# 976nm 430W Wavelength-Stabilized Fiber Coupled Diode Laser

## K976BNZRN-430.0WN0N-20022F20EFF (Standard Product)



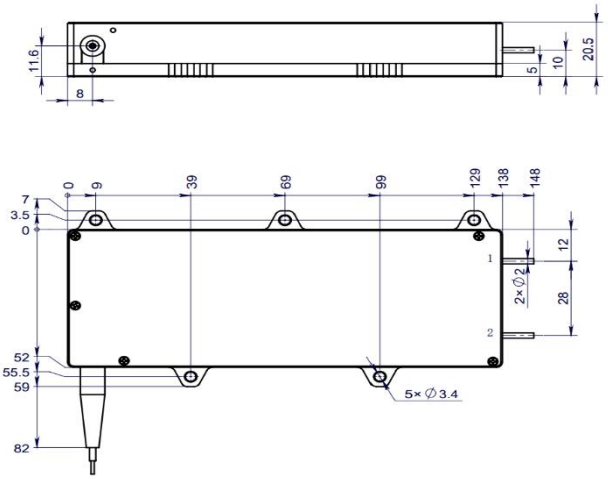
### Features:

- 976nm wavelength
- 430W output power
- 200 μm fiber core diameter
- 0.22 NA
- 1020nm~1200nm feedback protection

### Applications:

- Fiber laser pumping
- Scientific Research

## Package Dimensions (mm)




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

## OPERATING NOTES

- Avoid eye and skin exposure to direct radiation during operation.
- ESD precautions must be taken during storage, transportation and operation.
- Short-circuit is required between pins during storage and transportation.
- Please connect pins to wires by solder instead of using socket when operation current is higher than 6A. Soldering point should be close to the middle of the pins. Soldering temperature should be lower than 260℃ and time shorter than 10 second.
- 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.
- Use constant current power supply to avoid surge current during operation.
- Laser diode must be used according to the specifications.
- Laser diode must work with good cooling.
- Operation temperature ranges from 23℃ to 27℃ .
- Storage temperature ranges from -20℃ to +70℃.



# 976nm 430W Wavelength-Stabilized Fiber Coupled Diode Laser

## K976BNZRN-430.0WN0N-20022F20EFF (Standard Product)

| Specifications（25℃） | | Symbol | Unit | K976BNZRN-430.0W | | |
|---|---|---|---|---|---|---|
| | | | | Minimum | Typical | Maximum |
| Optical Data[1] | CW Output Power | $P_O$ | W | 430 | - | - |
| | Center Wavelength[2] | $l_c$ | nm | 976±1 | | |
| | Spectral Width(FWHM) | △l | nm | - | - | 1.0 |
| | Wavelength Shift with Temperature | △l/△T | nm/℃ | - | 0.02 | - |
| | Wavelength Shift with Current | △l/△A | nm/A | - | 0.03 | - |
| Electrical Data | Electrical-to-Optical Efficiency | PE | % | - | 50 | - |
| | Threshold Current | $I_{th}$ | A | - | 1.3 | - |
| | Operating Current | $I_{op}$ | A | - | 25 | 26.5 |
| | Operating Voltage | $V_{op}$ | V | - | 36 | 40 |
| | Slope Efficiency | η | W/A | - | 18.7 | - |
| Fiber Data | Core Diameter | $D_{core}$ | μm | - | 200 | - |
| | Cladding Diameter | $D_{clad}$ | μm | - | 220 | - |
| | Numeric Aperture | NA | - | - | 0.22 | - |
| | Fiber Length | $L_f$ | m | - | 2 | - |
| | Fiber Loose Tubing Diameter | - | mm | - | 0.9 | - |
| | Minimum Bending Radius | - | mm | 88 | - | - |
| | Fiber Termination | - | - | Ferrule | | |
| Feedback Isolation | Wavelength Range | - | nm | 1020~1200 | | |
| | Isolation | - | dB | - | 30 | - |
| Others | ESD | $V_{esd}$ | V | - | - | 500 |
| | Storage Temperature[3] | $T_{st}$ | ℃ | -20 | - | 70 |
| | Lead Soldering Temp | $T_{ls}$ | ℃ | - | - | 260 |
| | Lead Soldering Time | t | sec | - | - | 10 |
| | Operating Case Temperature[4] | $T_{op}$ | ℃ | 23 | 25 | 27 |
| | Relative Humidity | RH | % | 15 | - | 75 |

(1) All data are measured at 25 ℃ambient temperature.

(2) Wavelength-Stabilized: Power in band of 974.5nm to 977.5nm ≥90%.

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

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

**Declaration :** information and specifications contained herein are deemed to be reliable and accurate. Hyperline reserves the right to change, alter or modify the design and specifications of these products at any time without notice.26-07