

### Features:

- ♦ 785nm wavelength
- ♦ 600mW output power

### Applications:

- ♦ Sensing
- ♦ Scientific research
- ♦ Raman spectroscopy
- ♦ Medical

## 785nm 600mW Fiber Coupled Diode Laser

### RPK785S-FS-0.600W

Specifications (25°C)		Symbol	Unit	RPK785S-FS-0.600W		
				Minimum	Typical	Maximum
Optical Data <sup>(1)</sup>	CW Output Power	$P_o$	mW	600	-	-
	Center Wavelength	$\lambda_c$	nm	785±0.5		
	Spectral Width(FWHM)	$\Delta\lambda$	nm	-	<0.1	-
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.01	-
	Emitter size @Window	-	mm	<1.0*1.0mm		
	Fast Axis Half Divergence Angle	-	°	<0.3		
	Slow Axis Half Divergence Angle	-	°	<1		
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	30	-
	Threshold Current	$I_{th}$	A	-	0.4	-
	Operating Current	$I_{op}$	A	-	1.1	1.5
	Operating Voltage	$V_{op}$	V	-	1.9	2.2
	Slope Efficiency	$\eta$	W/A	-	1.0	-
Thermistor	-	$R_t$	(K $\Omega$ )/ $\beta$ (25°C)	10±3%/3450		
PD	Current	$I_{mo}$	uA	100		1000
TEC	TEC Max. Current	$I_{tec}$	A	-	-	2.2
	TEC Max. Voltage	$V_{tec}$	V	-	-	8.75
Others	ESD	$V_{esd}$	V	-	-	500
	Storage Temperature <sup>(2)</sup>	$T_{st}$	°C	-20	-	70
	Lead Soldering Temp	$T_{ls}$	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature <sup>(3)</sup>	$T_{op}$	°C	15	-	35
	Relative Humidity	RH	%	15	-	75

(1) Data measured under operation output at 600mW@25°C.

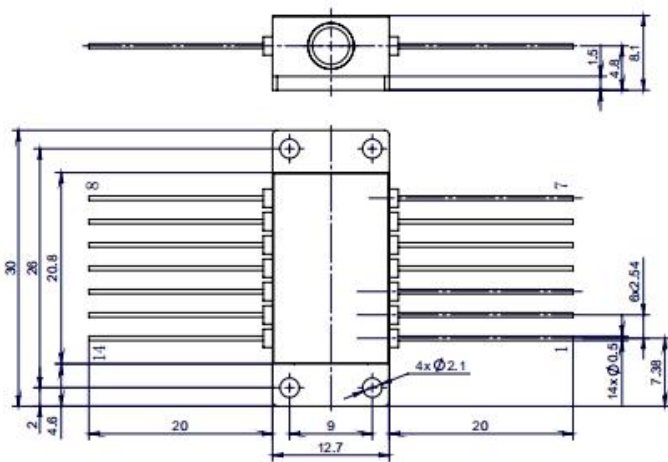
(2) A non-condensing environment is required for operation and storage.

(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	Pin	Function
1	TEC (+)	8	-
2	Thermistor	9	-
3	PD (+)	10	LD (+)
4	PD (-)	11	LD (-)
5	Thermistor	12	-
6	-	13	Case
7	-	14	TEC (-)

#### 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 15°C to 35°C .
- ◆ Storage temperature ranges from -20°C to +70°C.



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