



(In Canada)  
2343 Brimley Road  
Suite 868  
Toronto, Ontario M1S 3L6  
CANADA  
Tel: 1-416-840 4991  
Fax: 1-416-840 6541

(In US)  
1032 Serpentine Lane  
Suite 113  
Pleasanton, CA 94566  
USA  
Tel: 1-925-218 1885  
Email: sales@mightex.com

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## BLS-1000-2 LED Controller User's Manual

Version: 1.0.0

Last Updated: Jan/16/2014

### Relevant Products

Part Numbers

BLS-1000-2

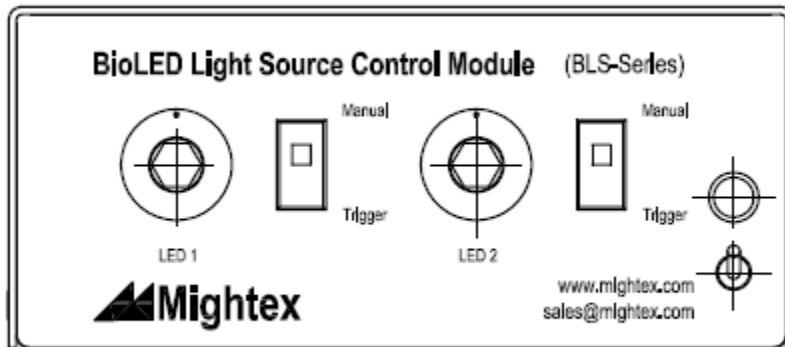
<b>Revision</b>	<b>Date</b>	<b>Author</b>	<b>Description</b>
1.0.0	Jan. 16, 2014	JT Zheng	Initial Revision

Mightex BLS-1000-2 Controller is designed to drive various kinds of Mightex LED light sources, The controller has two operation modes:

- **Manual Mode:** User can control the output current by the 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, the controller also provides a Maximum Current Selection DIP switches on rear panel which allows user to set the maximum current of the channel to 500mA, 750mA and 1000mA, the factory default is set to 500mA.


When controller is set to “**Trigger**” mode, the output current is fully controlled by the external analog signal (0 – 5V). While the maximum current of the channel is still set by the DIP switch.

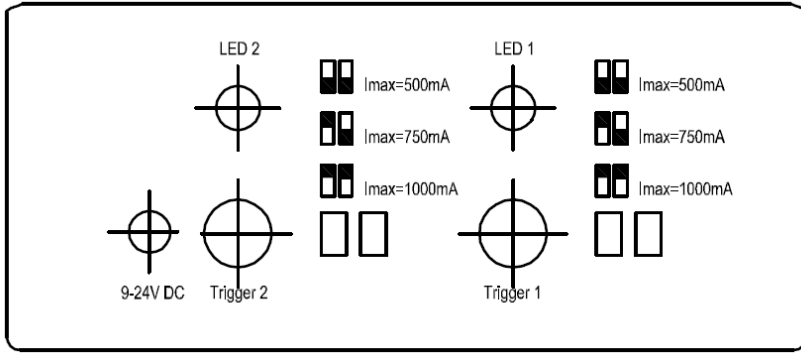


Front Panel

The mode slide switch for Mode selection as following:

 Set to **Manual Mode**, this is the factory default mode.  
In this mode, user can manually turn the counting dial to adjust the output current of this channel. **(Note: The counting dial has 10 rounds for the whole current range)**

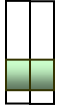
 Set to **Trigger Mode**, the output current is fully controlled by the external analog signal.



Rear Panel

The next two position DIP switch is used to select the maximum current of each channel:

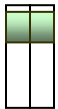
**Imax**



The maximum current is 500mA.



The maximum current is 750mA.



The maximum current is 1000mA.

**ELECTRICAL SPECIFICATIONS:**

Parameters	Value	Unit
DC Input Voltage	9 -- 24	V(dc)
DC Input Current	> channel currents*	mA
Channel Driving Voltage (Max)	V(dc) – 4.5	V
Current Accuracy	+/-3%	mA
Channel Driving Current	0 – 1000	mA
Channel Output Power Limit	< 20	W
Channel Frequency Response	<100K	Hz
External Analog Input	0 – 5	V

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

The BLS-1000-2 module is with a linear constant current source design. In operations, care must be taken while driving a LED head on a certain channel. For protecting the LED head and the controller, we expect customer to pay attention to the following items:

- 1). **HEAT SINK FOR LED:** User must have proper heat sink for the LED load (usually the light source), especially for some high power LEDs, the heat dissipation is considerable big, so we expect user have necessary heat sink for the LED to make sure LED can work under the desired current/voltage.
- 2). **CHANNEL MAXIMUM CURRENT:** For driving a certain LED light source(or a combination of LED's), user must carefully set the maximum current of the channel by setting the DIP switch on rear panel, to make sure the LED source is NOT over driven by high current.
- 3). **CONTROLLER INPUT CURRENT/VOLTAGE:** When user chooses AC-DC adapter, user should make sure that the following rules are met:
  - \*. The input DC Voltage is more than LED Driving Voltage (Vforward of LED) plus 4.5V.
  - \*. The input DC Current is more than the sum of two channel output current.
- 4). **HEAT SINK FOR LED DRIVER:** In some cases, e.g. user is using 24V as DC input and drive LED sources on both two channels, user might consider to put the LED driver on a metal surface which has good heat conduction, if the LED driver itself becomes very hot, user might even consider to have a heat sink or a fan.

**MECHANICAL SPECIFICATIONS:**

Dimension	150mm (L) x 152mm (W) x 68mm (H)
Weight	