

# WHEELED™ WAVELENGTH-SWITCHABLE LED SOURCES

Many applications require wavelength-switchable sources. For example, in vision applications different types of objects may require different illumination wavelengths for optimized contrast. Mightex WheeLED™ wavelength-switchable LED sources let users manually switch between a selection of LED sources with different wavelengths and/or white LEDs.

A wide range of wavelengths and white LEDs are available for users to choose from. The selected LEDs are installed in the light source chassis in the factory. Users can then switch among the installed LEDs by manually turning a hand wheel.

A high-NA aspherical collimating optics is included for precision collimation and high light throughput. Clear aperture of the optics is 22mm in diameter. Other optional optics may be added for fiber/lightguide coupling and other functions. The light source includes a 5-ft electrical cable with a connector on one end to be plugged into the light source, and two bare-wire terminals at the other end. The light sources can be driven by Mightex LED controllers or other LED controllers and current sources. Only a single driving channel is required because at any time only one wavelength is powered up. Over-current protection is built into the light source to prevent potential damage during switching. An optional focusing module can be mounted on the front of the LED collimator to focus light into a tight spot which is an image of the LED emitter. One of the applications of the focusing module is coupling LED light into a fiber or a lightguide.

## FEATURES

- Switchable among wavelengths/colors
- Up to 9 LED emitters
- Wide range of available wavelengths: UV/VIS/NIR and white
- Standard 22mm-diameter collimating optics
- Optional focusing module
- Optional fiber-coupling optics
- Optional lightguide-coupling optics
- Optional LED controllers

## APPLICATIONS

- General purpose light source
- Microscope illuminator
- Fiber and lightguide coupling

## PERFORMANCE SPECIFICATIONS

### WLS Series LED |

### WLS-22-A | Chassis for WheeLED Source



Part Number	Wavelength (nm)	Half Diverging Angle (deg.)	I <sub>op</sub> (mA)	V <sub>op</sub> (V)	Typical Output Power <sup>1</sup> (mW)
WLS-LED-0340-02	340	3.4	500	4.3	23
WLS-LED-0365-04	365	3.4	1000	3.65	500
WLS-LED-0385-04	385	3.4	1000	3.65	500
WLS-LED-0400-01	400	2.5	350	3.5	100
WLS-LED-0420-03	420	1.7	1000	3	310
WLS-LED-0425-03	425	1.7	1000	3	290
WLS-LED-0455-03	455	1.7	1000	3.9	280



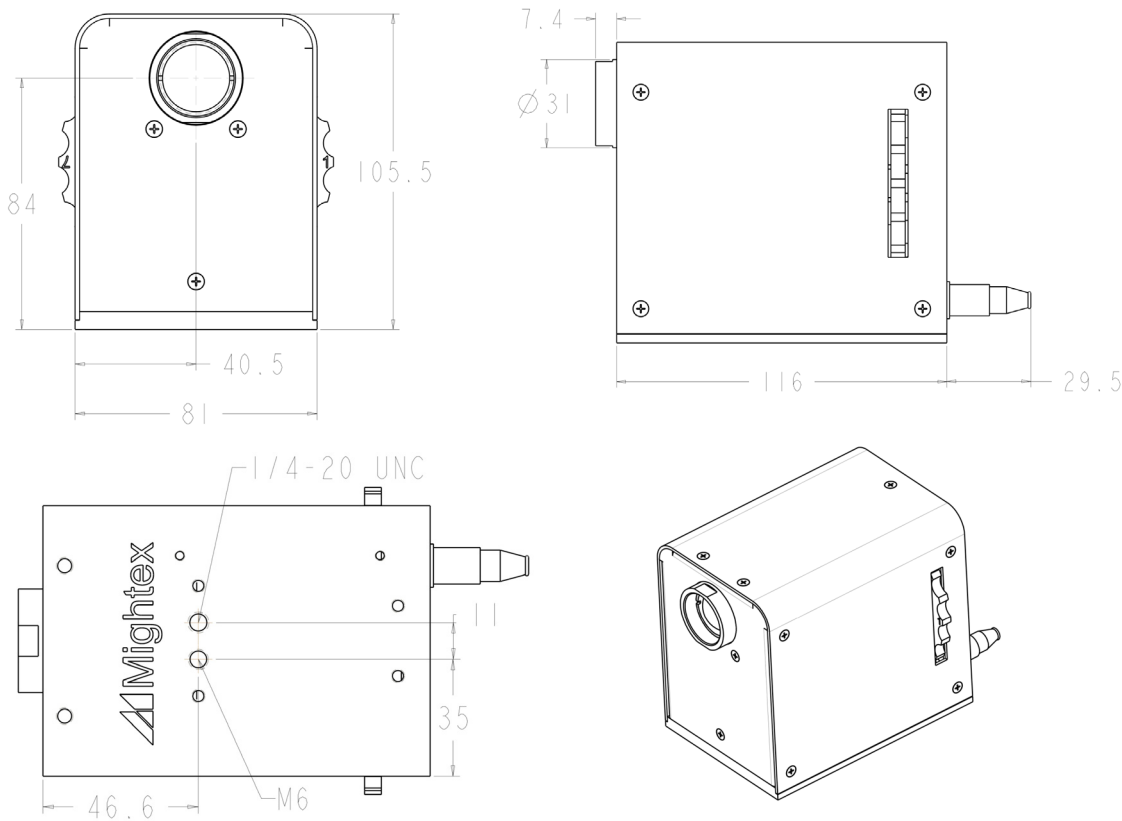
WLS Series LED | *continued*

Part Number	Wavelength (nm)	Half Diverging Angle (deg.)	I <sub>op</sub> (mA)	V <sub>op</sub> (V)	Typical Output Power <sup>1</sup> (mW)
WLS-LED-0470-03	470	1.7	1000	3.9	200
WLS-LED-0505-03	505	1.7	1000	3.9	135
WLS-LED-0530-03	530	1.7	1000	3.9	100
WLS-LED-0560-02	560 broadband	1.7	700	2.9	180
WLS-LED-0590-03	590	1.7	1000	3.9	65
WLS-LED-0617-03	617	1.7	1000	3.9	280
WLS-LED-0625-03	625	1.7	1000	3.9	280
WLS-LED-0656-03	656	1.7	1000	2.7	280
WLS-LED-0680-02	680	1.7	600	2.7	75
WLS-LED-0740-03	740	2.5	1000	2.5	200
WLS-LED-0780-02	740	1.7	800	2.5	110
WLS-LED-0810-02	810	1.7	800	2.2	120
WLS-LED-0850-02	850	1.7	1000	2.1	175
WLS-LED-0870-01	870	1.7	700	1.9	110
WLS-LED-0940-01	940	1.7	700	1.5	100
WLS-LED-0940-02	940	1.7	1000	1.8	200
WLS-LED-0980-01	980	1.7	500	1.4	30
WLS-LED-4000-03	warm white 4,000K	1.7	1000	3.9	180
WLS-LED-5500-03	cool white 5,500K	1.7	1000	3.9	170
WLS-LED-6500-03	glacier white 6,500K	1.7	1000	3.6	180

<sup>1</sup> Due to variations in the manufacturing process and operating parameters such as temperature and current, the actual output of any given LED may vary. Specifications are intended to be used as a guideline.



## INSTALLATION DRAWINGS



## PART NUMBER AND ORDERING INFORMATION

1. Chassis for WheelLED™ Wavelength-Switchable LED Source. Part Number: WLS-22-A.
2. LED modules for WheelLED™ Wavelength-Switchable LED Source. Part Number is defined as below:

**WLS - LED -**




**-**

Wavelength
Electrical  
Power

For example, WLS-LED-0455-03 is a LED module with a wavelength of 455nm and electrical power consumption of 3W.

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 [1-925-218 1885](tel:1-925-218-1885) or email [sales@mightex.com](mailto:sales@mightex.com) for details.





## WheeLED™ Wavelength-Switchable LED Sources



## ORDER NOW

Our primary goal is to help you find the optimal solution for your application. We have a dedicated technical support and sales team committed to providing guidance on our LED illumination and other Mightex products.

Please visit [www.mightexsystems.com](http://www.mightexsystems.com)  
for more information!

## CONTACT US

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