

PDL976-330-200 High Power Diode Laser

PN: DL976330200

PRODUCT FEATURES

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

MAIN APPLICATION

- ▶ Fiber laser pumping
- ▶ Direct applications



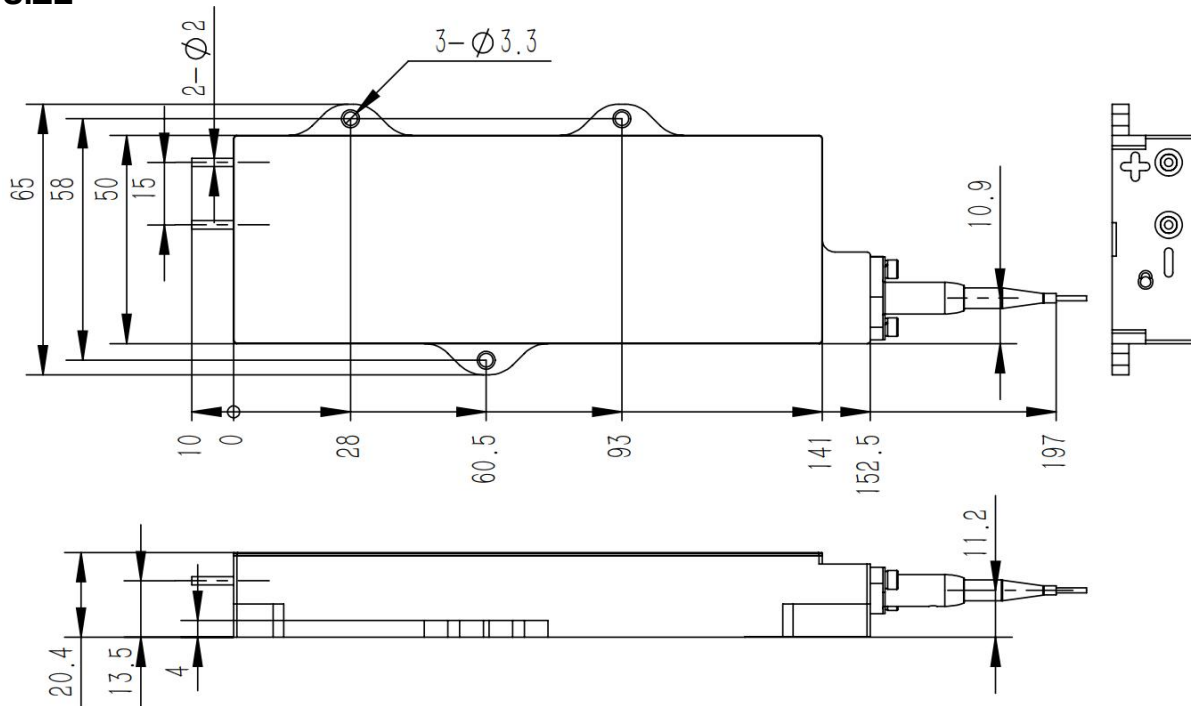
TECHNICAL INDEX

| Performance | | | Index | | |
|-----------------|----------------------------------|-------------------|-------|------|------|
| | | | Min. | Typ. | Max. |
| Optical Data | CW Output Power(in fiber) | (W) | - | 330 | - |
| | CW Output Power(as measured) | (W) | 320 | 330 | - |
| | Center Wavelength | (nm) | 973 | 976 | 979 |
| | Spectral Width (FWHM) | (nm) | - | 4 | |
| | NA/95% Power Within NA | NA | - | 0.3 | - |
| | Back Reflection Isolation Range | nm | 1040 | 1064 | 1200 |
| | Back Reflection Isolation | dB | 30 | | |
| | Light within 0.17NA | (%) | 90 | | |
| Electrical Data | Operating Current | (A) | | | |
| | Threshold Current | | | | |
| | Electrical-to-Optical Efficiency | | | | |
| | Slope Efficiency | | | | |
| | Operating Voltage | | | | |
| Fiber Data | Fiber Core Diameter | (μm) | 217 | 220 | 223 |
| | Fiber Clad Diameter | (μm) | 240 | 242 | 244 |
| | Numerical Aperture | NA | 0.20 | 0.22 | 0.24 |
| | Fiber Length2 | (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 | | |
| Thermal Parameter | Operating Temperature Range ⁴ | (°C) | 5 | | 45 |
| | Storage Temperature Range | (°C) | -30 | | 85 |
| | Wavelength Temperature Coefficient | (nm/°C) | | 0.35 | |
| | Lead Soldering Temp. | (°C) | | 260 | 300 |
| | Lead Soldering Time | (sec) | | | 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

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
9
7
6
-
3
3
0
-
2
0
0

| High Power Diode Laser | Operating Wavelength | | Output Power | | Output Fiber | |
|------------------------|----------------------|-------|--------------|------|--------------|---------------|
| | 976 | 976nm | 330 | 330W | 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 |
| | | | 350 | 350W | 220 | 220/242 μ m |
| | | | 370 | 370W | | |
| | | | 540 | 540W | | |