

# BioLED Drivers with Manual and Trigger Mode Input Controls

Part Numbers: BLS-1000-2, BLS-3000-2, BLS-13000-1/1E, BLS-18000-1

## FEATURES

- Dual Control Modes: manual or trigger-input
- High Frequency response
- Capable of driving variable loads
- BNC connectors

## APPLICATIONS

- Microscopy
- Lighting
- Machine Vision
- Display
- Semiconductor equipment
- Testing instruments
- Medical instruments
- Optogenetics

## PRODUCT DESCRIPTION

Mightex BLS-1000-2, BLS-3000-2, BLS-13000-1/1E, and BLS-18000-1 LED Controllers have two operation modes to control an LED:

**Manual Mode:** User can control the output current by a turn-counting knob manually.

**Trigger Mode:** Analog input signal to fully control the output current.

The control mode is selected with a slide switch on the front panel, the factory default is "Manual" mode. BLS-1000-2 and BLS-3000-2 provide Maximum Current Selection DIP switches on rear panel which allow the user to set maximum output current of the channel to 500 / 750 / 1,000mA for BLS-1000-2, and 1,000 / 2,000 / 3,000mA for BLS-3000-2. The factory default is set to 500mA for BLS-1000-2 and 1,000mA for BLS-3000-2. BLS-13000-1/1E and BLS-18000-1 has only one maximum current setting of 13,000mA and 18,000mA, respectively.

When the controller is set to "Trigger" mode, the output current is fully controlled by the input analog signal (0-5V).

## ELECTRICAL SPECIFICATIONS

Parameters	Value					Unit
	BLS-1000-2	BLS-3000-2	BLS-13000-1	BLS-13000-1E	BLS-18000-1	
DC Input Voltage	9 ~ 12*	9	48	12	12	V <sub>dc</sub>
DC Input Current	> total/combined channel currents**		< 2.5	13.75	13.75	A
Channel Driving Voltage (Max)	V <sub>dc</sub> - 4.5	V <sub>dc</sub> - 4	5.5	7.5	7.5	V
Current Accuracy	± 3%					mA
Channel Driving Current	0 ~ 1,000	0 ~ 3,000	0 ~ 13,000	0 ~ 13,000	0 ~ 18,000	mA
Channel Output Power Limit	< 20	< 15	< 72	< 95	< 135	W
Channel Frequency Response	< 100	< 50	< 3	< 3	< 3	kHz
External Analog Input	0 ~ 5***					V

\*. When V<sub>forward</sub> of LED load is more than 8V, 24V DC input might be used.

\*\*The Input current should be more than the sum of output currents of two channels.

\*\*\*. The input current should be greater than the combined output current of the two channels.



BLS-1000-2/BLS-3000-2 (Front Panel)



BLS-1000-2, BLS-3000-2 (Rear Panel)

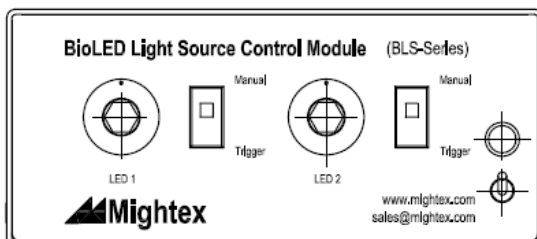


BLS-13000-1/1E, BLS-18000-1 (Front Panel)

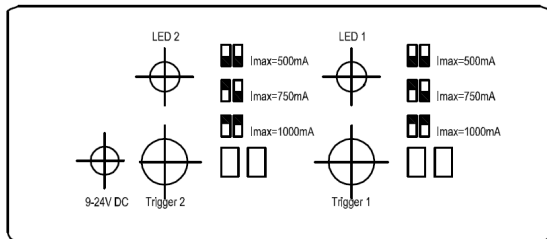


BLS-13000-1/1E, BLS-18000-1 (Rear Panel)

## FRONT PANEL AND REAR PANEL(BLS-1000-2, BLS-3000-2):



The Front Panel has power switch and power indicator. For each channel, it has a slide switch (for selecting Manual or Trigger mode) and a turn-counting dial (for adjusting output current).



The Rear Panel has a DC input plug (9 ~ 24V DC). For each channel, it has a BNC connector for external trigger/ analog voltage signal (0-5V), a two-pin LED connector, and a pair of DIP switches to set the maximum current of the channel.

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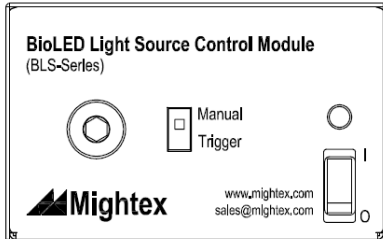
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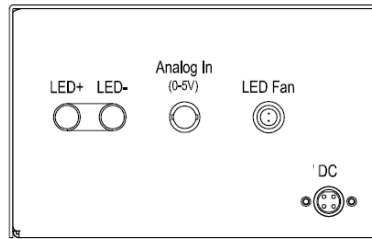
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## FRONT PANEL AND REAR PANEL (BLS-13000-1/1E, BLS-18000-1):



Front Panel



Rear Panel

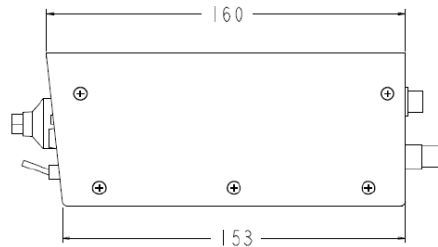
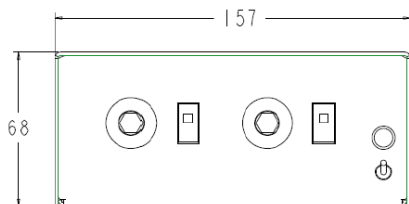
Front Panel has power switch and power indicator. It also has a slide switch (for selecting Manual or Trigger mode) and a turn-counting dial (for adjusting output current).

The Rear panel has a DC (12V or 48V) input plug, and it also has a BNC connector for analog input (0-5V), a two pin LED Fan aero connector to drive the fan of the LED light source, and a pair of LED+/LED- to drive the LED light source.

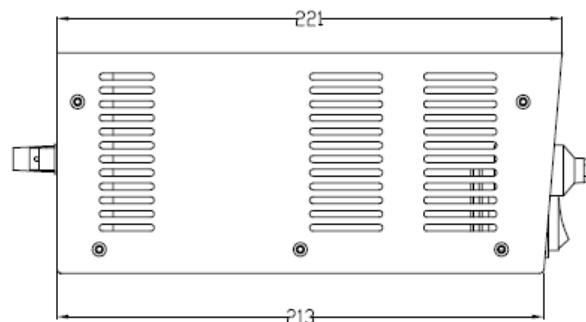
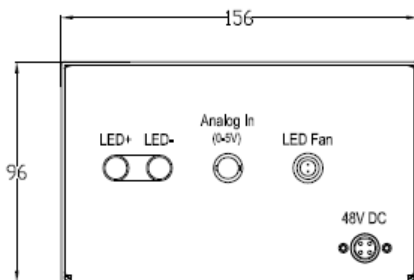
## MECHANICAL SPECIFICATION

	BLS-1000-2, BLS-3000-2	BLS-13000-1/1E, BLS-18000-1
<b>Dimension</b>	160mm (L) x 157mm (W) x 68mm (H)	221mm(L) x 156mm (W) x 96mm ( H )
<b>Weight</b>	600g	1300g

## INSTALATION DRAWING



BLS-1000-2, BLS-3000-2



BLS-13000-1/1E, BLS-18000-1

With a world-class OEM design team, Mightex offers a broad range of customized solutions in order to meet individual customer's unique requirements. Please call 1-416-840-4991 or email [sales@mightex.com](mailto:sales@mightex.com) for details.