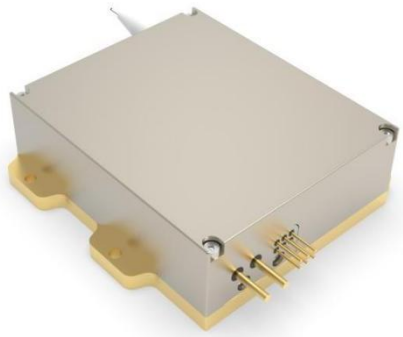
976nm 140W Wavelength-Stabilized Fiber Coupled Diode Laser

K976BN1RN-140.0WN0N-10522F20EFF (Standard Product)



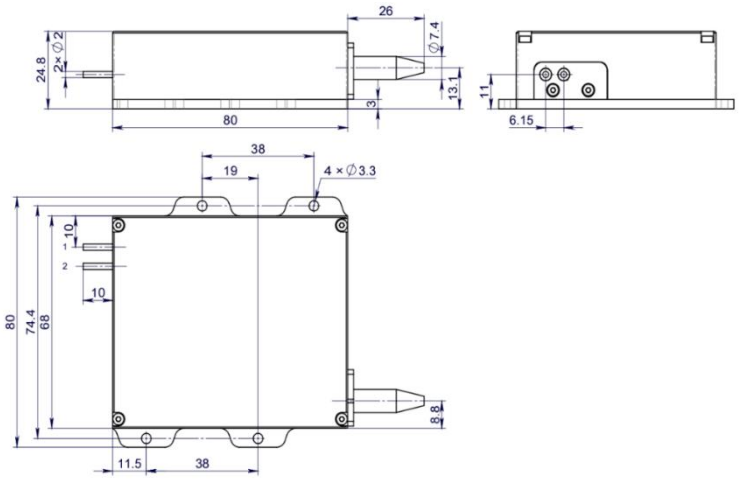
Features:

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

Applications:

- Fiber laser pumping
- Scientific Research

Package Dimensions (mm)



Pin	Function
1	LD (+)
2	LD (-)
3	*Aiming Beam(+)
4	*Aiming Beam(-)
5	*Thermistor
6	*Thermistor
7	*PD (P)
8	*PD (N)

*Optinonal

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.
- 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 middle of the pins. Soldering temperature should be lower than 260℃ and time shorter than 10 second.
- 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.
- Use constant current power supply to avoid surge current during operation.
- Laser diode must be used according to the specifications.
- Laser diode must work with good cooling.
- Operation temperature ranges from 23℃ to 27℃ .
- Storage temperature ranges from -20℃ to +70℃.



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Specifications (25℃)		Symbol	Unit	K976BN1RN-140.0W		
				Minimum	Typical	Maximum
Optical Data(1)	CW Output Power	P_O	W	140	-	-
	Center Wavelength(2)	I_c	nm	976±1		
	Spectral Width(FWHM)	△I	nm	-	0.7	1.0
	Wavelength Shift with Temperature	△I/△T	nm/℃	-	0.02	-
	Wavelength Shift with Current	△I/△A	nm/A	-	0.03	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	50	-
	Threshold Current	I_{th}	A	-	0.9	-
	Operating Current	I_{op}	A	-	13.0	15.0
	Operating Voltage	V_{op}	V	-	21.5	24.0
	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	-	-	Ferrule		
Feedback Isolation	Wavelength Range	-	nm	1020~1200		
	Isolation	-	dB	-	30	-
Others	ESD	V_{esd}	V	-	-	500
	Storage Temperature(3)	T_{st}	℃	-20	-	70
	Lead Soldering Temp	T_{ls}	℃	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature(4)	T_{op}	℃	23	25	27
	Relative Humidity	RH	%	15	-	75

(1) All data are measured at 25 ℃ambient temperature.

(2) Wavelength-Stabilized: Power in band of 974.5nm to 977.5nm ≥90%.

(3) A non-condensing environment is required for operation and storage.

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

Declaration : information and specifications contained herein are deemed to be reliable and accurate. Hyperline reserves the right to

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change, alter or modify the design and specifications of these products at any time without notice.26-07