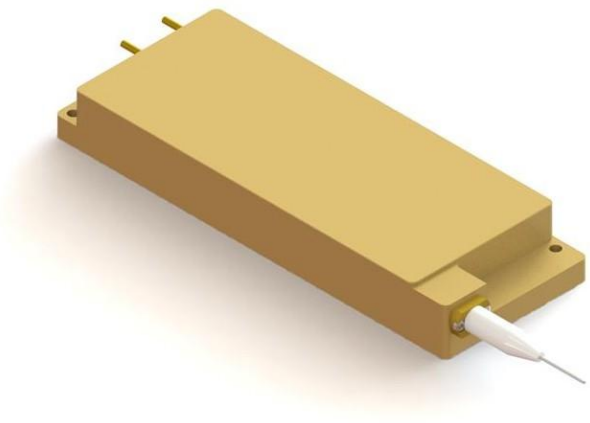
976nm 510W　High Power Fiber Coupled Diode Laser

K976DA0RN-510.00WN0N-22022F20EFF（Standard Product）



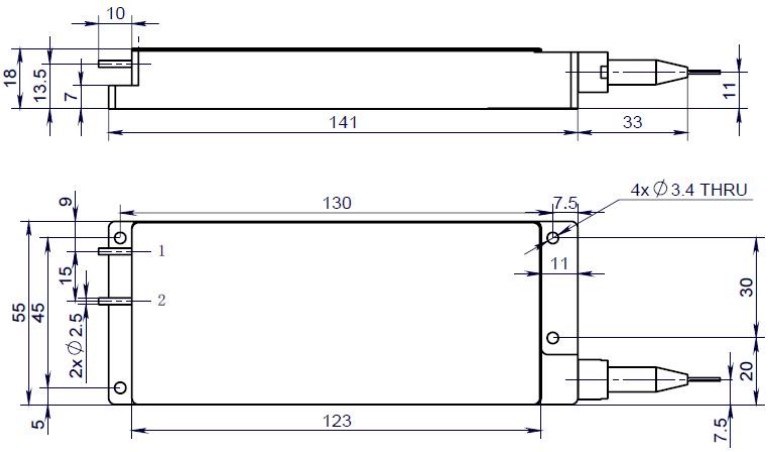
Features:

- Wavelength 976±3nm
- Output Powe-510W
- Fiber Core-220 μm
- Numberic Aperture 0.22 NA
- BRP 1020-1200nm

Application Scenarios:

- Fiber laser pumping
- Scientific Research

Dimensions (mm)



Pins	Functions
1	LD (+)
2	LD (-)
3	
4	
5	
6	
7	-
8	-

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.
- Connect pins to wires by solder instead of using socket when operation current is higher than 6A. Soldering point should beclose 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 handlingand 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 15℃ to 35℃ .
- Storage temperature ranges from -20℃ to +70℃



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Specifications（25℃）		Symbol	Unit	K976DA0RN-510.0W		
				Min.	Typ.	Max.
Optical Paramters (1)	Output Power	P_o	W	510	-	-
	Central Wavelength	λc	nm	976±3		
	Spectral Width(FWHM)	Δλ	nm	-	3	6
	Temperature Coefficient Wl.	Δλ/ΔT	nm/℃	-	0.3	-
	Current Coefficient Wl.	Δλ/ΔA	nm/A	-	0.6	-
	0.17/0.22NA	-	%	90	95	-
Electrical Parameters	Wall Pug Efficiency	PE	%	-	45	-
	Threshold Current	I_{th}	A	-	1.7	-
	Operating Current	I_{op}	A	-	33.0	34.0
	Operating Voltage	V_{op}	V	-	31.5	34.0
	Slope Efficiency	η	W/A	-	16.0	-
Fiber Parameters	Fiber Core	D_{core}	μm	-	220	-
	Cladding Diameter	D_{clad}	μm	-	242	-
	Numberic Aperture	NA	-	-	0.22	-
	Fiber Length	L_f	m	-	2.0	-
	Jacket of Fiber	-	mm	-	0.9	-
	Bending Radius	-	mm	96	-	-
	Fiber Termination	-	-	FC-Ferrule		
Feedback Isolation	Reflection Wavelength		nm	1020-1200		
	Isolation		-	-	30	-
Others	ESD	V_{esd}	V	-	-	500
	Storage Temperature(2)	T_{st}	℃	-20	-	70
	Sodering Temperature	T_{ls}	℃	-	-	260
	Sodering Time	t	sec	-	-	10
	Operating Case Temperature(3)	T_{op}	℃	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Test Conditions: Unless otherwise specified, all specifications are tested at 25℃.

(2) Environmental Requirements: Both storage and operation must be strictly under non-condensing conditions.

(3) Thermal Management: The operating temperature refers to the baseplate temperature. The acceptable operating range is 15℃ to 35℃, however, optical performance may slightly deviate at different temperatures within this range.

Declaration : information and specifications contained herein are deemed to be reliable and accurate. Hyperline reserves the right to change, alter or modify the design and specifications of these products at any time without notice.26-09