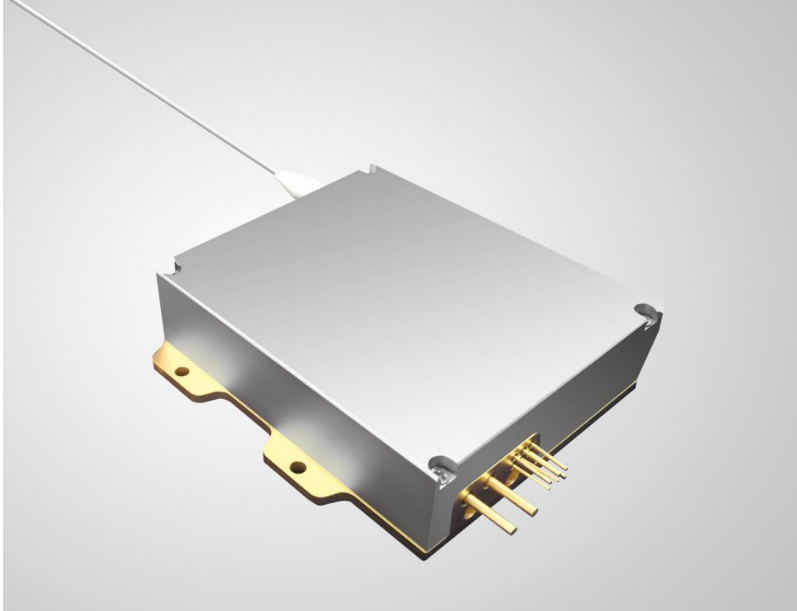


976nm 140W Wavelength-Stabilized High Power Diode Laser K976AN1RN-140.0W



Features:

- ◆ 976nm wavelength
- ◆ 140W output power
- ◆ 105 μ 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.

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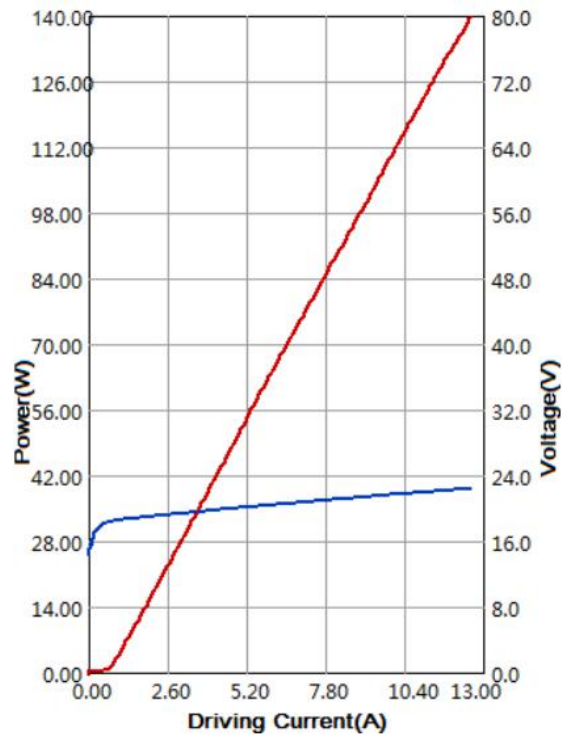
	Specifications(25°C)	Symbol	Unit	K976AN1RN-140.0W		
				Minimum	Typical	Maximum
Optical Data ⁽¹⁾⁽²⁾	CW-Output Power	P_o	W	140	-	-
	Center Wavelength	λ_c	nm	975	976	977
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	-	1
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	~0.02	-
	Light within 0.16NA	-	%	90	-	-
Electrical Data	Operating Current	I_{op}	A	-	13.5	-
	Threshold Current	I_{th}	A	-	0.8	1.0
	Electrical-to-Optical Efficiency	η	%	-	47	-
	Slope Efficiency	η_D	W/A	-	11.5	-
	Operating Voltage	V_{op}	V	-	23.8	-
Fiber Data	Core diameter	D_{core}	μm	105	106.5	108
	Cladding diameter	D_{clad}	μm	124	125	126
	Buffer diameter	D_{buf}	μm	230	245	260
	Numerical Aperture	N.A.	-	0.2	0.22	0.24
	Total Fiber Length	-	m	-	1.0	-
	Fiber Loose Tubing Diameter	-	μm	-	900	-
	Minimum Static Bending Radius	-	mm	40.0	-	-
	Minimum Dynamic Bending Radius	-	mm	50.0	-	-
	Connector	-	-	-	None	-
Thermistor Data ⁽³⁾	Thermistor	R_t	(K Ω)/ β (25°C)	-	-	-
Feedback Isolation	Wavelength Range	λ	nm	1040	-	1200
	Isolation	-	dB	30	-	-
Others	Operating Case Temperature	T_{op}	°C	25	-	35
	Storage Temperature (Non-operating)	T_{st}	°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.

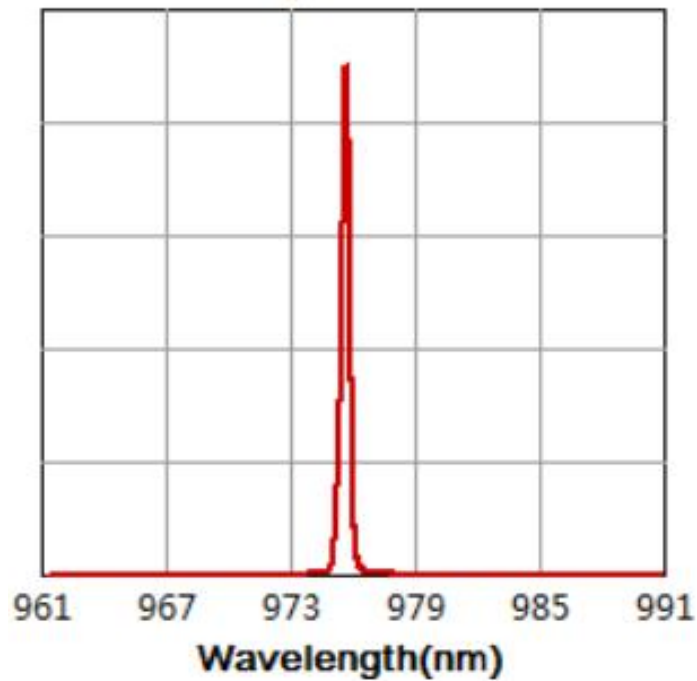
(2) Wavelength-stabilized range:25°C-35°C

(3) $RT=R0 \cdot \exp(\beta(1/T - 1/T0))$, ($T0=25^\circ C=298K$)(Optional function).

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K976AN1RN-140.0W

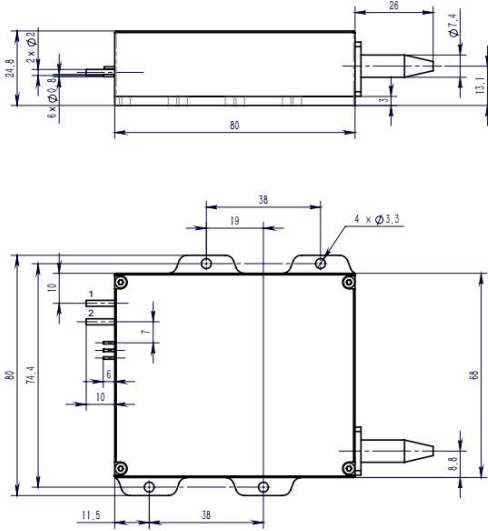


Spectrum



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Package Dimensions (mm)



Pins	Function
1	LD (+)
2	LD (-)

OPERATING NOTES

- ◆ Avoid eye exposure to direct or scattered radiation.
- ◆ ESD precautions must be taken.
- ◆ 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 root of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second.
- ◆ Use constant current power supply. Avoid surge current.
- ◆ Laser diode must be used according to the specifications.
- ◆ Laser diode must work with good cooling.
- ◆ Operation temperature is 25°C~ 35°C. (case temperature)
- ◆ Storage: -20°C~ +70°C, all pins short-circuit.



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.