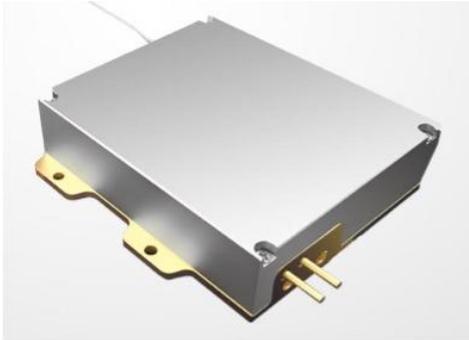


976nm 180W Wavelength-Stabilized High Power Fiber Coupled Laser Diode

K976BN1RN-180.0W (Optional Product)



Features:

- 976nm wavelength
- 180W output power
- 200 μ m fiber core diameter
- 0.22N.A.
- 1040nm-1200nm feedback protection

Applications:

- Fiber laser pumping

Specifications (25°C)		Symbol	Unit	K976BN1RN-180.0W		
				Minimum	Typical	Maximum
Optical Data ⁽¹⁾	CW-Output Power	P_o	W	180	-	-
	Center Wavelength	λ_c	nm	976 \pm 1		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	< 1		
	Wavelength Locked range	-	A	$(I_{op-2}) \sim I_{op}$		
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.02	-
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	0.03	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	45	-
	Operating Current	I_{op}	A	-	13	14
	Threshold Current	I_{th}	A	-	0.9	-
	Operating Voltage	V_{op}	V	-	31.5	35
	Slope Efficiency	η	W/A	-	13	-
Fiber Data ⁽²⁾	Core diameter	D_{core}	μ m	-	200	-
	Cladding diameter	D_{clad}	μ m	-	220	-
	Buffer diameter	D_{buf}	μ m	-	320	-
	Numerical Aperture	N.A.	-	-	0.22	-
	Total Fiber Length	L_f	m	1.9	2	-
	Fiber Loose Tubing Diameter/Length	-	μ m	0.9mmPTFE/180cm		
	Minimum Bending Radius	-	mm	88	-	-
	Fiber termination	-	-	-	FPT	-
Feedback Isolation	Wavelength Range ⁽³⁾	λ	nm	1040~1200		
	Isolation	-	dB	-	30	-
Others	ESD	V_{esd}	V	-	-	500
	Storage Temperature (Non-operating) ⁽⁴⁾	T_{st}	°C	-20	-	70
	Lead Soldering Temp	T_{ls}	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature ⁽⁵⁾	T_{op}	°C	25	-	30
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 180W.

(2) Other fiber type customized according to customers' requirements.

(3) Other feedback isolation customized according to customers' requirements.

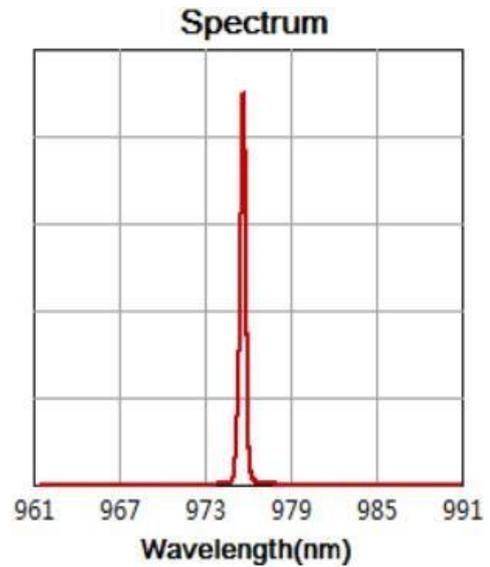
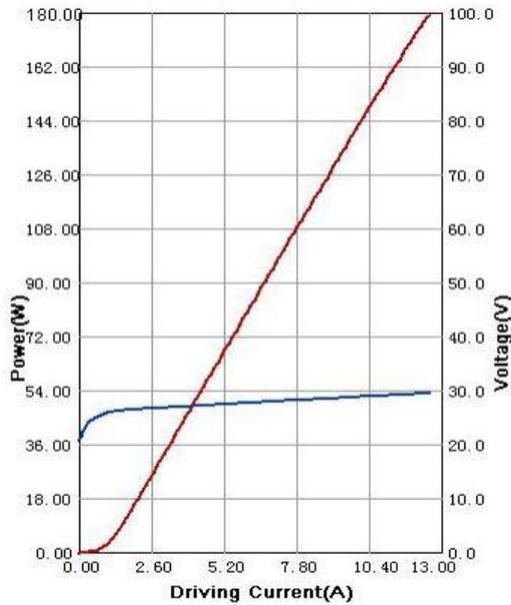
(4) A non-condensing environment is required for operation and storage conditions are from -20 to +70 °C with relative humidity between 15 to 75 %.

(5) Operating temperature defined by the package housing. Acceptable operating range is 25 - 30C, but performance may vary.

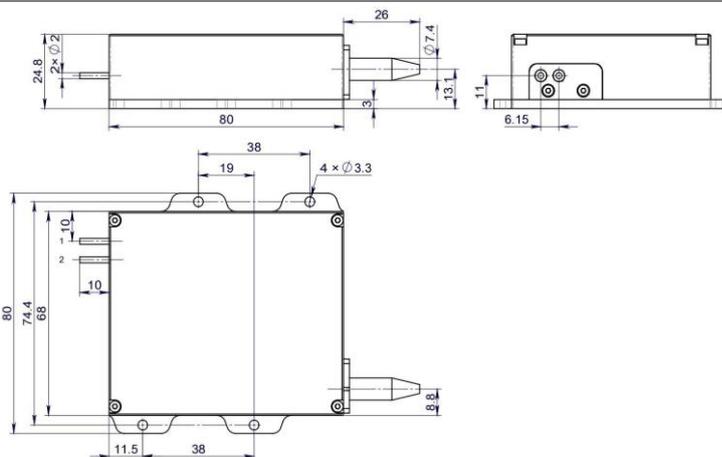
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Characteristics



Package Dimensions (mm)



Pin	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~ 30°C.
- Storage: -20°C~ +70°C, all pins short-circuit.

For purchase, questions, and quotes: contact@ephotonics.com • ephotonics.com