



Distributed by Norman Lamps, Inc.
 Product Data – 48” Tube – DLC “A”
HYBRID™ T8 LED Lighting

18 Watts • 2,100 Lumens

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

- **Ballast Compatible & Direct Line Voltage Compatible.** (Patented, Internal dual mode driver)
- Dual Mode internal driver allows for either ballast compatible or direct voltage install formats.
- Compatible with *most* electronic ballasts for quick and easy, “**plug & play**” installation *
- Operates 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 (Single end or Double end input options)
- Operates using Shunted or Non-Shunted sockets
- **2,100 Lmens @ 18 Watts 48” Tube**
- **Qualified to DLC 4.2 & UL “A” Functions**



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

Specifications:

Factory test data results:

Model:	LED-T8-48” Tube	Series:	HYBRID™ T8
Wattage:	18 Watts		
Input Voltage:	Built-In universal voltage driver 120VAC~277VAC		
Color Temp:	3,500k, 4,000k, 5,000k, 6,500k		
Lumens:	2,100lm @ 18 Watts	C.R.I.	
Viewing Angle:	>83 240 Degree viewing angle		
Operating Temp:	-25°C ~ 40°C		
Life Hours:	>50,000Hrs		
Dimensions:	1” Diameter x 48” Length	Base:	G-13 Bi-Pin
Replaces:	32W Fluorescent T8 tubes	Pack:	30/Case

Qualification:



DLC 4.2 “A”



UL Type “A”



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.
- **Shatter protected** - Safe use in food service industries.
- 5 Year Warranty

Ordering:

Manufactured by:
 Xiamen Grace Solar Technology Co., Ltd
 Xiamen Byme Lighting Co., Ltd



(2,100lm) 2,199 LM	} 35K (3,500k) T08L31-F-35H 30K T08L31-F-30H 4K (4,000k) DLC # T08L31-F-40H or 5K (5,000k) DLC # T08L31-F-50H 65K UL only	
		2100lum 4K
		2100lum 5K

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 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, 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.

Not all product variations listed on this page are DLC qualified. To ensure that a specific model is qualified, visit www.designlights.org/search.