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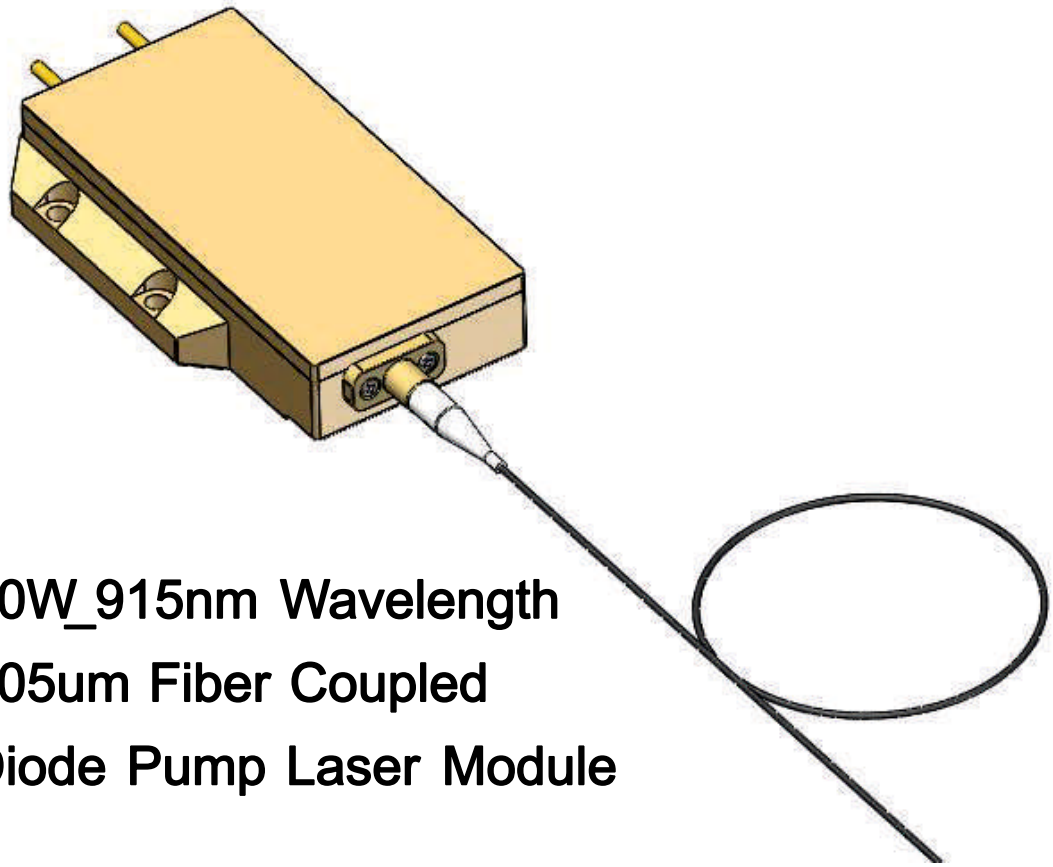


# 90W_915nm Wavelength 105um Fiber Coupled Diode Pump Laser Module

**PN:DPLM-90S-915-105**

# 90W 915nm Wavelength 105μm Fiber Coupled Diode Pump Laser Module

**Key Features：**

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

**Applications：**

- Fiber laser pumping
- Direct applications

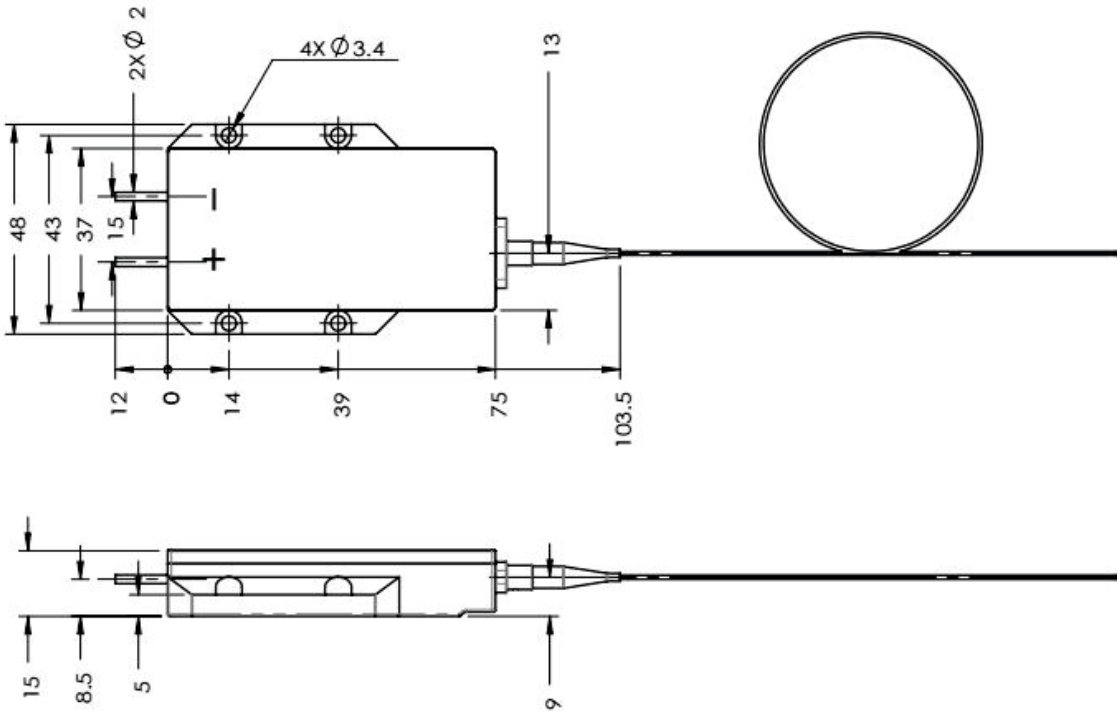
| **Optical Parameters[1]** | | **Minimum** | **Typical** | **Maximum** |
|---|---|---|---|---|
| Output Power | W | 90 | | |
| Center Wavelength[2] | nm | 902 | 915 | 925 |
| Spectral Width(FWHM) | nm | | 6 | |
| NA/95% Power Within NA | NA | | 0.14 | |
| Slope Efficiency | W/A | | 8 | |
| Back Reflection Isolation Range | nm | 1040 | 1064 | 1200 |
| Back Reflection Isolation | dB | 30 | | |
| **Fiber Parameters** | | | | |
| Fiber Core Diameter | μm | 102 | 105 | 108 |
| Fiber Clad Diameter | μm | 123 | 125 | 127 |
| Numerical Aperture | NA | 0.2 | 0.22 | 0.24 |
| Fiber Length[2] | m | 1.5 | 2 | |
| Loose Tubing Diameter | μm | 800 | 900 | |
| Loose Tubing length | m | 1.2 | 1.5 | |
| Fiber Connector | | | Bare fiber | |
| Fiber Bend Radius | mm | 30 | | |
| **Electrical Parameters[3]** | | | | |
| Conversion Efficiency | % | | 48 | |
| Threshold Current | A | | 0.8 | |
| Operating Current[3] | A | | 12.5 | 13.5 |
| Operation Voltage[3] | V | | 13.7 | 14 |
| **Thermal Parameters** | | | | |
| Operating Temperature Range | ℃ | 15 | | 50 |
| Storage Temperature Range | ℃ | -30 | | 70 |
| 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.

**Dimensions Diagram**




## 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.