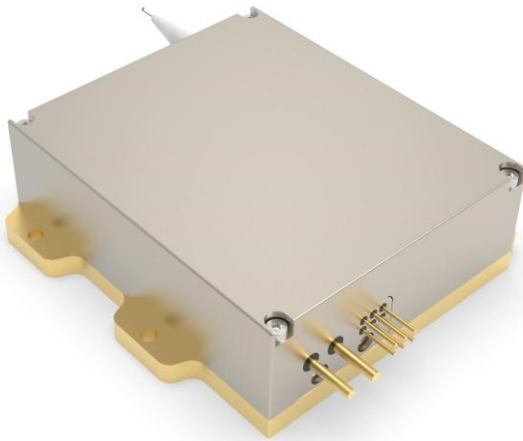


## 976 nm 140 W Wavelength-Stabilized Fiber Coupled Laser Diode

K976BN1RN-140.0WN0N-10522F20EFF (Standard Product)



### Features:

- 976±1 nm wavelength
- 140 W output power
- 105 μm fiber core diameter
- 0.22 NA
- 1020nm~1200nm feedback protection

### Applications:

- Fiber Laser Pumping
- Scientific Research

Specifications (25°C)		Symbol	Unit	K976BN1RN-140.0W		
				Minimum	Typical	Maximum
Optical Data <sup>(1)</sup>	CW Output Power	P <sub>o</sub>	W	140.0	-	-
	Center Wavelength	λ <sub>c</sub>	nm	976±1		
	Spectral Width (FWHM)	Δλ	nm	-	0.6	1.0
	Wavelength Shift with Temperature	Δλ/ΔT	nm/°C	-	0.02	-
	Wavelength Shift with Current	Δλ/ΔI	nm/A	-	0.03	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	50	-
	Threshold Current	I <sub>th</sub>	A	-	0.9	-
	Operating Current	I <sub>op</sub>	A	-	13.0	15.0
	Operating Voltage	V <sub>op</sub>	V	-	22.5	25.0
	Slope Efficiency	η	W/A	-	11.0	-
Fiber Data	Core Diameter	D <sub>core</sub>	μm	-	105	-
	Cladding Diameter	D <sub>clad</sub>	μm	-	125	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Length	L <sub>f</sub>	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 <sub>esd</sub>	V	-	-	500
	Storage Temperature <sup>(2)</sup>	T <sub>st</sub>	°C	-20	-	70
	Lead Soldering Temp	T <sub>ls</sub>	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature <sup>(3)</sup>	T <sub>op</sub>	°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.

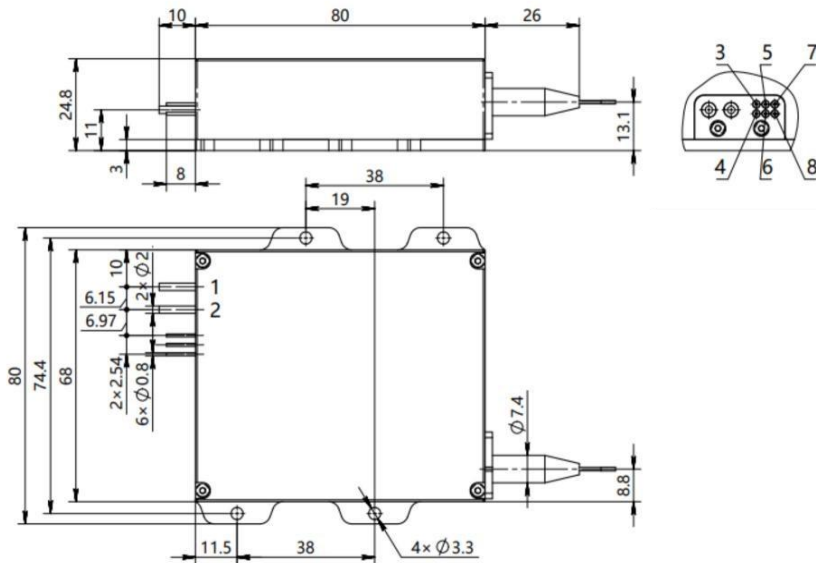
(3) Operating temperature defined by the package case. Acceptable operating range is 23°C~27°C, but performance may vary.

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

## 976 nm 140 W Wavelength-Stabilized Fiber Coupled Laser Diode

K976BN1RN-140.0WN0N-10522F20EFF (Standard Product)

### Package Dimensions (mm)



Pin	Function
1	LD (+)
2	LD (-)
3	-
4	-
5	Thermistor (optional)
6	Thermistor (optional)
7	Photo Diode (P) (optional)
8	Photo Diode (N) (optional)

## 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.