
Features:

- ◆ 445nm wavelength
- ◆ 4W output power
- ◆ 105µm fiber core diameter
- ◆ 0.22 NA

Applications:

- ◆ illuminating
- ◆ 3D Printing
- ◆ Medical use

445nm 4W Fiber Coupled Diode Laser
RPK445-03-4.00W-10522-SM

Specifications (25°C)		Symbol	Unit	RPK445-03-4.00W-10522-SM		
				Minimum	Typical	Maximum
Optical Data⁽¹⁾	CW Output Power	P _O	W	4	-	-
	Center Wavelength	λ _c	nm	445±20		
	Spectral Width (FWHM)	Δλ	nm	-	6	-
	Wavelength Shift with Temperature	Δλ/ΔT	nm/°C	-	0.1	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	23	-
	Threshold Current	I _{th}	A	-	0.3	-
	Operating Current	I _{op}	A	-	2.8	3.5
	Operating Voltage	V _{op}	V	-	4.5	5
	Slope Efficiency	η	W/A	-	1.4	-
Fiber Data	Core Diameter	D _{core}	µm	-	105	-
	Numeric Aperture	NA	NA	-	0.22	-
	Minimum Bending Radius	-	mm	45	-	-
Others	ESD	V _{esd}	V	-	-	500
	Storage Temperature ⁽²⁾	T _{st}	°C	-20	-	70
	Lead Soldering Temp	T _{ls}	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature ⁽³⁾	T _{op}	°C	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 4W@25°C.

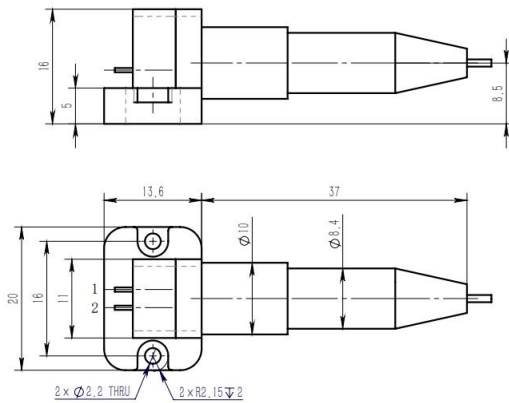
(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the package case. Acceptable operating range is 15°C~35°C, but performance may vary.

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Package Dimensions (mm)



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

OPERATING NOTES

- ◆ Avoid eye and skin exposure to direct radiation during operation.
- ◆ ESD precautions must be taken during transportation, storage, and operation. A short-circuit connection is required between pins during transportation and storage.
- ◆ For lasers with operating currents above 6A, connect leads by soldering. The soldering point should be as close to the middle of the pins as possible, with a temperature below 260°C and a soldering time of less than 10 seconds.
- ◆ Before operating the laser, ensure that the fiber output end is properly cleaned. Follow safety protocols when handling and cutting fiber to avoid injury.
- ◆ Use a constant current power supply and avoid surges during operation.
- ◆ Operate within the rated current and power levels.
- ◆ Ensure proper cooling during operation.
- ◆ The operating temperature range is 15°C to 35°C.
- ◆ The storage temperature range is -20°C to +70°C.



Declaration: 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.24-5