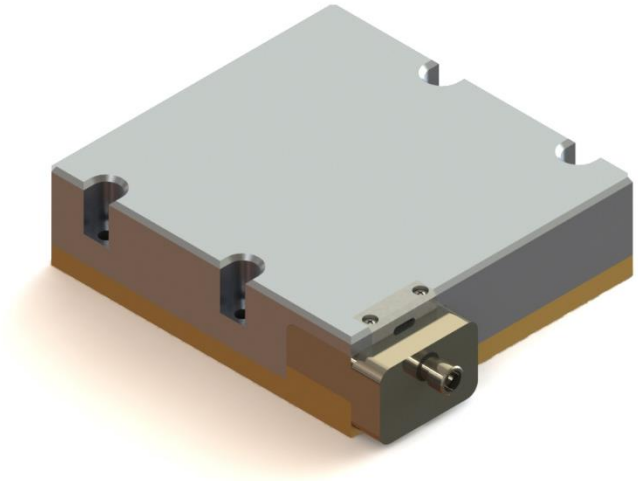
976nm Pluggable Fiber Coupled Diode Laser

RPK976-PA-200.0W-40022-SM



Features：

- 976nm wavelength
- 200W/300W output power
- 400μm pluggable output
- 0.22 NA
- 635nm aiming beam

Applications：

- Laser plastic welding
- Laser soldering
- Scientific research

Specifications（25℃）		Symbol	Unit	RPK976-PA-200.0W-40022-SM		
				Minimum	Typical	Maximum
Optical Data[1]	CW Output Power	P_O	mW	300	-	-
	Center Wavelength[2]	λ_c	nm	976±10		
	Spectral Width(FWHM)	$\triangle\lambda$	nm	-	3	-
	Wavelength Shift with Temperature	$\triangle\lambda/\triangle T$	nm/℃	-	0.2	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	50%	-
	Operating Current	I_{op}	A	-	13.5	15.0
	Threshold Current	I_{th}	A	-	1	-
	Operating Voltage	V_{op}	V	-	45.5	47.5
	Slope Efficiency	η	W/A	-	24	-
Fiber Data	Core Diameter	D_{core}	μm	-	400	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Loose Tubing Diameter	-	mm	3mm		
	Fiber length	Pluggable output, Fiber length is optional				
	Fiber Termination	SMA905/ Customization				
Aiming beam	Output Power	P_a	mW	-	2	-
	Wavelength	λ_a	nm	635±10		
	Operating Voltage	V_a	V	-	2.2	-
	Operating Current	I_a	mA	-	45	65
Others	ESD	V_{esd}	V	-	-	500
	Storage Temperature[2]	T_{st}	℃	-20	-	70
	Lead Soldering Temp	T_{ls}	℃	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature[3]	T_{op}	℃	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 300W@25℃.

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

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15℃~30℃,but performance may vary.

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Specifications（25℃）		Symbol	Unit	RPK976-PA-200.0W-40022-SM		
				Minimum	Typical	Maximum
Optical Data[1]	CW Output Power	P_O	mW	200	-	-
	Center Wavelength[2]	λ_c	nm	976±10		
	Spectral Width(FWHM)	$\triangle\lambda$	nm	-	3	-
	Wavelength Shift with Temperature	$\triangle\lambda/\triangle T$	nm/℃	-	0.2	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	50%	-
	Operating Current	I_{op}	A	-	13.5	15.0
	Threshold Current	I_{th}	A	-	1	-
	Operating Voltage	V_{op}	V	-	31	32.5
	Slope Efficiency	η	W/A	-	16	-
Fiber Data	Core Diameter	D_{core}	μm	-	400	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Loose Tubing Diameter	-	mm	3mm		
	Fiber length	Pluggable output, Fiber length is optional				
	Fiber Termination	SMA905/ Customization				
Aiming beam	Output Power	P_a	mW	-	2	-
	Wavelength	λ_a	nm	635±10		
	Operating Voltage	V_a	V	-	2.2	-
	Operating Current	I_a	mA	-	45	65
Others	ESD	V_{esd}	V	-	-	500
	Storage Temperature[2]	T_{st}	℃	-20	-	70
	Lead Soldering Temp	T_{ls}	℃	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature[3]	T_{op}	℃	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 200W@25℃.

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

(3) Operating temperature defined by the thermistor. Acceptable operating range is 15℃~30℃,but performance may vary.

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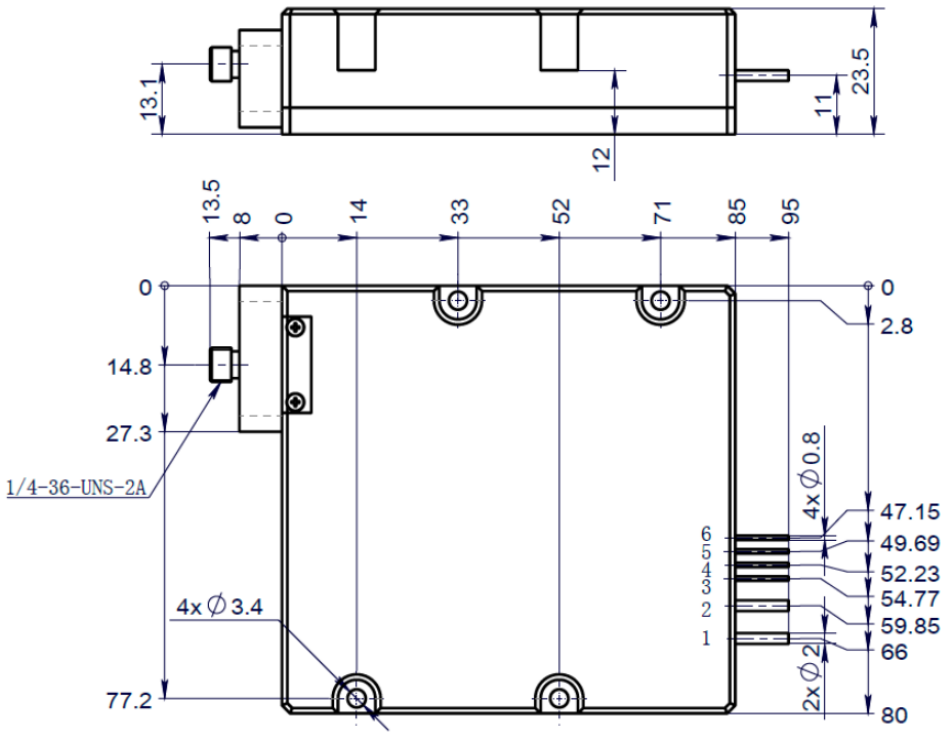
Package Dimensions (mm)



Pin	Function
1	LD (+)
2	LD (-)
3	*aiming beam (+)
4	*aiming beam (-)
5	*Thermistor
6	*Thermistor

1. *: Optional functions.

RPMC Lasers, Inc.
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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 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 15℃ to 35℃ .
- ◆ Storage temperature ranges from -20℃ to +70℃.