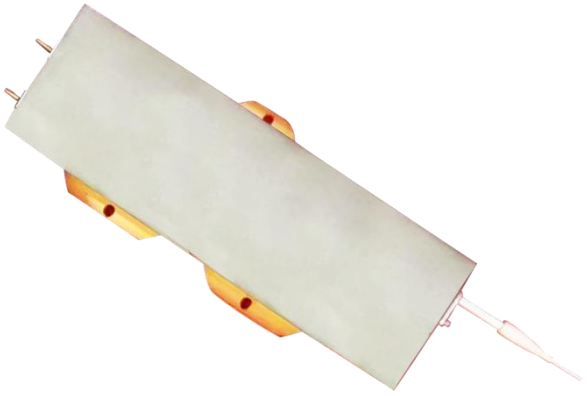
DIODE LASER

PDL976-480-220 Fiber Coupled High Power Diode Laser

〉PRODUCT FEATURE AND SPECIFICATIONS:



- Multiple single emitter based diode laser, high reliability
- 1040-1200nm feedback protection

- Fiber laser pumping
- Direct applications

Optical Parameters	Unit	Min.	Typ.	Max.
Output Power	W		480	
Center Wavelength2@41A	nm	970.5		974.5
Spectral Width(FWHM)	nm		6	
Power Within NA	NA		0.18	
Back Reflection Isolation Range	nm	1040	1064	1200
Back Reflection Isolation	dB	30		
Fiber Core Diameter	μm	217	220	223
Fiber Clad Diameter	μm	240	242	244
Core Numerical Aperture	NA	0.21	0.22	0.23
Fiber Length[2]	m	1.5	2.0	
Loose Tubing Diameter	mm	1.1	1.4	
Loose Tubing length	m	1.2	1.5	
Fiber Connector			Bare Fiber/SC Ceramic Ferrule	
Fiber Bend Radius	mm	65		
Conversion Efficiency	%		48	
Threshold Current	A		2.1	
Operating Current[3]	A			41.0
Operating Voltage[3]	V			24.0
Operating Temperature Range[4]	℃	5		45
Package Temperature Range[1,4]	℃			45
Lid Temperature Range[1]	℃			60
Boot and Fiber Temperature[1]	℃			45
Storage Temperature Range	℃	-30		85
Wavelength Temperature Coefficient	nm/℃		0.35	
Lead Soldering Temperature	℃		260	300
Lead Soldering Time	s			10

1. Tested at 25˚C cold plate temperature.
2. Others available upon request.
3. Reduced lifetime if used above nominal operating conditions.
4. Laser Wavelength would shift when package operating temperature is changed.

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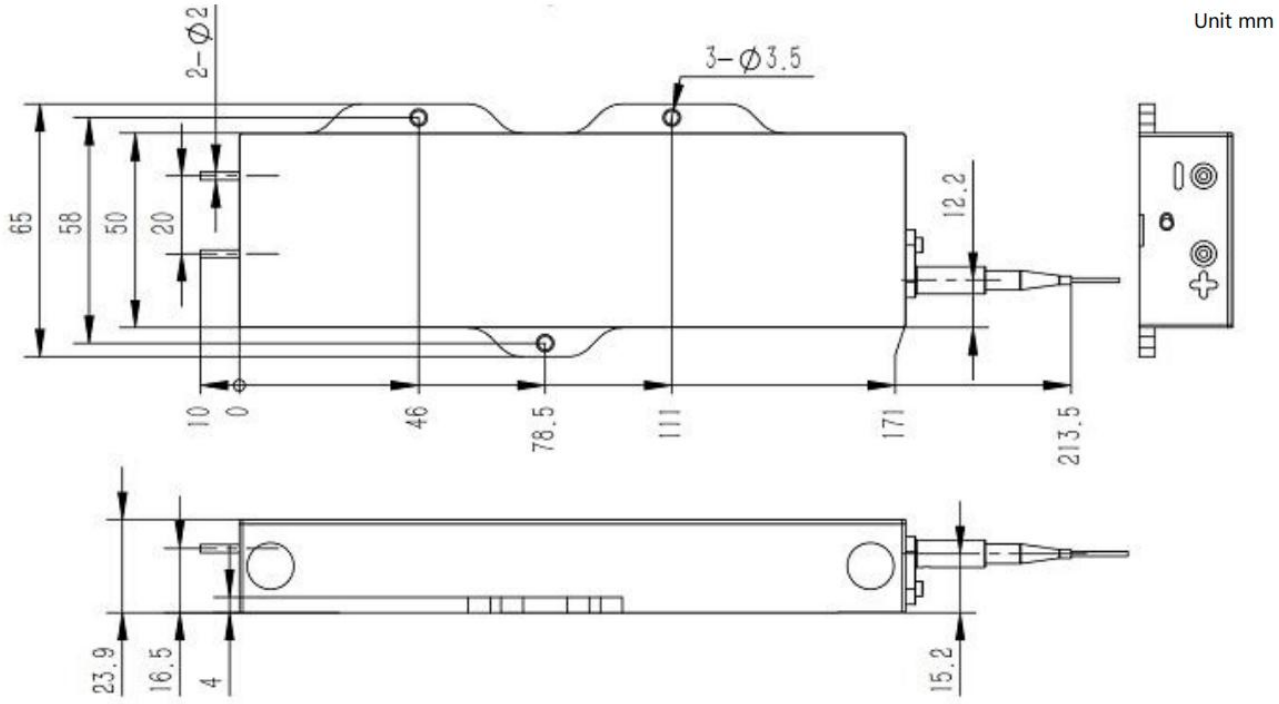
〉DIMENSIONS



〉APPLICATION NOTES

The laser beam emitted from the diode laser is invisible, please follow the standard safety procedures for IEC Class 4 lasers, avoid eye or skin exposure to direct or scattered radiation.

ESD is the primary cause of unexpected diode laser failure. The diode laser should be handled by trained operators wearing ESD grounding straps and the work surface should be grounded. Connectors should be attached to the pump pins prior to removing the ESD shortcut protection component.

Ensure the end of the fiber be free of dust and contamination before operation.

The laser should be operated according to the specifications, maximum optical power should not be exceeded.

The laser may be damaged by excessive drive current, stable power supply should be used to avoid surge current.

To ensure long-term reliability of the laser, a 20 - 30˚C cold plate is needed to make the laser work within proper temperature range.