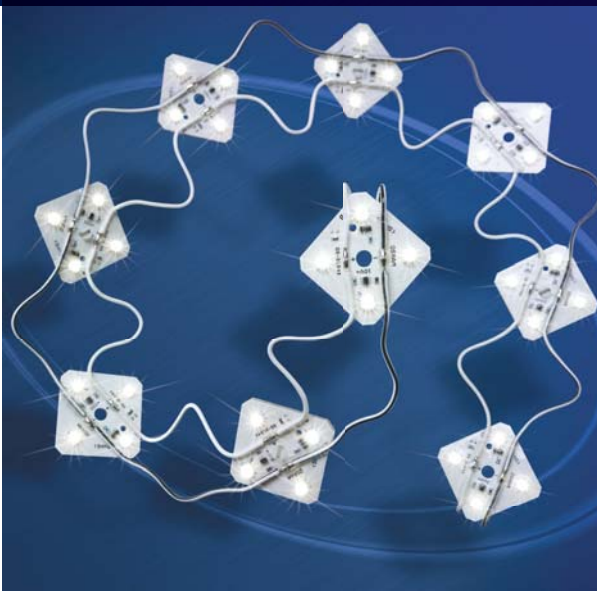


BACKlight 2G BL04 LED Module Ideal for Signage



BACKlight 2G BL04 modules offer alternatives to traditional neon sources. The main advantages of LEDs over neon or cold cathode sources are reduced manufacturing costs, durability, reduced maintenance costs, and small size.

The BL04 LED modules are ideally suited to fit contours and curves typical to advertising spaces and channel letters, and can also be used for general signage applications. They are available in green, white and blue. BACKlight 2G BL04 modules are optimally operated with OPTOTRONIC® 10.5Vdc power supplies.

Key Features & Benefits

- Uniform illumination of channel letter signs
- Flexible wiring between circuit boards allows bending up to 180°
- 120° beam angle per LED
- Long life: up to 50,000 hours when temperature at Tc point is maintained at 40°C
- A complete reel has 60 circuit boards with 4 LEDs on each board
- RoHS compliant
- Shock resistant
- Conformally coated to protect against moisture, dust, and dripping water
- Two LED modules per reel
- Mounting holes allow for installation by screw, rivet, or snap-in mounting accessories
- Listed in UL Sign Components Manual (SAM)
- Mounting tape (70125) and installation aid (70296) may be purchased separately to aid in installation

Product Offering

Ordering Description	Wattage (W)	Color
B2G/BL04S/W3-854 15.75 FT	44	5400K
B2G/BL04L/W3F-865 23.62 FT	44	6500K
B2G/BL04S/W3-865 15.75 FT	44	6500K
B2G/BL04ST/W2-865 15.75 FT	38	6500K
B2G/525/BL04ST/T2 15.75 FT	32	True Green
B2G/470/BL04ST/B1 15.75 FT	32	Blue

Application Information

Applications

Channel letters
Backlighting advertising panels
Displays
Signs

Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	Date

Ordering Information

Item Number	Ordering Abbreviation	Reel Length (ft)	Circuit Board Spacing (in)	No. of LEDs	Power (W)	Voltage (Vdc)	Current per Reel (Amps)	Color Temp. (K) Wavelength (nm)	Lumens (lm)*	Lumens/ft	Watts/ft
70273	B2G/BL04S/W3-854	15.75	3.15	240	44	10.5	4.2	5400K	880	55.8	2.8
70279	B2G/BL04L/W3F-865	23.62	4.72	240	44	10.5	4.2	6500K	880	37.2	1.8
70274	B2G/BL04S/W3-865	15.75	3.15	240	44	10.5	4.2	6500K	880	55.8	2.8
70173	B2G/BL04ST/W2-865	15.75	3.15	240	38	10.5	3.6	6500K	520	33	2.4
70172	B2G/525/BL04ST/T2	15.75	3.15	240	32	10.5	3.0	525nm	430	27.3	2
70171	B2G/470/BL04ST/B1	15.75	3.15	240	32	10.5	3.0	470nm	100	6.3	2

*All data is related to entire reel measured at Tc point of 25°C. Data reflects statistical mean values. Actual data may differ depending on variances in the manufacturing process. End users need to take into account the lumen depreciation as the temperature rises with various thermal management solutions installed.

Ordering Guide

B2G	/	470	/	BL04ST	/	B1
BACKlight Second Generation Module		Wavelength 470nm		ID No.		Color Code B1=Blue T2=True Green
B2G	/	BL04L	/	W3F	8	54
BACKlight Second Generation		ID No.		White 3rd Generation	CRI 8 > 80	Color Temperature 54 = 5400K 65 = 6500K

Power Supply Information

LED Description	OT20 (51599)		OT25 (51505, 51506)		OT50 (51508, 51509)	
	Max. Length	Max. No. of Boards	Max. Length	Max. No. of Boards	Max. Length	Max. No. of Boards
B2G/BL04S/W3-854	7ft	26	8.75ft	35	17.75ft	71
B2G/BL04L/W3F-865	11ft	27	13ft	33	27ft	68
B2G/BL04S/W3-865	7ft	26	8.75ft	35	17.75ft	71
B2G/BL04ST/W2-865	8.25ft	31	10.0ft	41	20ft	83
B2G/525/BL04ST/T2	9.75ft	37	12ft	50	25ft	100
B2G/470/BL04ST/B1	9.75ft	37	12ft	50	25ft	100

Minimum and Maximum Ratings

Ordering Description	Operating Temperature at Tc Point	Storage Temperature	Voltage Range Vdc	Reverse Voltage Vdc
B2G/BL04S/W3-854	-20 to 85C (-4 to 185F)	-20 to 85C (-4 to 185F)	10 to 11	11
B2G/BL04L/W3F-865	-20 to 85C (-4 to 185F)	-20 to 85C (-4 to 185F)	10 to 11	11
B2G/BL04S/W3-865	-20 to 85C (-4 to 185F)	-20 to 85C (-4 to 185F)	10 to 11	11
B2G/BL04ST/W2-865	-20 to 85C (-4 to 185F)	-20 to 85C (-4 to 185F)	10 to 11	11
B2G/525/BL04ST/T2	-20 to 75F (-4 to 167F)	-20 to 85C (-4 to 185F)	10 to 11	11
B2G/470/BL04ST/B1	-20 to 75F (-4 to 167F)	-20 to 85C (-4 to 185F)	10 to 11	11

Notes:

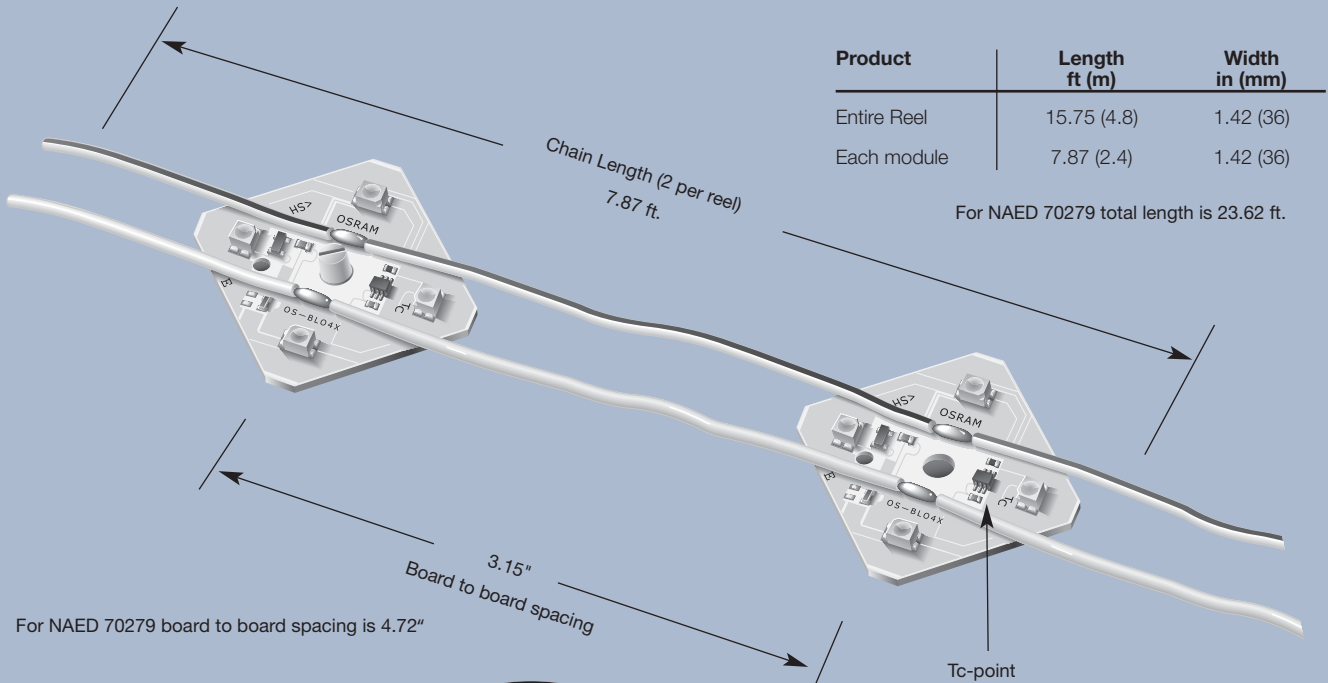
- Exceeding maximum ratings may damage the LED module and cause potential safety hazards.
- Elevated operating temperatures can be expected to negatively impact the service life in terms of lumen output.

Accessories



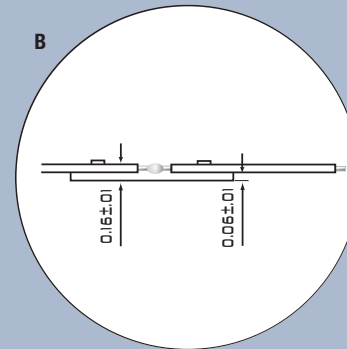
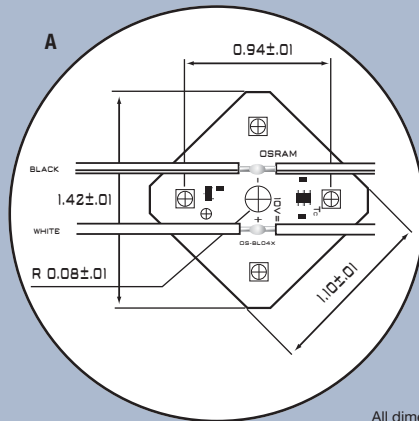
Item Number	Ordering Description	Description
70125	BACKlite Tape/OS/LM03A	Adhesive Tape Installer Aid
70296	BL-T BT60	Adhesive Clip Installer Aid

Dimensions



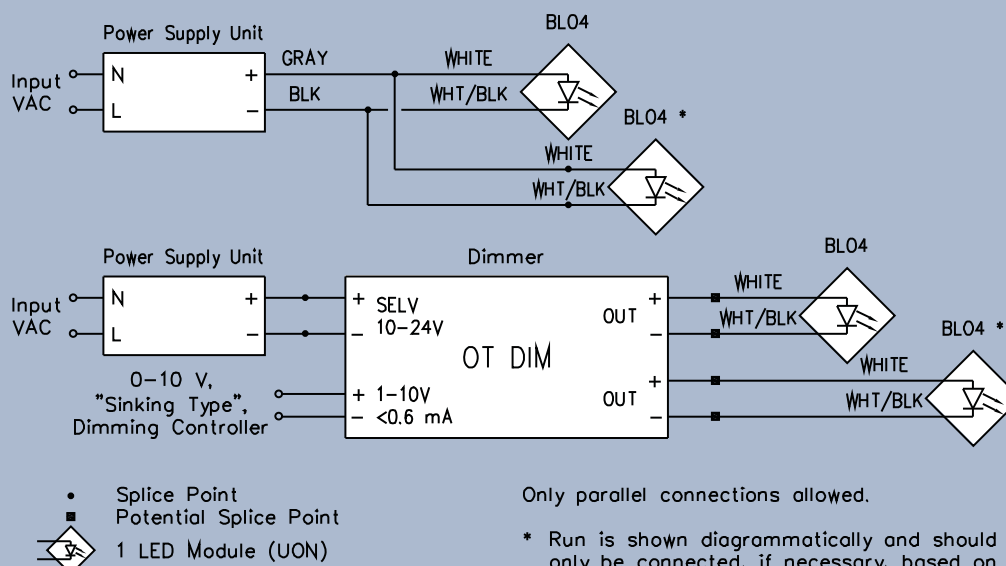
Product	Length ft (m)	Width in (mm)
Entire Reel	15.75 (4.8)	1.42 (36)
Each module	7.87 (2.4)	1.42 (36)

For NAED 70279 total length is 23.62 ft.



All dimensions given in inches

Wiring Diagram



Only parallel connections allowed.

* Run is shown diagrammatically and should only be connected, if necessary, based on load info provided in the "Power Supply Information" chart.

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 Underwriter's Laboratories (UL) safety standards for the installation, location and application may cause serious personal injury, death, property damage and/or product malfunction.

These instructions are guidelines for installation of SYLVANIA LED modules and power supplies. Installation requirements may vary depending on the application. Licensed electricians should provide all installation services for connection of both primary and secondary (input/output) of the power supplies.

1. The LED itself and all its components should not be mechanically stressed.
2. Assembly must not damage or destroy conducting paths on the circuit board.
3. To avoid mechanical damage to the connecting cables, the boards should be attached securely to the intended substrate. Heavy vibration should be avoided.
4. Detach each circuit board unit of the module only by severing the connecting cables (with power disconnected).
5. Verify the polarity of all electrical connections. The connections from power supply to the module must be positive to positive and negative to negative. Reverse polarity connections may damage the LEDs and void the product warranty.
6. Parallel connection is highly recommended for safe electrical operation mode. Serial connection of 2 LED modules is not allowed. Unbalanced voltage drop can cause hazardous overload and damage the LED module. Electrical connection is achieved through the conductors. Do not exceed the rated output capacity of the power supplies. (Application Note: Determining the maximum LED load on a constant voltage power supply module LED026).
7. The LED module can be cut into smaller segments at any interval.
8. The module itself is protected against condensation water with a polymeric conformal coating. Supplementary soldering on any solder pad will destroy the conformal coating and with it protection against condensation water.
9. Operation in or under water is not allowed.

The LED Module incorporates no protection against short circuits, overload or overheating. Therefore it is necessary to operate the modules with an electronically stabilized power supply offering protection against the above mentioned safety risks.

OSRAM OPTOTRONIC power supplies are specifically designed with protection features for safe operation.

When using power supplies other than OPTOTRONIC the following basic safety features should be verified in addition to any other application specific concerns and local safety codes:

- Short circuit protection
- Overload protection
- Overheat protection
- Correct output voltage, including consideration for ripple and spikes

Assembly Information

1. The LED module is equipped with a self-adhesive foam backed tape for installation on a clean surface. Additional adhesive mounting tape is available. (BACKlight TAPE/OS/LM03A NAED 70125).
2. Mounting of the LED module may also be performed with screws (#4 round head screw & plastic washer) by using the 5/32" (4 mm) holes in the circuit board. See the "BACKlight 2G Installation Guide" LED032 for more details.
3. Care should be taken not to over torque the mounting screws and damage the circuit board.
4. To connect the LED modules with each other or with an OPTOTRONIC Power Supply we recommend standard wire connectors. A push in style permanent locking connector is available. (BACKlight Connector/OS/LM03A/CONN NAED 70126).
5. De-rate maximum LED load for remote mounting or exterior applications. Application Note: Determining the maximum LED load on a constant voltage power supply. (LED026)

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