

976 nm 9 W Wavelength-Stabilized Fiber Coupled Laser Diode

K976AB2RN-9.000WN0N-10522F20EFF (Standard Product)



Features:

- 976 ± 0.5 nm wavelength
- 9 W output power
- 105 μm fiber core diameter
- 0.22 NA
- 1020nm~1200 nm feedback protection

Applications:

- Fiber Laser Pumping
- Scientific Research

| Specifications (25°C) | | Symbol | Unit | K976AB2RN-9.000W | | |
|-----------------------------|---|--------------------------|-------|------------------|---------|---------|
| | | | | Minimum | Typical | Maximum |
| Optical Data ⁽¹⁾ | CW Output Power | P _o | W | 9.0 | - | - |
| | Center Wavelength | λ_c | nm | 976 ± 0.5 | | |
| | Spectral Width (FWHM) | $\Delta\lambda$ | nm | - | 0.5 | 0.7 |
| | Wavelength Shift with Temperature | $\Delta\lambda/\Delta T$ | nm/°C | - | 0.02 | - |
| | Wavelength Shift with Current | $\Delta\lambda/\Delta I$ | nm/A | - | 0.03 | - |
| Electrical Data | Electrical-to-Optical Efficiency | PE | % | - | 50 | - |
| | Threshold Current | I _{th} | A | - | 0.9 | - |
| | Operating Current | I _{op} | A | - | 12.0 | 13.0 |
| | Operating Voltage | V _{op} | V | - | 1.6 | 1.8 |
| | Slope Efficiency | η | W/A | - | 0.9 | - |
| Fiber Data | Core Diameter | D _{core} | μm | - | 105 | - |
| | Cladding Diameter | D _{clad} | μm | - | 125 | - |
| | Numeric Aperture | NA | - | - | 0.22 | - |
| | Fiber Length | L _f | m | - | 2 | - |
| | Fiber Loose Tubing Diameter | - | mm | 0.9 | | |
| | Minimum Bending Radius | - | mm | 50 | - | - |
| | Fiber Termination | - | - | FC-Ferrule | | |
| Feedback Isolation | Wavelength Range | - | nm | 1020~1200 | | |
| | Isolation | - | dB | - | 30 | - |
| Others | ESD | V _{esd} | V | - | - | 500 |
| | Storage Temperature ⁽²⁾ | T _{st} | °C | -20 | - | 70 |
| | Lead Soldering Temp | T _{ls} | °C | - | - | 260 |
| | Lead Soldering Time | t | sec | - | - | 10 |
| | Operating Case Temperature ⁽³⁾ | T _{op} | °C | 23 | 25 | 27 |
| | Relative Humidity | RH | % | 15 | - | 75 |

(1) Data measured under operation output at nominal output power@25°C.

(2) A non-condensing environment is required for operation and storage.

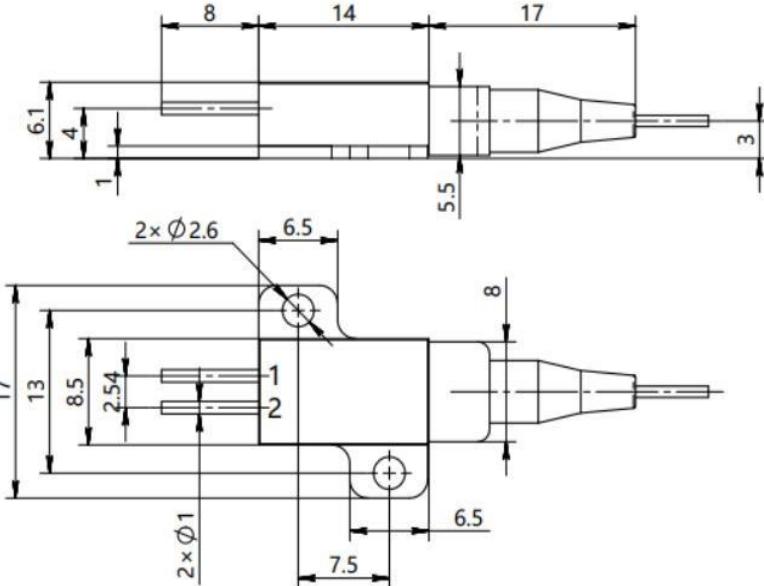
(3) Operating temperature defined by the package case. Acceptable operating range is 23°C~27°C, but performance may vary.

(4) Wavelength-Stabilized: Percentage of power in band of 974.5nm to 977.5nm ≥90%.

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Package Dimensions (mm)



| Pin | Function |
|-----|----------|
| 1 | LD1+ |
| 2 | LD1- |

OPERATING NOTES

- Avoid eye and skin exposure to direct radiation during operation.
- ESD precautions must be taken during transportation, storage, and operation. A short-circuit connection is required between pins during transportation and storage.
- For lasers with operating currents above 6A, connect leads by soldering. The soldering point should be as close to the middle of the pins as possible, with a temperature below 260°C and a soldering time of less than 10 seconds.
- Before operating the laser, ensure that the fiber output end is properly cleaned. Follow safety protocols when handling and cutting fiber to avoid injury.
- Use a constant current power supply and avoid surges during operation.
- Operate within the rated current and power levels.
- Ensure proper cooling during operation.
- The operating temperature range is 23°C to 27°C.
- The storage temperature range is -20°C to +70°C.