

PDL976-250-135 High Power Diode Laser

PN: DL976250135

PRODUCT FEATURES

- ▶ Multiple single emitter based diode laser, high reliability
- ▶ 1020-1200nm feedback protection

MAIN APPLICATION

- ▶ Fiber laser pumping
- ▶ Direct applications



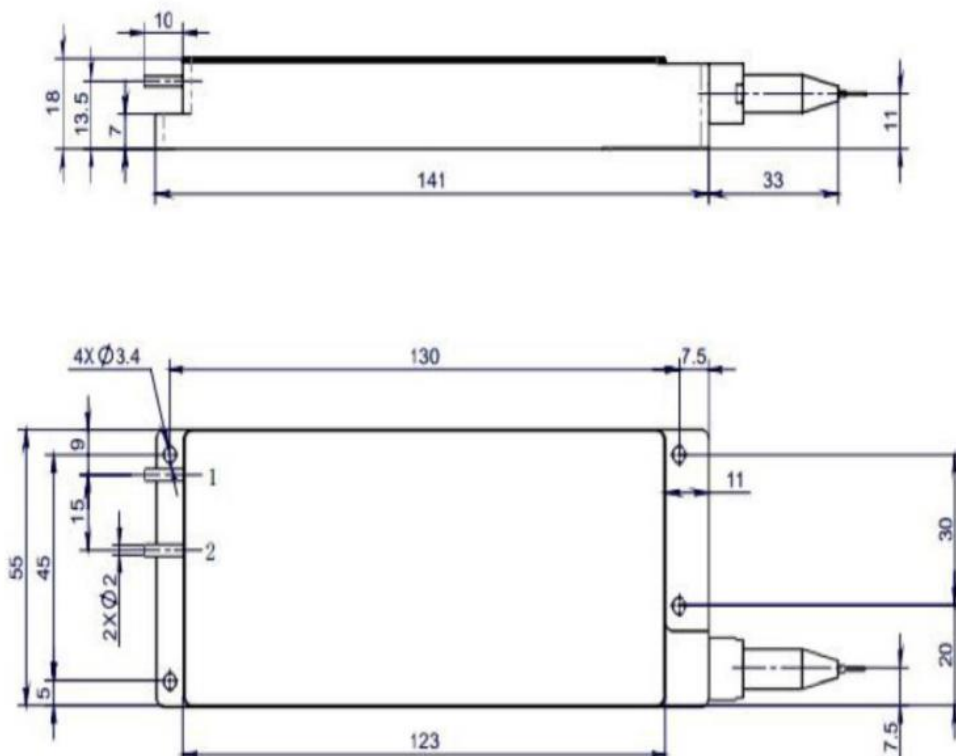
TECHNICAL INDEX

Performance			Index		
			Min.	Typ.	Max.
Optical Data	CW Output Power(in fiber)	(W)	-	250	-
	CW Output Power(as measured)	(W)	240	250	-
	Center Wavelength	(nm)	973	976	979
	Spectral Width (FWHM)	(nm)	-	4	
	Wavelength Shift with Temperature	(nm/°C)	-	0.3	-
	Light within 0.17NA	(%)	92	-	-
Electrical Data	Operating Current	(A)	-	18.5	20
	Threshold Current	(A)		1	
	Electrical-to-Optical Efficiency	(%)		50	
	Slope Efficiency	(W/A)		14	
	Operating Voltage	(V)		27.2	30
Fiber Data	Core diameter	(μm)		135	
	Cladding diameter	(μm)		155	
	Numerical Aperture	-		0.22	

	Total Fiber Length	(m)	2.0	
	Fiber Loose Tubing Diameter	(μm)	900	
	Bending Radius	(mm)	62	
	Connector	-	FC	
Isolation	Wavelength Range	(nm)	1020	1200
	Isolation	(dB)	30	
Others	Operating Case Temp.	($^{\circ}\text{C}$)	15	35
	Storage Temp. (Non-operating)	($^{\circ}\text{C}$)	-20	+70
	ESD	(V)		500
	Lead Soldering Temp.	($^{\circ}\text{C}$)		260
	Lead Soldering Time	(sec)		10
	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 — 250 — 135						
High Power Diode Laser	Operating Wavelength		Output Power		Output Fiber	
	976	976nm	250	250W	135	135/155 μm
	915	915nm	240	240W	135	105/125 μm
	940	940nm	140	140W	105	106.5/125 μm
			200	200W	106.5	200/220 μm
			350	350W	200	220/242 μm
			370	370W	220	
			540	540W		