted sockets.
- ***2,200 Lumens @ 17 Watts 48” Tube***
- ***Qualified to DLC 5.1 & UL Listed***
- **Dimmable LED Tube** (Using 120V direct wire only.)

Licensed under U.S. Patent # 8,729,809

Single End & Double End voltage input option



Specifications:

Model:	**LED-T8-48” Tube**	**Series:** HYBRID™ T8	
Wattage:	**17 Watts**		
Input Voltage:	**Universal voltage driver 120VAC~277VAC**		
Color Temps:	**2,700k, 3,000k, 3,500k, 4,000k, 5,000k, 6,500k**		
Lumens:	**2,200lm @ 17 Watts**		
Viewing Angle:	**240 Degree viewing angle**		
Operating Temp:	**-25°C ~ +40°C**	**C.R.I. >80**	
Life Hours:	**>50,000Hrs**		
Dimensions:	**1” Diameter x 48” Length**	**Base: G-13 Bi-Pin**	
Replaces:	**32W Fluorescent T8 tubes**	**Pack: 25/Case**	

Qualifications:

Hengdian Group Tospo items are UL listed E352052

Xiamen Homestar Tech items are ETL listed

Features & Special Data:

- **Quick and Easy “Plug & Play” Installation if desired.**
- **Extend tube life and efficiency by using direct voltage input method.**
- **Direct Voltage Input range is 120VAC~277VAC.**
- **LED tubes are labeled with operating information and instructions.**
- **Compatible with existing electronic ballast or with ballast bypassed.**
- **Dual Mode Driver is protected under current U.S. patent # 8,729,809.**
- **50% Energy Reduction with LED tubes vs 32-watt fluorescent tubes.**
- ***Dimmable operation under DLC 5.1*** (Using 120V direct wire only.)
- **Shatter Protected-Safe for use in food service industry**
- **5 Year Warranty**

Ordering:

LED-T818-22

Norman category		Lumens		Color Temp
LED-T818	–	22	–	XX
T8, 17W		2,200Lm		

Manufactured under DLC for NLI

Xiamen Homestar Technology Co., Ltd. →
(and/or)
Hengdian Group Tospo Lighting Co., Ltd. D

G2 120-277-17/T8 2200lm 4FT A+B G13 GLASS-P SE/DE

Available in 35K, 4K or 5K color Temperatures
UL E352052

27K (2,700k) • 2,100Lm
DLC # T851-4FT-27FO18

3K (3,000k) • *2,200Lm*
DLC # T851-4FT-30FO18

35K (3,500k) • *2,200Lm*
DLC # T851-4FT-35FO18

4K (4,000k) • *2,200Lm*
DLC # T851-4FT-40FO18

5K (5,000k) • *2,200Lm*
DLC # T851-4FT-50FO18

65K (6,500k) • *2,200Lm*
DLC # Not Listed in 65K

Important Caution Notice:

It is critical to replace any damaged, broken, worn out or old lamp sockets before installing LED tubes. Failure to do so may result in electrical arcing or short which can lead to lamp failure. The condition of the lamp sockets should be determined solely by a qualified electrician trained in identifying lamp sockets in need of upgrade or replacement *before* converting to high end LED technology. While “Plug & Play” is a safe, simple and reliable retrofit method, we recommend, whenever possible, using the direct wire retrofit method and bypassing the existing ballast completely. By avoiding combining two different technologies, the direct wire method effectively eliminates any possible anomalies or technical conflicts that might prevent the LED tube from achieving and operating at 100% of its designed values. Applications and operating conditions vary greatly, and it is the responsibility of the installer or end user of the LED tube to verify that the part is compatible and suitable for their application. May not be suitable for use in fully enclosed fixtures including vapor tight fixtures. Use in these fixtures can cause premature failures and will void the warranty.