

CW Lasers

Continuous Wave Laser Modules



High End Performance in a Miniature Package

Continuous Wave (CW) Laser modules, part of the innovative MatchBox 2 Series from Integrated Optics, deliver high performance in a miniature package. As the name suggests, the MatchBox 2 Series is a platform for ultra-compact laser modules, incorporating optics, electronics and mechanics in a complete package with overall dimensions of just 30 x 50 x 16mm³.

The CW Lasers provide an excellent combination of high performance and competitive price and are easily integrated into laser systems for industrial and scientific applications.

The configurable CW Laser series is available in a wide range of wavelengths, output powers and line-width options. Over 150 configurations of CW Lasers are already available. In addition, customized products for specific applications are available from ProPhotonix.

Key Features

- Compact, Complete Laser Module Package
- Unique Design with Thermal Stabilization
- Automatic Power Control
- Available in more than 20 Wavelengths
- Range of Fiber-Coupled Options Available: MM/SM/PM

Key Applications

- Spectroscopy
- Medical Diagnostics
- Scanning Microscopy
- Sorting
- Flow Cytometry

Specifications - Narrow Spectrum CW Lasers

	Central Wavelength (nm)	Spectral Line Width FWHM (nm)	Output Power (mW)	Power Stability (%) RMS, 8hrs	Noise,% (RMS, 20Hz to 20MHz)
0405L-13A	405	0.5	80	1	0.25
0445L-13A	445	0.8	35	1	0.25
0488L-13A	488	1	20	1	0.25
0515L-13A	515	1	30	1	0.8
0520L-13A	520	1	30	1	0.8
0532L-13A	532	0.3	100	1	3
0638L-13A	638	0.7	100	0.2	0.25
0660L-13A	660	0.7	45	1	0.25
0785L-13A	785	0.2	100	0.2	0.25
0830L-13A	830	0.5	50	1	0.25
0850L-13A	850	0.5	60	1	0.25
0915L-13A	915	0.5	80	1	0.25
0975L-13A	975	0.5	80	1	0.25
1030L-13A	1030	0.7	300	1	3

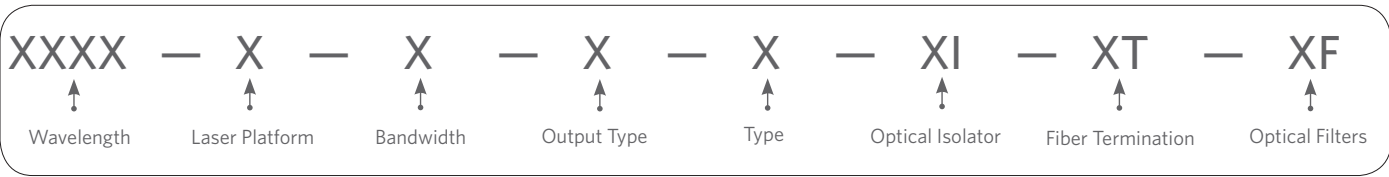
Specifications - Broad Spectrum CW Lasers

	Central Wavelength (nm)	Spectral Line Width FWHM (nm)	Output Power (mW)	Power Stability (%) RMS, 8hrs	Noise,% (RMS, 20Hz to 20MHz)	Polarization Ratio	M2 Effective
0405L-11A	405	0.5	150	0.1	0.25	2000	1.2
0445L-11A	445	0.8	80	0.2	0.25	2000	1.2
0488L-11A	488	1	40	0.2	0.25	2000	1.2
0515L-11A	515	1	60	0.2	0.8	2000	1.2
0520L-11A	520	1	60	0.2	0.8	2000	1.2
0532L-11B	532	0.3	200	0.4	3	1000	1.3
0638L-11A	638	0.7	180	0.2	0.25	2000	1.2
0660L-11A	660	0.7	110	0.2	0.25	2000	1.2
0785L-11A	785	0.2	180	1	0.25	2000	1.2
0830L-11A	830	0.5	130	0.2	0.25	2000	1.2
0850L-11A	850	0.5	130	0.2	0.25	2000	1.2
0915L-11A	915	0.5	200	0.2	0.25	2000	1.2
0975L-11A	975	0.5	200	0.2	0.25	2000	1.2
1030L-11B	1030	0.7	500	1	3	Polarized on request	1.1
1064L-11B	1064	0.7	500	0.4	3	2000	1.1
1123L-11B	1123	0.5	200	0.4	3	1000	1.1
1319L-11B	1319	0.5	200	0.4	3	1000	1.1

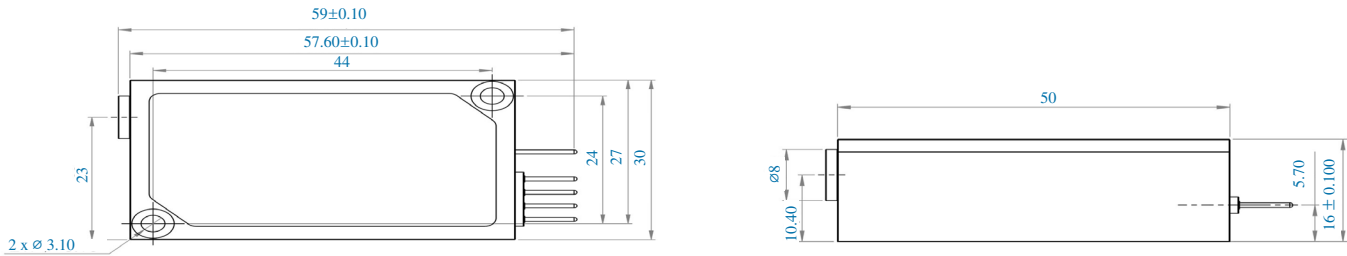
Part Number Structure

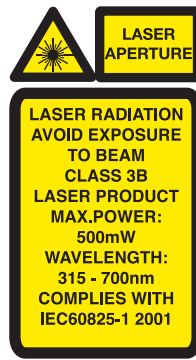
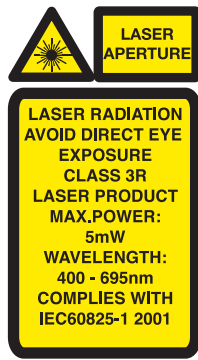
Wavelengths (nm)*	Laser Platform	Bandwidth	Output Type	Type	Optical Isolator	Fiber Termination	Optical Filters
405	L: Match-Box	1: non-SLM	1: free-space	A: direct diode	NI: no isolator	PT: FC/PC connector	NF: no filter
488		2: SLM	2: circular beam	B: DPSS	1I: isolator w/o retarder	AT: FC/APC connector	CF: clean-up filter
520		3: Non-SLM highest power	3: SM fiber		2I: isolator with retarder	ST: SMA connector	LF: long pass filter
635		4: SLM: higher power	4: MM fiber			CT: Collimator	SF: short-pass filter
660			5: PM fiber				
785			6: SMA port				
808			7: FBG SM fiber				
1064			8: FBG PM fiber				

*Other wavelengths available



Dimensional Diagram





Laser Safety

The light emitted from these devices has been set in accordance with IEC60825. However, staring into the beam, whether directly or indirectly, must be avoided. IEC60825 classifies laser products into three different categories depending on light emitted, wavelength and eye safety.

CLASS II

“Caution”, visible laser light less than 1.0mW. Considered eye safe, normal exposure to this type of beam will not cause permanent damage to the retina.

CLASS IIIR

“Danger”, visible laser light between 1.0mW and 5.0mW. Considered eye safe with caution. Focusing of this light into the eye could cause some damage.

CLASS IIIB

“Danger”, infrared (IR), and high power visible lasers considered dangerous to the retina if exposed.

NB: It is important to note that while complying with the above classifications, unless otherwise stated, our laser diode products are not certified and are designed solely for use in OEM products. The way in which the device is used in the final product may alter its original design classification, and it is the responsibility of the OEM to ensure compliance with the relevant standards.

NB. Without the inclusion of laser drive circuits, the output powers cannot be set in accordance with EN60825 since they are designed for OEM use and not certified devices as defined in the specification. The manufacturer of the complete laser product is responsible for complying with the requirements of EN60825. If the case temperature of the laser diode exceeds its maximum specification, premature or catastrophic failure may occur. To ensure the maximum life of the laser diode, it is recommended that an additional electrically insulated heatsink, of at least 35 sq. cm. be used, Thermal transfer paste can be used to improve contact and heat dissipation.

Do not restrict air circulation around the device. Specifications subject to change without notice.

Errors & Omissions Excepted. The information describes the type of product and shall not be considered as assured characteristics.

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