

# BoxLED® Plus

## LED Chain Signage Modules



The latest generation of BoxLED Plus LED chain modules are an ideal signage solution to light single sided box signs in place of traditional fluorescent tubes in both new construction and in retrofit applications. The modules are now available in four color temperatures (3000K, 4000K, 5000K and 6500K) and utilize Flat-Ray optical lens technology for crisp, uniform illumination of signage installations. The BoxLED Plus lighting system ships in 42.8 foot chains consisting of 32 modules each with 6 LEDs. The chain can be cut in-between each module creating a custom fit for each installation. These modules are IP66 rated creating a seal against dust and moisture. The modules can be mounted directly to the back of the sign or easily snapped into an accessory mounting track for fast, accurate installation.

With this latest generation of the BoxLED Plus products 50% more modules can be operated on our OPTOTRONIC® OT96W than the previous generations.

The BoxLED Plus modules are optimally paired with OPTOTRONIC® 24Vdc power supplies, available in both dimming and non-dimming models. These modules are listed in the UL Sign Components Manual (SAM) for new signage installations and are UL Classified for retrofit installations.

### Application Information

#### Applications

- Backlighting of single sided box signs
- Signage and illuminated advertising
- Retrofitting T12HO fluorescent lamps

### Key Features & Benefits

- Single sided chain of linear white LED modules
- Utilizes Flat-Ray optical lens technology for uniform illumination of single sided signs
- Single board cuttable for an exact fit in any installation
- Fully integrated heat sink
- IP66 rated to protect against dust, moisture, and condensation in outdoor operation
- Lower sign maintenance costs due to a lifetime of 50,000 hours (L<sub>70</sub>) at a TA of 25°C
- Simplified installation is achieved with pre-mounted tape and mounting holes or modules can be snapped into the accessory mounting track for use in both new construction or retrofit applications
- Optimal operation on OPTOTRONIC® 24Vdc and 24Vdc dimmable power supplies
- Accessories available to directly retrofit T12HO fluorescent lamps using existing R17d sockets

Track and socket accessories are available that turn the BoxLED Plus Modules into a direct retrofit for T12HO fluorescent lamps. The adapter sockets slide onto the ends of the new adapter track enabling the system to fit directly into R17d sockets. The same track and sockets can be used to retrofit any size T12HO up to F96, minimizing the number of SKUs that are required to be stocked.

### Product Offering

Ordering Abbreviation	Lumens per Module	Color
BX-PL-830	250	3000K
BX-PL-840	270	4000K
BX-PL-850	274	5000K
BX-PL-865	274	6500K

### Specifications and Certifications



Listed in the Sign Components Manual (SAM)  
(File # E258264)



The BoxLED Plus is UL Classified for sign retrofit  
(UL File # E311887)



## Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

## Ordering Information

Item Number	Ordering Abbreviation	Length (ft.)	No. of Modules	Color Temperature	Voltage (Vdc)	Power per Module(W)	Lumens per Module	Watts/ft	Lumens/ft	LPW
73519	BX-PL-830	42.8	32	3000K	24	3.12	250	2.4	191	80
73534	BX-PL-840	42.8	32	4000K	24	3.12	270	2.4	206	86
73738	BX-PL-850	42.8	32	5000K	24	3.12	274	2.4	209	88
73535	BX-PL-865	42.8	32	6500K	24	3.12	274	2.4	209	88

## Ordering Guide

<b>BX</b>	-	<b>PL</b>	-	<b>8</b>	<b>30</b>
BX = Box		PL = Plus		8 = CRI >80	30 = 3000K 40 = 4000K 50 = 5000K 65 = 6500K

## Power Supply Information

Item Number	Ordering Description	Max. No. of Modules
51598	OT50W/24V/120V/LP	13
51514	OT75W/24V/UNV	20
51522	OT96W/24V/UNV	26
51520	OT96W/24V/UNV/DIM	26
51627*	OT240W/3X24V/120-240V/JBX	3 x 21*

\*The OT240 has 3 channels at 80W each. Each channel can operate 21 modules for a total of 63 modules per OT240.

Notes:

1. These numbers are based on calculated "Maximum Board Wattage" value.
2. The listed "Maximum number of modules per power supply" values are only applicable when OPTOTRONIC power supplies are used.

## Minimum and Maximum Ratings

Parameter	Values
Operating Temperature at Tc point	-25 to +85°C (-13 to +185°F)
Storage Temperature Range	-25 to +85°C (-13 to +185°F)
Voltage Range	+23...+25 Vdc

Notes:

1. Exceeding maximum ratings for operating and storage temperature will reduce expected lifetime or destroy the LED module.
2. Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED module.
3. The temperature of the LED module must be measured at the Tc point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label.

## Accessories



73837 & 73839

Item Number	Ordering Abbreviation	Description	Case Quantity
70923	BX-MP VS24	Aluminum Mounting Track, 93.6" long	24 Units <sup>1</sup>
73837	BX-RETRO-ADAPT	Adapter Sockets	30 Units <sup>2</sup>
73839	BX-SS-ADAPT-TRACK	Aluminum Adapter Track, 91.91" long with grooves to fit Adapter sockets (73837)	24 Units <sup>3</sup>

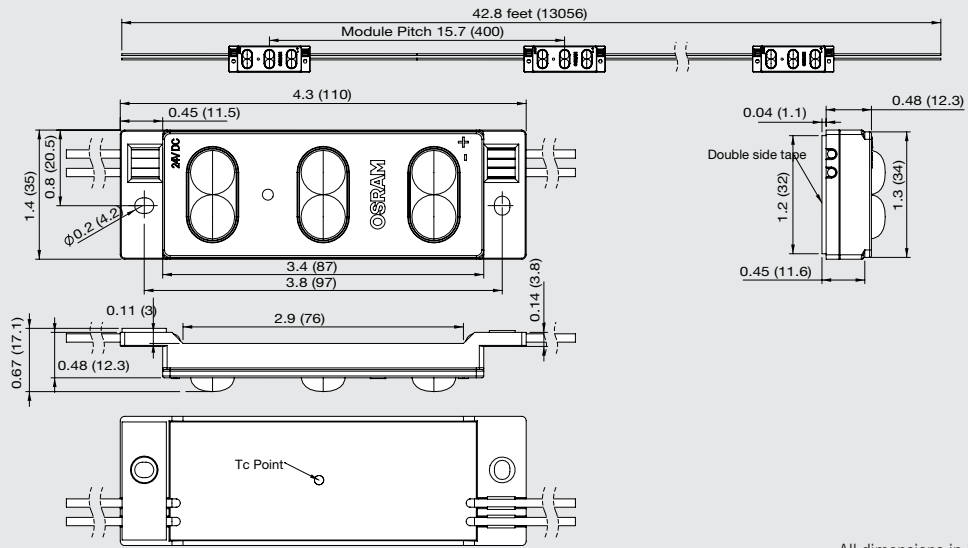
Note:

1. Mounting tracks are sold in full cases of 24 units only
2. Adapter Sockets are sold in full cases of 30 units only
3. Adapter tracks are sold in full cases of 24 units only



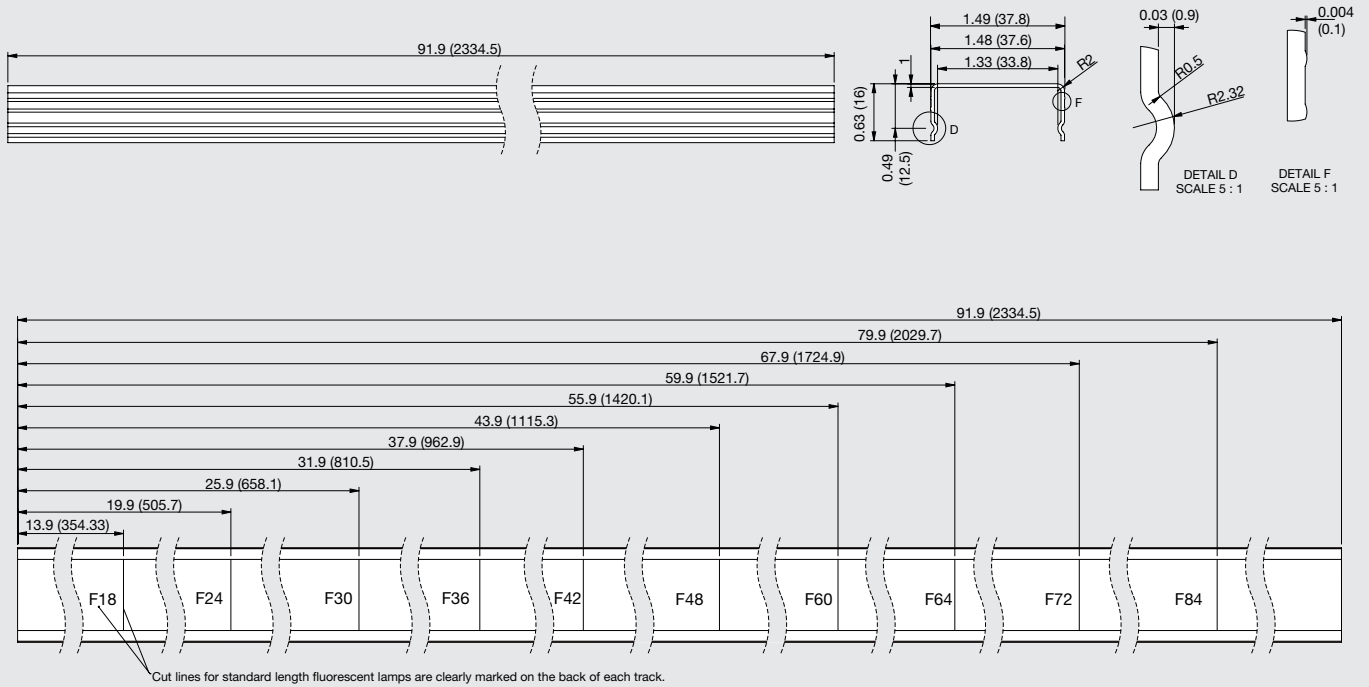
BoxLED Plus modules mounted in Adapter Track with Adapter sockets

## Assembly Diagram

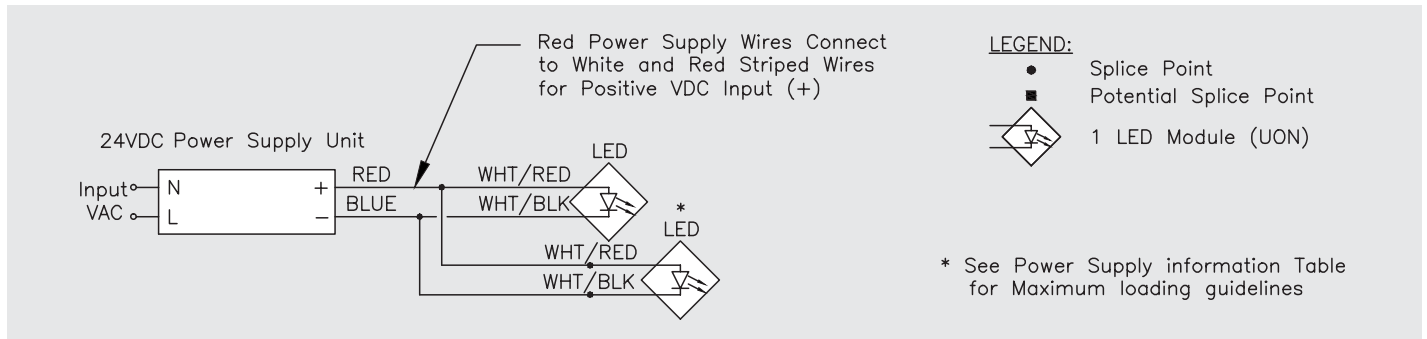


## Mounting Accessories

Adapter Track (73839)



## Wiring Diagram



## Safety Information

**WARNING: ONLY QUALIFIED PERSONNEL SHOULD PERFORM INSTALLATION. TO AVOID ELECTRICAL SHOCK OR COMPONENT DAMAGE, DISCONNECT POWER BEFORE ATTEMPTING INSTALLATION OF THE POWER SUPPLIES AND/OR MODULES.**

Failure to install the power supplies and/or LED modules in accordance with the National Electric Code (NEC), all applicable Federal, State and local electric codes as well as the specific Underwriters Laboratories (UL) safety standards for the installation, location and application may cause serious personal injury, death, property damage and/or product malfunction.

1. The LED module itself and all its components shall not be subjected to mechanical stress and assembly must not damage or destroy conducting paths on the circuit board.
2. Installation of LED modules shall be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
3. Observe correct electrical polarity, incorrect polarity may destroy the module.
4. Electrostatic Discharge (ESD) precautions shall be incorporated when handling or installing the module. (For more information, reference document # LED093 ESD Protection for LED Systems.)
5. Circuit boards should be attached securely to the intended substrate, but do not over-tighten screws or rivets. Heavy vibration should be avoided

## Assembly Information

1. Mounting tape is provided as an installation aid only, not for permanent adhesion. It is recommended all modules are secured to the mounting surface using screws of appropriate size.
2. Do not over-tighten mounting screws as over-torque could damage the module housing. Do not exceed 10 in-lbs torque.
3. The LED module shall not be subject to mechanical stress or heavy vibration.
4. When using power supplies other than OSRAM OPTOTRONIC®, power supply voltage must not fall below 24Voc.
5. For complete installation instructions, refer to BoxLED Plus Installation Instructions LED445.

## Warranty

5 Year Full System Warranty. Please refer to OSRAM SYLVANIA Signage Systems Warranty Document (LED087).

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