

## Narrow High Output Module For Linear Applications

### Features and Benefits

- 23.5" long modules are scalable for legacy fluorescent applications to create a family of fixtures with different lengths
- Ideal for decorative linear luminaires: bath bars, recessed linear, cove and high end architectural
- Narrow 0.5" width, high efficacy linear family of modules replace T5HO and T8 linear fluorescent light sources with superior CRI
- LED spacing optimized to provide continuous illumination
- Lower cost FR4 PCB includes notches at ends and 3M 468MP peel & stick tape for mechanical attachment
- Latest generation LED for high efficacy and color consistency
- Pre-wired pigtails are mechanically robust and reduce labor
- Protective conformal (transparent) coating for exterior applications



**BB48TO SERIES**

### Compatible LED Drivers

Recommended Maximum DC Input Current to Module .....	700mA
Typical DC input Voltage to Module .....	37V

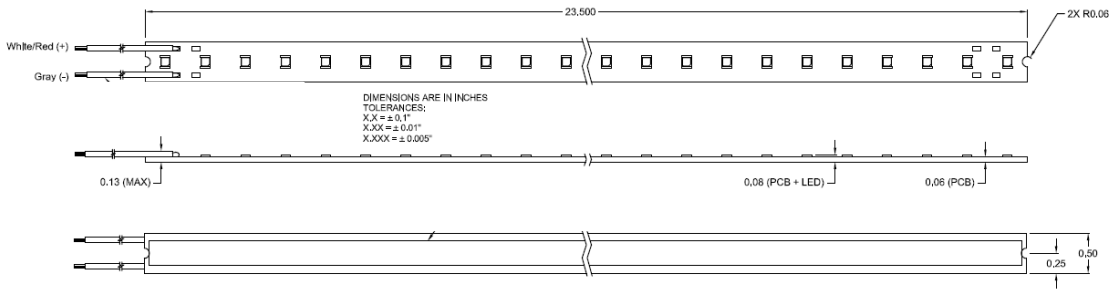
### Ratings and Performance Specifications

Nominal DC Power Consumption .....	See Table 1
Recommended Screw Installation Torque .....	75 inch ounces
Maximum Operating Range Ambient Temperature (Ta) .....	-40 to +50°C
Maximum Solder Pad Temperature (Ts) .....	+105°C
Estimated Lumen Depreciation (TM-21) ...70% initial lumens (L70) @ 100,000 hours	
Nominal Weight .....	55 grams
Safety/Compliance UL Class 2 Recognized Component .....	E321468

### Application Notes

1. The use of any washer (lock, flat, etc.), will void the warranty due to possible damage and/or shorting of LED and/or circuit board.
2. This module requires heatsinking at full power. The luminaire design should allow heat to escape the system. Forzlux provides thermal testing of light engines in the luminaire for OEM customers to ensure long life and compliance with warranty.
3. Abnormal operating conditions such as elevated ambient temperatures can negatively impact lumen output, product lifetime and/or performance.

## Physical Dimensions



30" nominal length leads, 20AWG, 105°C, strip ends 7/16"

Ts measurement point is cathode of center LED

Entire top of module is conformal coated with Humiseal 1B31 or equivalent

3M 468MP peel & stick tape on back of module, clean heatsink surface with isopropyl alcohol

## Table 1, Performance Characteristics at 25°C

Data from laboratory test measurements, actual results may vary.

Part Number	Nominal		Nominal	Nominal	Nominal
	CCT (Kelvin)	Minimum CRI	Light Output @ 700mA (Lumens)	Power Consumption @ 700mA (WDC)	Module Efficacy @ 700mA (DC LPW)
BB48TO-27-80-01	2700	80	3870	26	149
BB48TO-30-80-01	3000	80	3995	26	154
BB48TO-35-80-01	3500	80	4096	26	158
BB48TO-40-80-01	4000	80	4096	26	158
BB48TO-50-80-01	5000	80	4346	26	167

### Options available

Other CCT and CRI may be available on special order

90CRI minimum versions on special order, subtract 15% lumens

### Packaging

Product is marked with SKU and lot information on non-LED side of module.

Sold in groups of (18) unit(s) and packaged in ESD bags with SKU and lot information.

### Warranty

5-Year limited warranty in accordance with published warranty conditions. Product must be used with compatible components (modules, drivers, engines and/or accessories) and no maximum ratings (such as Ts) shall be exceeded during any operating conditions of the system. If product is used with other manufacturer's product, compatibility must be recognized in writing by Forzlux.

Forzlux owns the following United States patents of which may be applicable to the design or manufacture of this product: 6712486, 6578986, 6846093, 7114831, 7306353, 7102172, 7108396, 7329024, 7387406, 7582911, 7649327, 8926145, 8729810. Additional granted patents, patents pending and other IP protection rights may apply.