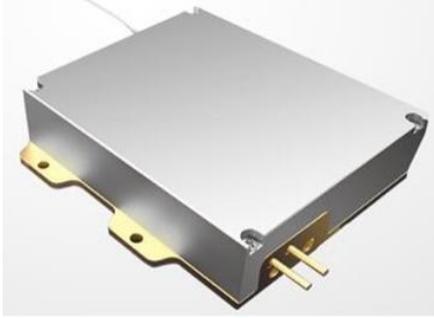


940nm 200W High Power Fiber Coupled Laser Diode

K940FN1RN-200.0W (Standard Product)



Features:

- 940nm wavelength
- 200W output power
- 135 μ m fiber core diameter
- 0.22N.A.
- 1040nm-1200nm feedback protection

Applications:

- Fiber laser pumping

| Specifications (25°C) | | Symbol | Unit | K940FN1RN-200.0W | | |
|-----------------------------------|--|--------------------------|---------|------------------|---------|---------|
| | | | | Minimum | Typical | Maximum |
| Optical Data ⁽¹⁾ | CW-Output Power | P_o | W | 200 | - | - |
| | Center Wavelength | λ_c | nm | 940 \pm 10nm | | |
| | Spectral Width (FWHM) | $\Delta\lambda$ | nm | 6 | | |
| | Wavelength Shift with Temperature | $\Delta\lambda/\Delta T$ | nm/°C | - | 0.3 | - |
| | Wavelength Shift with Current | $\Delta\lambda/\Delta A$ | nm/A | - | 1 | - |
| Electrical Data | Electrical-to-Optical Efficiency | PE | % | - | 48 | - |
| | Operating Current | I_{op} | A | - | 13 | 14 |
| | Threshold Current | I_{th} | A | - | 0.9 | - |
| | Operating Voltage | V_{op} | V | - | 31.5 | 35 |
| | Slope Efficiency | η | W/A | - | 17.5 | - |
| Fiber Data ⁽²⁾ | Core diameter | D_{core} | μ m | - | 135 | - |
| | Cladding diameter | D_{clad} | μ m | - | 155 | - |
| | Buffer diameter | D_{buf} | μ m | - | 320 | - |
| | Numerical Aperture | N.A. | - | - | 0.22 | - |
| | Total Fiber Length | L_f | m | 1.9 | 2 | - |
| | Fiber Loose Tubing Diameter/Length | - | μ m | 1mm PTFE /180cm | | |
| | Minimum Bending Radius | - | mm | 80 | - | - |
| | Fiber termination | - | - | - | FPT | - |
| Feedback Isolation ⁽³⁾ | Wavelength Range | λ | nm | 1040~1200 | | |
| | Isolation | - | dB | - | 30 | - |
| Others | ESD | V_{esd} | V | - | - | 500 |
| | Storage Temperature (Non-operating) ⁽⁴⁾ | T_{st} | °C | -20 | - | 70 |
| | Lead Soldering Temp | T_{ls} | °C | - | - | 260 |
| | Lead Soldering Time | t | sec | - | - | 10 |
| | Operating Case Temperature ⁽⁵⁾ | T_{op} | °C | 15 | - | 35 |
| | Relative Humidity | RH | % | 15 | - | 75 |

(1) Data measured under operation output at 200W.

(2) Other fiber type customized according to customers' requirements.

(3) Other feedback isolation customized according to customers' requirements.

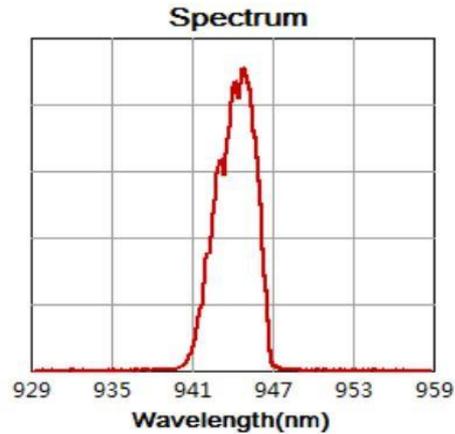
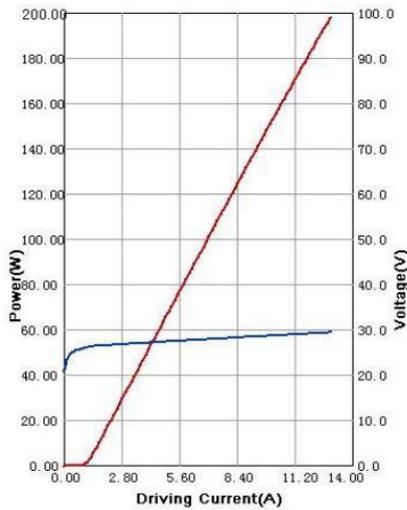
(4) A non-condensing environment is required for operation and storage conditions are from -20 to +70 °C with relative humidity between 15 to 75 %.

(5) Operating temperature defined by the package case. Acceptable operating range is 15 - 35C, but performance may vary.

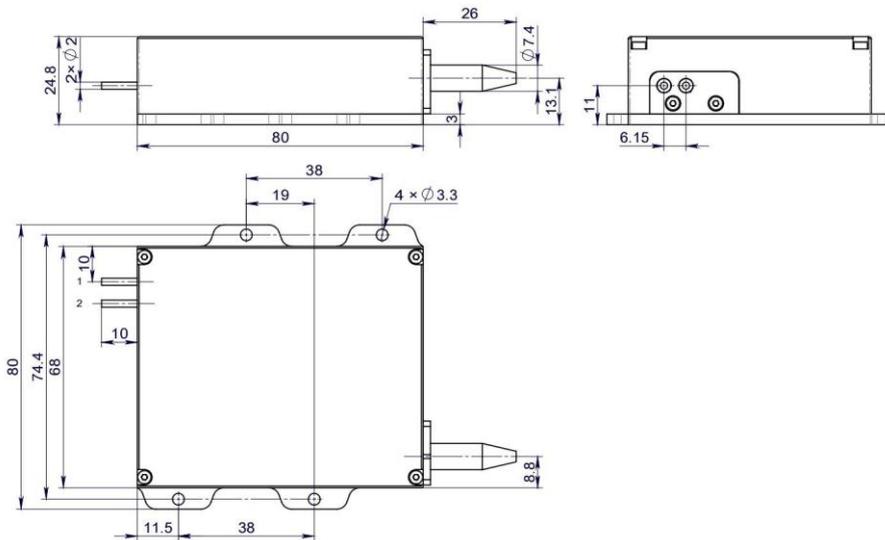
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Characteristics



Package Dimensions (mm)



| Pin | Function |
|-----|----------|
| 1 | LD (+) |
| 2 | LD (-) |

OPERATING NOTES

- ESD protection measures must be taken during storage, transportation and operation.
- Solder pins instead of using socket for electrical connections for modules with operating current higher than 6A. Soldering temperature should be lower than 260°C and soldering duration should be less than 10 seconds.
- Make sure the fiber output end is properly cleaned before operation of laser. Follow safety protocols to avoid injury when handling and cutting the fiber.
- Fiber bending radius should be bigger than 80mm to avoid leaking of laser light.
- Diode laser should be operated according to the specification. Over-drive the diode laser will reduce its lifetime.
- Avoid eye and skin exposure to direct radiation during operation.
- Use constant current power supply. Current surge may damage the laser.
- Diode laser must be operated under good cooling condition.

For purchase, questions, and quotes: contact@ephotonics.com • ephotonics.com