



CPDL-S-F and CPDL-S-FA Series

Compact Diode Lasers for Integration

- Compact design for integration
- Wavelength: 1030, 1064, 1530, 1550 nm (others upon request)
- Pulse width < 100 ps
- Any rep rate 1 kHz up to 100 MHz
- Average power up to 50 mW (incl. fiber amplifier)
- Flexible interface USB or RS 232tor

Applications

- Seeding
- Metrology and ranging (LiDAR)
- Time-resolved measurement



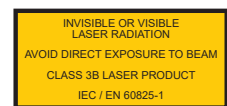
The CPDL-S-F and CPDL-S-FA Series are ideally suited for OEM integration. These laser heads are based on our well established picosecond pulsed diode laser technologies with optional fiber amplification. The CPDL-S-F and CPDL-S-FA heads do not require a laser driver from the PDL Series for operation. Instead, all parameter can be controlled from a PC via USB or serial connection (RS 232).

CPDL-S-F and CPDL-S-FA heads are based on the same platform, which uses primarily narrow-linewidth near infrared laser diodes , typically emitting at 1030, 1064, or 1530 to 1550 nm). The laser diodes can be mounted either alone (CPDL-F-xxxx) or together with a one stage fiber amplifier to increase its output power (CPDL-FA-xxxx).

Specifications

Optical output	
Fiber receptacle	FC/APC, single mode PM fiber with built in optical isolator
Max reverse launched power	< 50 mW
Mainframe	
Power Input Voltage	12 V (max. 18 V)
Current	max. 1.7 A
External power supply	100 to 240 VAC, 50/60 Hz, max. 100 Watt
Connector Type	LEMO EXG0B302HLN-A
Dimensions (l × w × h)	210 x 118 x 47.4 mm
Net weight laser head	0.8 kg
Total weight incl. power supply, etc	1.6 kg
Power dissipation	max. 20 W
Operating Temperature	15 to 35°C
Trigger Input	
Amplitude	max. +5 V
External frequency	1 - 100 MHz
Trigger threshold	~ +0.4 V
Impedance	50 Ohms
Connector Type	SMA (female)
Internal trigger	
Internal PPL frequency range	1 kHz – 100 MHz
Status Output	
Amplitude	+5 V for laser ON; 0 V for laser OFF
Impedance	min. 10 kOhms
Connector type	SMA (female)
USB 2.0 UART (Virtual COM-Port)	
Connector type	Mini-USB 2, type B
Baud rate	115200
Data	8 bits
Parity	none
Stop	1 bit
RS232 (option)¹	
Connector type	Sub-D9 female
Baud rate	115200
Data	8 bits
Parity	none
Stop	1 bit

¹ If the RS232 is chosen then the USB Port is no longer available



These tables are updated on a regular basis based on data of recently manufactured laser heads. Other specifications such as shorter pulse widths or higher powers than listed might be possible depending on the performance of diodes on stock. Please contact us for more information. All measurements shown may be subject to a 10 % calibration error. Each laser head undergoes an extensive burn-in test to ensure long-term stability and is shipped with a comprehensive set of test data. This test data is kept in our database, which already holds records of more than 18 years.

Wavelengths

Wavelength (± 3) [nm]	Type (CPDL-S)	Pulse (FWHM) [ps]	Max. repetition rate [MHz]	Average power [mW]
808	-F-808	< 160	70	3.0
1030	-FA-1030	< 90	100	30.0
1064	-F-1064	< 90	100	1.6
	-FA-1064	< 90	100	30.0
1560	-FA-1560	< 90	100	50.0



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