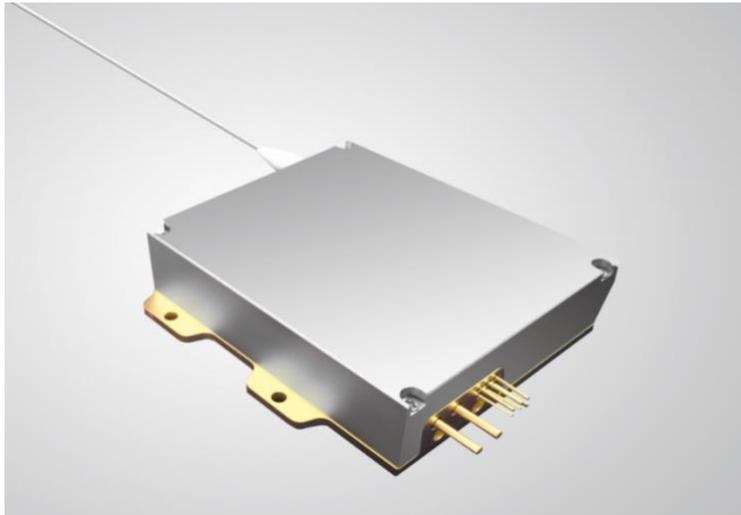




976nm 140W Wavelength-Stabilized Fiber Coupled Diode Laser K976BN1RN-140.0WN0N-10522F20EFF (Standard Product)



Features:

- ◆ 976 ± 1 nm wavelength
- ◆ 140W output power
- ◆ $105 \mu\text{m}$ fiber core diameter
- ◆ 0.22 NA
- ◆ 1020nm~1200nm feedback protection

Applications:

- ◆ Fiber Laser Pumping
- ◆ Scientific Research

BWT, founded in 2003, is committed to the mission of "let the dream drive the light", the vision of becoming the "Global leader in laser solutions", and the value of "Outstanding innovation", providing diode laser, fiber laser, ultra-fast laser products and solutions to global customers.

The company pursues continuous innovation and insists on autonomous and controllable advanced process and technology. With Beijing headquarters as the core, BWT has successively established production and R&D centers in Jiangsu, and Shenzhen, and invested in the construction of an intelligent and digital production base in Tianjin. To build a high level of technical strength and product quality, BWT set up a German subsidiary in 2020, and taking a solid step for the internationalization of R&D, production and technological innovation.



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Specifications (25°C)		Symbol	Unit	K976BN1RN-140.0W		
				Minimum	Typical	Maximum
Optical Data ⁽¹⁾	CW Output Power	P_o	W	140	-	-
	Center Wavelength	λ_c	nm	976±1		
	Spectral Width(FWHM)	$\Delta\lambda$	nm	-	0.6	1.0
	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	%	-	48	-
	Threshold Current	I_{th}	A	-	0.9	-
	Operating Current	I_{op}	A	-	13.0	15.0
	Operating Voltage	V_{op}	V	-	22.5	25.0
	Slope Efficiency	η	W/A	-	11.0	-
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	20	25	30
	Relative Humidity	RH	%	15	-	75

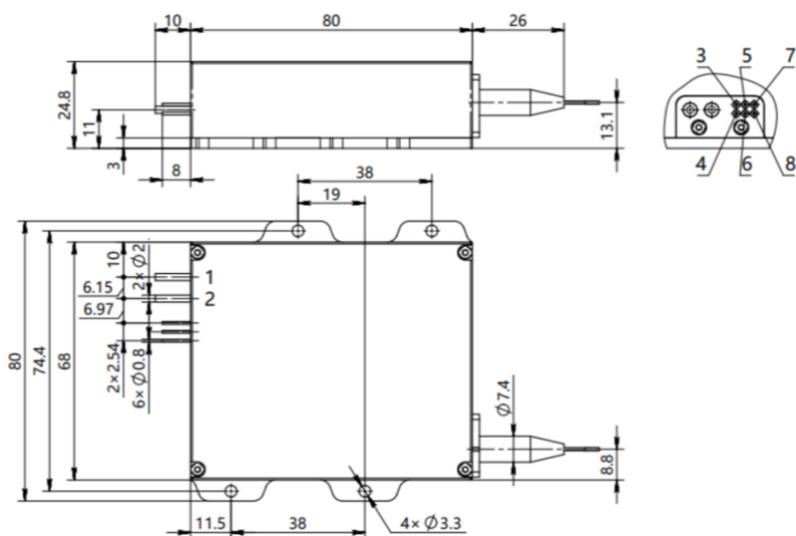
(1) Data measured under operation at nominal output power@25°C.



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- (2) A non-condensing environment is required for operation and storage.
- (3) Operating temperature defined by the package case. Acceptable operating range is 20°C~30°C, but performance may vary.
- (4) Wavelength-Stabilized : Percentage of power in band of 974.5nm to 977.5nm ≥90%.

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 storage, transportation and operation.
- ◆ Short-circuit is required between pins during storage and transportation to the middle of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second. cutting the fiber.
- ◆ Laser diode must work with good cooling.
- ◆ Operation temperature ranges from 20°C to 30°C .
- ◆ Storage temperature ranges from -20°C to +70°C.





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Declaration: information and specifications contained herein are deemed to be reliable and accurate. BWT Beijing reserves the right to change, alter or modify the design and specifications of these products at any time without notice.21-1