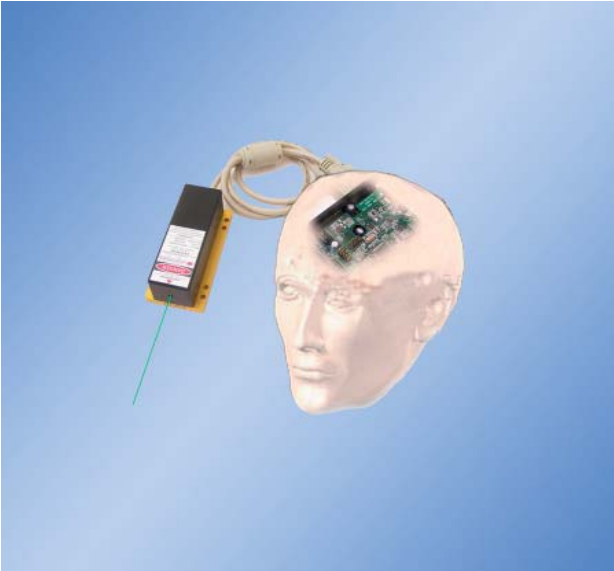


BWN Series

SmartLaze™ Lasers



The BWN SmartLaze™ Series are very compact, self-contained, double thermoelectric (TE) cooled, solid-state Green, Red, and NIR lasers. They can be operated over a wide temperature range, 10 to 35°C with a stable and quiet laser output power. The combination of excellent beam characteristics, such as mode quality and low divergence, makes the lasers suitable for beam focusing, as well as long distance beam positioning. The compact power supply can be easily integrated into the OEM version, and the end user version has all the applicable safety features, such as key-lock switch, emission indicator and remote connector. To further enhance reliability and prolong the lifetime of laser, and reduce the operation, service, and maintenance cost for the customer, a patent pending, SmartLaze™ technology has been implemented as an option for many of OEM customers.

Features

- **Real Time Monitoring:** It monitors the output power stability and noise level in real time so that there is 100% assurance that laser is functioning normally for many critical applications
- **Self-Healing:** Depending on the applications, the laser can either automatically or under external instruction via embedded interface, perform self-healing without human interface. It can reduce the cost for maintenance and replacement
- **Prolong the Laser Lifetime:** It significantly prolongs the laser lifetime beyond the normal warranty period utilizing the feature of Real Time Monitoring and Self-Healing. Statistics show the majority of failures are not due to the lifetime of pumping diode, but drifting out of the optimum operation conditions due to the aging of various cavity components
- **Early Warning:** It can also monitor the operation current of LD used as an indicator for maintenance and replacement

Applications

- Bio instrument
- Spectroscopy
- Metrology
- Wafer inspection
- Printing
- Micro-material processing
- Medicine
- Particle counting
- Photoluminescence



BWN Series

SmartLaze™ Lasers

Typical Specifications

BWN Series	532 - xx	594 - xxx
Power Output (mW)	5, 10, 20, 50, 100*	5, 10, 20*
Wavelength (nm)	532 +/- 1	594 +/- 1
FWHM Spectral Line width (nm)	< 0.1	0.2
Mode	TEM ₀₀	
M²	1.1	1.2
Beam Size (1/e²)	< 1.0 mm	< 1.5 mm
Beam Divergence	< 1.5 mrad	< 2.0 mrad
Long Term Stability (> 2 hrs)	< 5 %	
Short Term Noise (rms)	< 0.5 % (up to 20 MHz) Option (for OEM customer) < 0.2 %	
Polarization	Linear (100:1)	
Operating Temp.	10 - 35 °C	
Warm-up Time	< 15 min	
Laser Head Dimension	35mm(H) x 50mm(W) x 100mm(L)	50mm(H) x 75mm(W) x 150mm(L)
Fiber Pigtail (option)	Single Mode fiber with FC/APC termination	
	Multi Mode fiber with SMA905 termination	
TTL Modulation (option)	0 - 20 KHz	On/Off only
Expected Lifetime (hrs)	> 10,000	
<u>End User Driver Specifications</u>	<u>BWN-532-xxx-E</u>	<u>BWN-594-xxx-E</u>
Operating Voltage	100 - 240 VAC	
Power Supply Dimension	TBD	
<u>OEM Driver Specifications</u>	<u>BWN-532-xxx-OEM</u>	<u>BWN-594-xxx-OEM</u>
Operating Voltage	5 VDC	
Power Supply Dimension	40mm(H) x 80mm(W) x 105mm(L)	

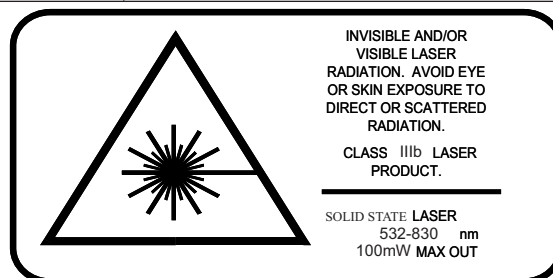
* High power output as options are available upon request, please check with us before placing order.

BWN Series

SmartLaze™ Lasers

Typical Specifications

BWN Series	635 - xx	660 - xx	685 - xx	780 - xx	830 - xx
Power Output (mW)	3, 5, 10	5, 10	5, 10	5, 10, 20	5, 10
Wavelength (nm)	635 +/- 10	660 +/- 10	685 +/- 10	780 +/- 10	830 +/- 10
FWHM Spectral Line width (nm)	< 1 nm				
Mode	TEM ₀₀				
M ²	1.1				
Beam Size (1/e ²)	< 1.0 mm				
Beam Divergence	< 1.5 mrad				
Power Stability (> 2 hrs)	< 5 %				
Noise (rms)	< 2 % (up to 2 GHz)				
Polarization	Linear				
Operating Temp.	10 - 35 °C				
Warm-up Time	< 15 min				
Laser Head Dimension	35mm(H) x 50mm(W) x 100mm(L)				
Fiber Pigtail (option)	Single Mode fiber with FC/APC termination Multi Mode fiber with SMA905 termination				
TTL Modulation (option)	0 - 20 KHz				
Expected Lifetime (hrs)	> 10,000				
<u>End User Driver Specifications</u>	<u>BWN-xxx-xx-E</u>				
Operating Voltage	100 - 240 VAC				
Power Supply Dimension	(TBD)				
<u>OEM Driver Specifications</u>	<u>BWN-xxx-xx-OEM</u>				
Operating Voltage	5 VDC				
Power Supply Dimension	40mm(H) x 80mm(W) x 105mm(L)				



DISCLAIMER:

For OEM: This product is sold solely as a component for incorporation into other equipment and does not comply with the requirements of Federal Regulations CDRH 21 CFR 1040 as shipped. This laser is intended for use as a component only. The integrator assumes full and complete responsibility for compliance of the equipment or device in which the laser is integrated with Federal and local regulations as required.

For End-user: This product complies with the requirements with Federal Regulations CDRH 21 CFR 1040.10. This laser is intended for scientific and industrial applications only and is not for use as a medical device.



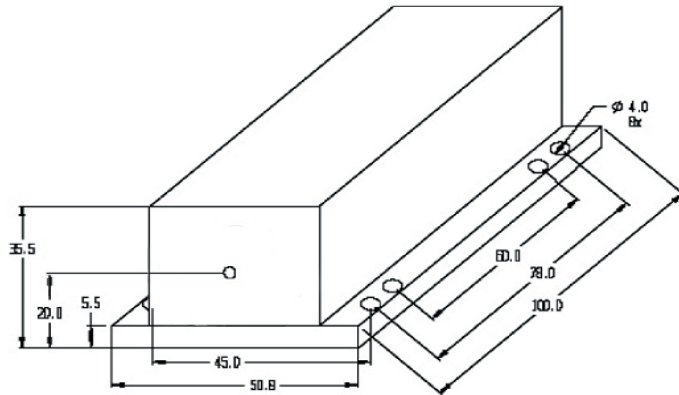
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BWN Series

SmartLaze™ Lasers

Dimension Drawings

Laser Head Dimension:



OEM Driver Dimension:

