LASER SOURCES

PRODUCT OVERVIEW

Mightex's fiber-coupled laser sources are designed to produce high power and high intensity output of illumination through an optical fiber patchcord and are available in either an ultra high power model or compact model.

Ultra-High Power Laser Sources

Manual and analog input control modes
Up to 2 wavelengths

LSR-040-0405
405nm

LSR-040-0463
463nm

LSR-040-0635
635nm

LSR-040-0405-0463
405nm & 463nm

LSR-040-0405-0635
405nm & 635nm

LSR-040-0463-0635
463nm &635nm

Compact Laser Sources

Single way blend
200nm max

LSR-SMA-XXXX-000

405nm & 635nm

LSR-SMA-0450-000

450nm &635nm

Manual and Analog Laser Controller

Compact Universal USB LED Controller

BLS-0280-2

ULTRA-HIGH POWER LASER SOURCES

Mightex ultra high power (up to 4W) laser sources are configurable to contain up to 2 different wavelengths that share the same fiber-optic output. Laser intensity can be controlled in two different modes:

1. **Manual Knob Control Mode:** 10-turn dial knobs are present for each wavelength channel.

2. **Analog Input mode:** each channel can be controlled with 0-5V signal. Maximum modulation frequency achieved in this mode is 100 kHz.

FEATURES

- Dual control modes: manual or analog input
- Up to 2 wavelengths per fiber-optic output
- Maximum modulation frequency of 100 kHz in analog mode
- Multiple safety features
- USB port for firmware and configuration upgrade

With many safety features, including a power switch, key switch, emergency switch and interlock, Mightex's laser sources are optimal for high intensity illumination applications.

MODELS

Ultra-High Power Laser Sources

LSR-040-xxxx

PERFORMANCE SPECIFICATIONS

Part number	Output Power | **mW**					
	405nm	463nm	465nm	520nm	635nm	637nm
LSR-040-0405	500	-	-	-	-	-
LSR-040-0463	-	2200	-	-	-	-
LSR-040-0465 [1]	-	-	3200	-	-	-
LSR-040-0520	-	-	-	500	-	-
LSR-040-0635	-	-	-	-	850	-
LSR-040-0637	-	-	-	-	-	4000
LSR-040-0405-0463	450	2000	-	-	-	-
LSR-040-0405-0635	450	-	-	-	750	-
LSR-040-0463-0635	-	2000	-	-	750	-

[1] LSR-040-0465 and LSR-040-0637 are only available as single-channel lasers. They cannot be combined with other wavelengths.

DIMENSIONS

Models	Weight | **kg**	Size (lxwxh) | **mm**
LSR series	9.98	483x436x132

FIBER COUPLED COMPACT LASER MODULES

Mightex compact laser sources are single channel laser sources that offer higher power optical illumination through an optical fiber. The compact size allows allows the laser module to be easily incorporated into a variety of different settings and applications. The user can control the laser illumination wavelength through a software via a separately available laser driver.

FEATURES

- Dual control modes: manual or analog input
- Up to 2 wavelengths per fiber-optic output
- Maximum modulation frequency of 100 kHz in analog mode
- Multiple safety features
- USB port for firmware and configuration upgrade

MODELS

Compact Laser Sources

LSR-SMA-XXXX-000

SPECIFICATIONS

Optical Fiber Connector	SMA
Optical Power	See Table
Maximum Current	See Table
Electrical Connection	2 meter length cable with 2-pin BLS Connector
Laser Safety	Class 3B
Dimensions	4 x 3 x 3 inches
Weight	1 lbs

POWER TABLE

Wavelength (nm)	Bandwidth (nm)	Threshold Current (mA)	Maximum Current (mA)	Optical Power* (mW)
520	<3	40	280	100
638	<3	75	280	150

[1] Power measured out of a 200um, 0.37NA fiber.

MANUAL AND ANALOG LASER CONTROLLER

Mightex offers a manual and analog controller to be used with our compact fiber-coupled laser sources. This controller features a linear design that eliminates light intensity ripples and oscillations often observed with buckpuck nonlinear drivers. This unit is also capable of achieving extremely fast modulation frequencies, reaching a maximum modulation frequency of 100kHz in analog mode. When the controller is set to "trigger" mode, the output current is fully controlled by the user's analog control signal (0-5V). The output current can also be controlled with high-precision manual knobs. The control mode is selected with a slide switch on the front panel. The controller also provides maximum current selection DIP switches on the rear panel which allows the user to set the maximum current of the channel to 3 different settings.

MODELS

Compact Universal USB LED controllers |

BLS-0280-2

PERFORMANCE SPECIFICATIONS

Models	BLS-0280-2
Current Accuracy | mA	±3%
Number of Channels	2
Power Supply Input Voltage (V_{dc}) | V	9-12[a]
Power Supply Input Current (I_{dc}) | A	> Total/combined channel current[b]
Maximum Output Voltage (V_{max}) | V	V_{dc} - 4.5V
Maximum Per Channel Output Current (I_{max}) | mA	280
Maximum Per Channel Output Power (P_{max}) | W	20
Max Modulation Frequency | KHz	100
External Analog Input[c] | V	0-5

[a] When forward voltage of LED load is greater than 8V, 24V DC input might be used.
[b] External analog voltage source should have 8+ mA of current driving capability.
[c] The input current should be greater than the combined output current of the two channels.

DIMENSIONS

Models	Weight |**g**	Size (lxwxh) |**mm**
BLS-0280-2	600	160x157x68