

**Features:**

- ◆ 976±1nm wavelength
- ◆ 140W output power
- ◆ 105µm fiber core diameter
- ◆ 0.22 NA
- ◆ 1020nm~1200nm feedback protection

**Applications:**

- ◆ Fiber Laser Pumping
- ◆ Scientific Research

**976nm 140W Wavelength-Stabilized Fiber Coupled Diode Laser**  
**RPK976S-N1-140.0W-10522-FF**

Specifications (25°C)		Symbol	Unit	RPK976S-N1-140.0W-10522-FF		
				Minimum	Typical	Maximum
Optical Data <sup>(1)</sup>	CW Output Power	P <sub>o</sub>	W	140	-	-
	Center Wavelength	λ <sub>c</sub>	nm	976±1		
	Spectral Width(FWHM)	Δλ	nm	-	0.6	1.0
	Wavelength Shift with Temperature	Δλ/ΔT	nm/°C	-	0.02	-
	Wavelength Shift with Current	Δλ/ΔI	nm/A	-	0.03	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	48	-
	Threshold Current	I <sub>th</sub>	A	-	0.9	-
	Operating Current	I <sub>op</sub>	A	-	13.0	15.0
	Operating Voltage	V <sub>op</sub>	V	-	22.5	25.0
	Slope Efficiency	η	W/A	-	11.0	-
Fiber Data	Core Diameter	D <sub>core</sub>	µm	-	105	-
	Cladding Diameter	D <sub>clad</sub>	µm	-	125	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Length	L <sub>f</sub>	m	-	2	-
	Fiber Loose Tubing Diameter	-	mm	0.9		
	Minimum Bending Radius	-	mm	50	-	-
	Fiber Termination	-	-	FC-Ferrule		
Feedback Isolation	Wavelength Range	-	nm	1020~1200		
	Isolation	-	dB	-	30	-
Others	ESD	V <sub>esd</sub>	V	-	-	500
	Storage Temperature <sup>(2)</sup>	T <sub>st</sub>	°C	-20	-	70
	Lead Soldering Temp	T <sub>ls</sub>	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature <sup>(3)</sup>	T <sub>op</sub>	°C	20	25	30
	Relative Humidity	RH	%	15	-	75

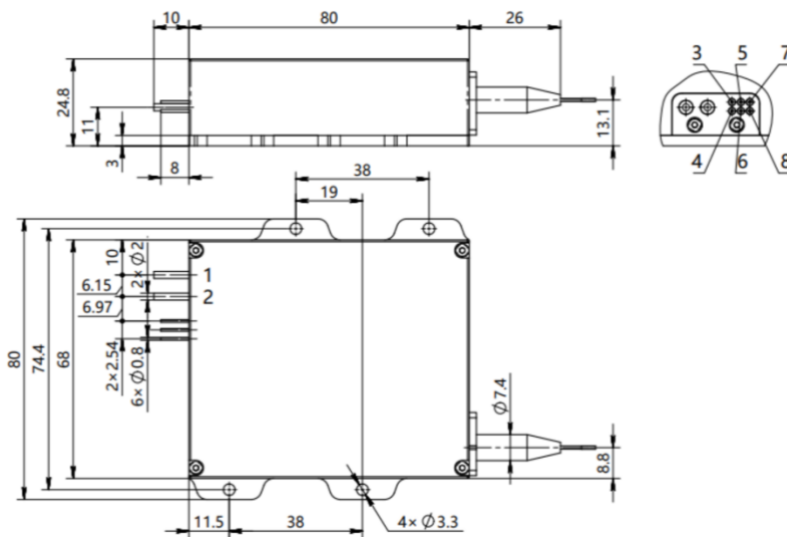
(1) Data measured under operation at nominal output power@25°C.

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- (2) A non-condensing environment is required for operation and storage.
- (3) Operating temperature defined by the package case. Acceptable operating range is 20°C~30°C, but performance may vary.
- (4) Wavelength-Stabilized : Percentage of power in band of 974.5nm to 977.5nm ≥90%.

#### Package Dimensions (mm)



Pin	Function
1	LD (+)
2	LD (-)
3	-
4	-
5	Thermistor (optional)
6	Thermistor (optional)
7	Photo Diode (P) (optional)
8	Photo Diode (N) (optional)

#### 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 to the middle of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second. cutting the fiber.
- ◆ Laser diode must work with good cooling.
- ◆ Operation temperature ranges from 20°C to 30°C .
- ◆ Storage temperature ranges from -20°C to +70°C.



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