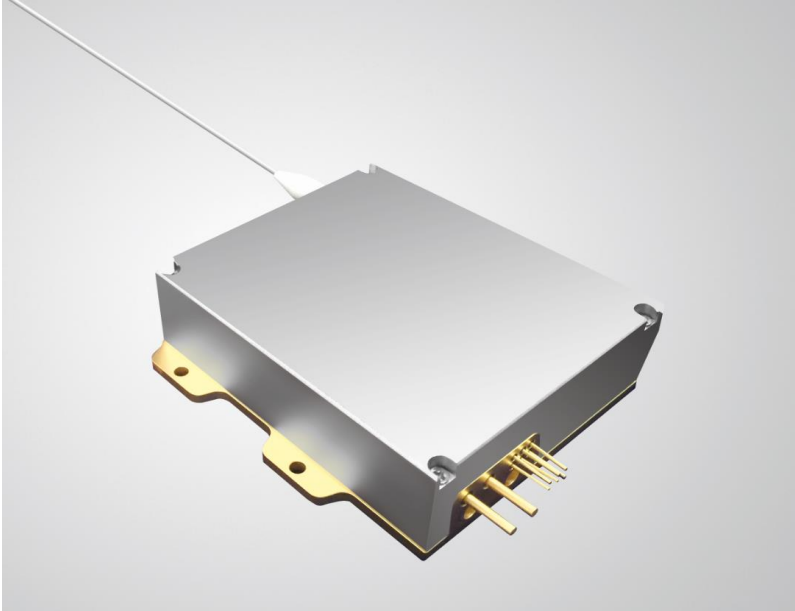


## 976nm 140W Wavelength-Stabilized High Power Fiber Coupled Diode Laser K976BN1RN-140.0W



### Features:

- ◆ 976nm wavelength
- ◆ 140W output power
- ◆ 105 $\mu$ m fiber core diameter
- ◆ 0.22N.A.
- ◆ 1040nm-1200nm feedback protection

### Applications:

- ◆ Fiber laser pumping

BWT Beijing's High Power Diode Laser Modules are manufactured by adopting specialized fiber-coupling techniques, resulting in volume products with a high efficiency, stability and superior beam quality. The products are achieved by transforming the asymmetric radiation from the laser diode chip into an output fiber with small core diameter by using special micro optics. Inspecting and burn-in procedures in every aspect come to a result to guarantee each product with the reliability, stability and long lifetime.

Our research staffs are constantly improving and innovating the processing technology in the producing process, based on the professional knowledge and experience accumulated in long-terms. We are also continuously developing new products to meet customers' specific needs.

At BWT Beijing, to provide high quality products with reasonable price is our always goal.

Specifications(25°C)	Symbol	Unit	K976BN1RN-140.0W
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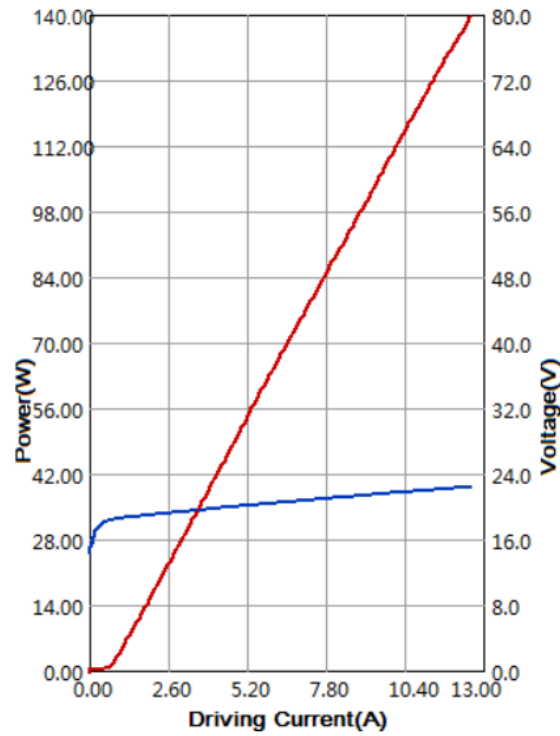
				Minimum	Typical	Maximum
Optical Data <sup>(1)</sup>	CW-Output Power	P <sub>o</sub>	W	-	140	
	Center Wavelength	λ <sub>c</sub>	nm	975	976	977
	Spectral Width (FWHM)	Δλ	nm	-	<5	
	Wavelength Shift with Temperature	Δλ/ΔT	nm/°C	-	-0.02	-
Electrical Data	Operating Current	I <sub>op</sub>	A	-	13.5	14
	Threshold Current	I <sub>th</sub>	A	-	0.8	1.0
	Electrical-to-Optical Efficiency	η	%	43	45	-
	Slope Efficiency	η <sub>D</sub>	W/A	-	11.5	-
	Operating Voltage	V <sub>op</sub>	V	-	23.8	-
Fiber Data <sup>(2)</sup>	Core diameter	D <sub>core</sub>	μm	105	106.5	108
	Cladding diameter	D <sub>clad</sub>	um	124	125	126
	Buffer diameter	D <sub>buf</sub>	um	230	245	260
	Numerical Aperture	N.A.	-	0.20	0.22	0.24
	Total Fiber Length	-	m	0.9	1.0	1.1
	Fiber Loose Tubing Diameter	-	μm	-	900	-
	Minimum Static Bending Radius	-	mm	63	-	-
	Minimum Dynamic Bending Radius	-	mm	84	-	-
	Fiber termination	-	-	FPT		
Feedback Isolation	Wavelength Range	λ	nm	1040	-	1200
	Isolation	-	dB	30	-	-
Others	Operating Case Temperature	T <sub>op</sub>	°C	25	-	35
	Storage Temperature ( Non-operating )	T <sub>st</sub>	°C	-20	-	+70
	ESD	-	V	-	-	500
	Lead Soldering Temp	-	°C	-	-	260
	Lead Soldering Time	-	sec	-	-	10
	Relative Humidity	-	%	15	-	75

(1) Data measured under operation output at 140W.

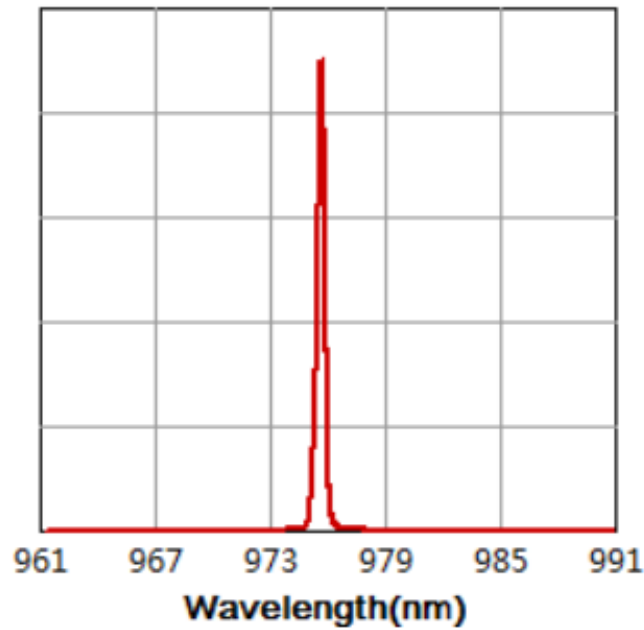
### Characteristics

**976nm 140W Wavelength-Stabilized High Power Fiber Coupled Diode Laser**  
**K976BN1RN-140.0W**

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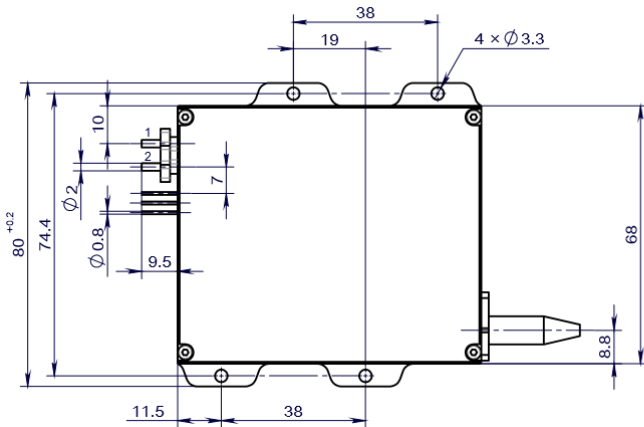
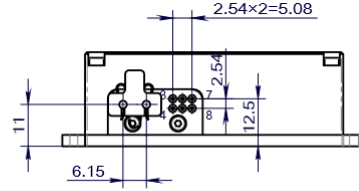
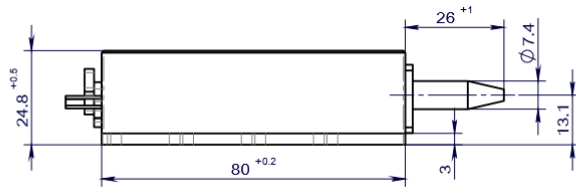


**Spectrum**



Package Dimensions

## 976nm 140W Wavelength-Stabilized High Power Fiber Coupled Diode Laser K976BN1RN-140.0W



(Pin)	(Function)
1	LD (+)
2	LD (-)
3	-
4	-
5	-
6	-
7	-
8	-

### 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.



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.