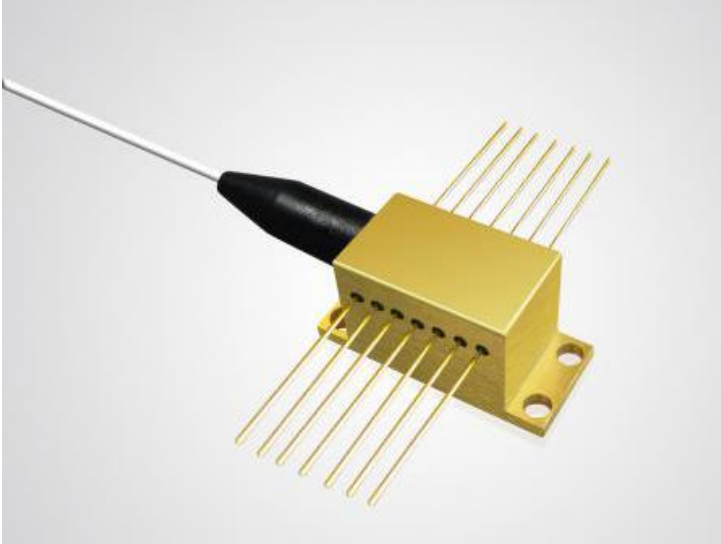


445nm 0.8W Fiber Coupled Diode Laser RPK445-0.800W-10522-FC



Features:

- ◆ 445nm wavelength
- ◆ 800mW output power
- ◆ 105 μ m fiber core diameter
- ◆ 0.22NA

Applications:

- ◆ Biochemical Analysis
- ◆ Scientific research
- ◆ Detection

High Power Diode Laser Modules are manufactured by adopting specialized fiber-coupling techniques, resulting in volume products with a high efficiency, stability and superior beam quality. The products are achieved by transforming the asymmetric radiation from the laser diode chip into an output fiber with small core diameter by using special micro optics. Inspecting and burn-in procedures in every aspect come to a result to guarantee each product with the reliability, stability and long lifetime.

Our research staffs are constantly improving and innovating the processing technology in the producing process, based on the professional knowledge and experience accumulated in long-terms. We are also continuously developing new products to meet customers' specific needs.

High quality products with reasonable price is always our goal.

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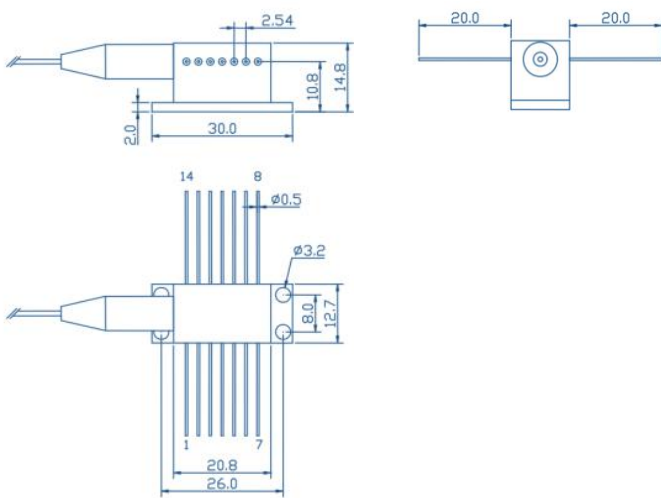
Specifications(20°C)		Symbol	Unit	RPK445-0.800W-10522-FC		
				Minimum	Typical	Maximum
Optical Data⁽¹⁾	CW Output Power	P _o	W	0.8	-	-
	Center Wavelength	λ_c	nm	445±10		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	<6	-
	Wavelength Shift with Temperature	$\Delta\lambda / \Delta T$	nm/°C	-	0.1	-
	Wavelength Shift with Current	$\Delta\lambda / \Delta I$	nm/A	-	1	-
Electrical Data	Threshold Current	I _{th}	A	-	0.2	-
	Operating Current	I _{op}	A	-	0.9	-
	Operating Voltage	V _{op}	V	-	4.5	5.2
	Slope Efficiency	η	W/A	-	1	-
	Electrical-to-Optical Efficiency	PE	%	-	16	-
Fiber Data	Core Diameter	D _{core}	μm	-	105	-
	Numerical Aperture	NA	NA	-	0.22	-
	Total Fiber Length	L _t	m	-	1.0	-
	Fiber Loose Tubing Diameter	-	mm	0.9mm PVC		
	Minimum Bending Radius	-	mm	50	-	-
	Fiber Termination	-	-	-	FC	-
Thermistor	-	R _t	(K Ω)/β(25°C)	-	10±3%/3477	-
TEC	Maximum TEC operating current	I _{tec}	A	-	-	2.2
	Maximum TEC operating voltage	V _{ec}	V	-	-	8.75
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	-	85

(1) Data measured under operation output at 800mW@20°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)																									
 <p>The technical drawings show the following dimensions (mm): - Side view: fiber diameter 2.0, fiber length 30.0, distance from fiber to pins 2.54, pin pitch 2.54, distance from fiber to thermistor pins 10.8, distance from fiber to LD pins 14.8. - Top view: distance from fiber to thermistor pins 20.0, distance from fiber to LD pins 20.0. - Front view: fiber diameter 2.0, fiber length 26.0, distance from fiber to pins 14, distance from fiber to thermistor pins 8, pin diameter 0.5, distance from fiber to LD pins 3.2, distance from fiber to case 8.0, distance from fiber to TEC pins 12.7.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: center;">引脚</th> <th style="text-align: center;">功能</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td>TEC(+)</td></tr> <tr><td style="text-align: center;">2</td><td>Thermistor</td></tr> <tr><td style="text-align: center;">3</td><td></td></tr> <tr><td style="text-align: center;">4</td><td></td></tr> <tr><td style="text-align: center;">5</td><td>Thermistor</td></tr> <tr><td style="text-align: center;">6-9</td><td>-</td></tr> <tr><td style="text-align: center;">10</td><td>LD (+)</td></tr> <tr><td style="text-align: center;">11</td><td>LD (-)</td></tr> <tr><td style="text-align: center;">12</td><td>-</td></tr> <tr><td style="text-align: center;">13</td><td>case</td></tr> <tr><td style="text-align: center;">14</td><td>TEC(-)</td></tr> </tbody> </table>	引脚	功能	1	TEC(+)	2	Thermistor	3		4		5	Thermistor	6-9	-	10	LD (+)	11	LD (-)	12	-	13	case	14	TEC(-)
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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 root of the pins. Soldering temperature should be lower than 260°C 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 15°C to 35°C.
- ◆ Storage temperature ranges from -20°C to +70°C.

