

Nanosecond Lasers



OEM Pulsed Laser Module Solution

The Nanosecond Laser modules from Integrated Optics offer a compact and self-contained design at 514.5nm or 1029nm output, with high pulse energy and single-frequency operation.

These Nanosecond Lasers are based on the innovative MatchBox 2 platform, with intelligent power electronics. The lasers operate with excellent pulse-to-pulse stability, extremely stable harmonic generation and very low jitter ensuring consistency of results.

The series is available in a wide range of wavelengths, output powers and line-width options. Additional features include USB power, USB control and intelligent monitoring.

As part of the MatchBox range, this is an extremely compact, self-contained Nanosecond Laser platform ideally suited for OEM applications. In addition to the off-the-shelf configurations, ProPhotonix and Integrated Optics will work with you to design a custom laser solution to suit your specific application needs.

Key Features

- Compact, Self-Contained Package
- Provides High Pulse Energy
- Single-Longitudinal-Mode Output
- USB Power and Control
- Superb Pulse-to-Pulse Stability
- Very Low Jitter

Key Applications

- Spectroscopy
- Range Finding
- Flow Cytometry
- LIDAR
- Sorting Applications
- Micromachining
- Laser Induced Breakdown Spectroscopy (LIBS)

Performance Characteristics

	Wave-length (nm)	Output Power (mW)	Pulse Energy (μ J)	Repetition Rate (kHz)	Pulsed Duration (ns)	Power Stability (%) RMS, 8Hrs	Pulse-To-Pulse Stability (%)	Spectral Line Width FWHM (nm)	M2 Effective
1030L-11C-NI-NT-NF	1029	150	100	1.5	1	0.5	2	1000	<1.5
1030L-21C-NI-NT-NF	1029	250	50	5	1.6	0.5	2	1	<1.5
1030L-21C-NI-NT-NF	1029	350	35	10	2.2	0.5	2	1	<1.5
1030L-21C-NI-NT-NF	1029	700	20	35	3.6	0.5	2	1	<1.5
0515L-21C-NI-NT-NF	514.5	130	25	5	1.6	0.5	2	1	<1.5
0515L-21C-NI-NT-NF	514.5	180	18	10	2.2	0.5	2	1	<1.5
0515L-21C-NI-NT-NF	514.5	200	6	35	3.6	0.5	2	1	<1.5

Part Number

Laser Platform	
L	Matchbox Platform

Bandwidth	
1	non-SLM
2	SLM

Output Type	
1	Free space
3	SM Fiber
5	PM Fiber
6	SMA Port

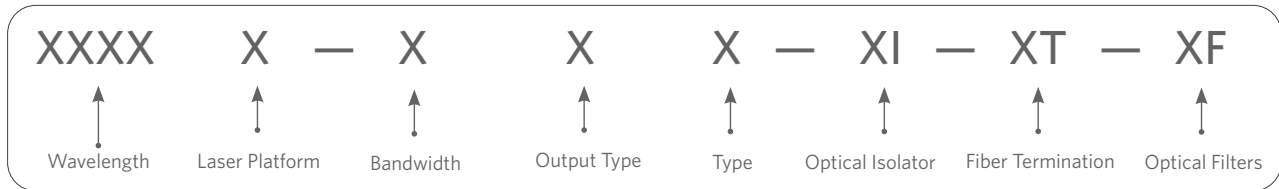
Type	
C	Passive Q-Switch
D	DPSS MOPA
F	Fiber MOPA

Optical Isolator (Free Space Only)	
NI	No Isolator
1I	Isolator without Retarder
2I	Isolator with Retarder

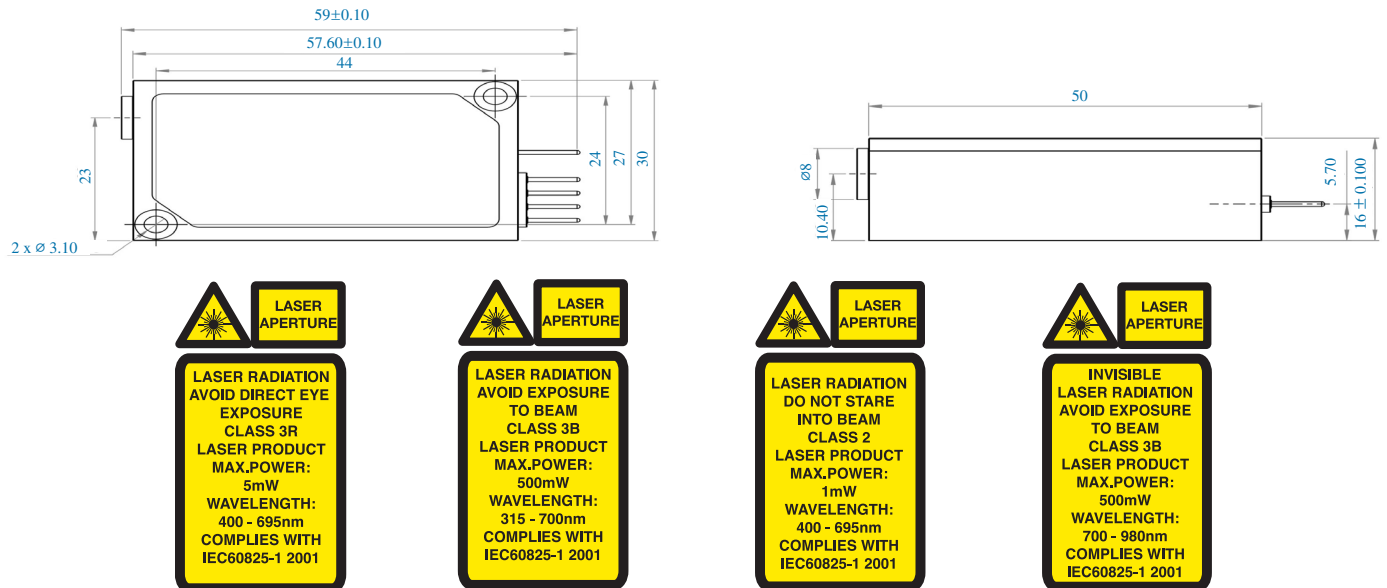
Optical Filters	
NF	No Filter
CF	Clean-up Filter
LF	Long-pass Filter
SF	Short-pass Filter
PF	Pump-Filter

Fiber Termination	
NT	No Termination
PT	FC/PC connector
AT	FC/APC connector
ST	SMA connector
CT	Collimator

Part Number Structure



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.

Document Revision:
(290324)

US Sales

Tel: +1 603-893-8778
sales@prophotonix.com

EMEA & ROW Sales

Tel: +44-1279-717170
sales@prophotonix.com

ProPhotonix and the ProPhotonix logo are trademarks of ProPhotonix, Inc. All other brand and product names are trademarks or registered trademarks of their respective holders. Copyright © 2024 ProPhotonix, Inc. All rights reserved.