PDL976-420-200 High Power Diode Laser

PN: DL976420200

PRODUCT FEATURES

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

MAIN APPLICATION

- ▶Fiber laser pumping
- ▶Direct applications

TECHNICAL INDEX

Performance			Index		
			Min.	Typ.	Max.
Optical Data(1)	CW-Output Power	W	420	-	-
	Center Wavelength	nm	976±3		
	Spectral Width (FWHM)	nm	-	4	-
	Wavelength Shift with Temperature	nm/℃	-	0.3	-
	Wavelength Shift with Current	nm/A	-	0.6	-
Electrical Data	Electrical-to-Optical Efficiency	%	-	48	-
	Threshold Current	A	-	1.2	-
	Operating Current	A	-	27	28
	Operating Voltage	V	-	33	35
	Slope Efficiency	W/A	-	21	-
Fiber Data	Core Diameter	μm	-	200	-
	Cladding Diameter	μm	-	220	-
	Fiber Loose Tubing Diameter	mm	0.9		
	Numerical Aperture	-	-	0.22	-

	Total Fiber Length	m	-	2.0	-
	Minimum Bending Radius	mm	88	-	-
	Fiber Termination	-	-	FF	-
Feedback Isolation	Wavelength Range	nm	1020-1200		
	Isolation	dB	-	30	-
Others	ESD	V	-	-	500
	Storage Temperature(2)	℃	-20		70
	Lead Soldering Temperature	℃	-	-	260
	Lead Soldering Time	sec	-	-	10
	Operating Temperature (3)	℃	15	-	35
	Relative Humidity	%	15	-	75

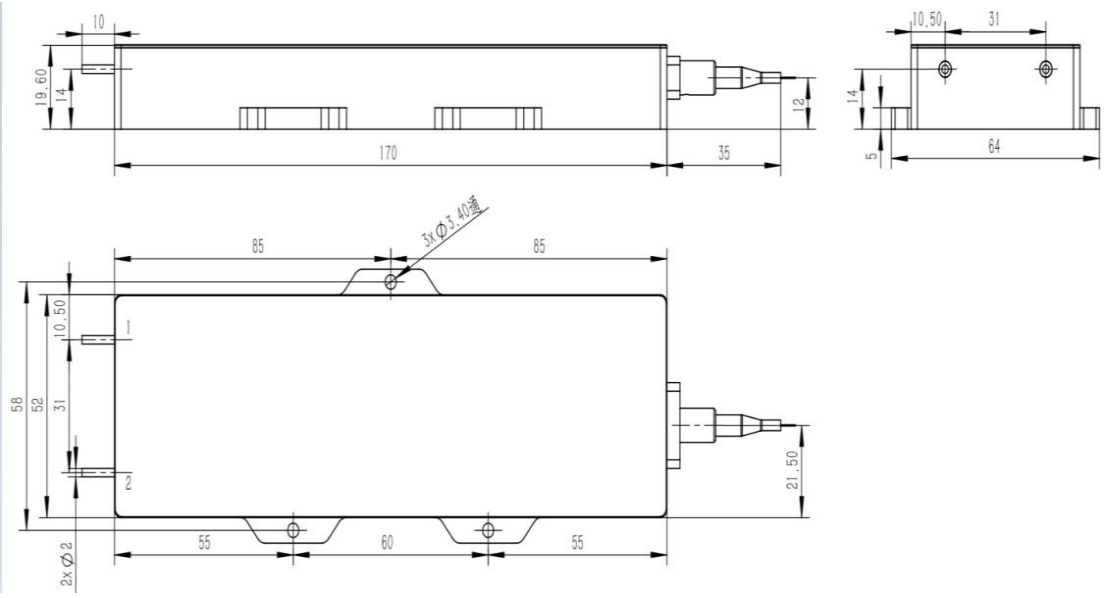
1. Tested at 25˚C cold plate temperature.

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.

SIZE



APPLICATION NOTES:

1. 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;

2. 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;

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

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

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

6. 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.

MODEL EXPLANATION

PDL 976 – 420 – 200

High Power Diode Laser	Operating Wavelength		Output Power		Output Fiber	
	976	976nm	420	420W	200	200/220 μ m
	915	915nm	140	140W	105	105/125 μ m
	940	940nm	200	200W	106.5	106.5/125 μ m
			240	240W	135	135/155 μ m
			330	330W	220	220/242 μ m
			350	350W		
			370	370W		
			540	540W		