



SPM1470-2W5-105M-PDT-9P

- IR Fiber-pigtailed Laser Diode Module
- 1470 nm, >2 W
- 105 μm Multi-mode Fiber
- Build-in PD and TEC
- 9-Pin Package



Description



SPM1470-2W5-105M-PDT-9P is an infrared fiber-pigtailed laser diode module, typically emitting at 1470 nm, with an output power of >2 W. It comes in a 9-pin package with 105 μm multi-mode fiber and FC/PC connector, built-in TEC (thermo-electric cooler), thermistor and photodiode. Different fibers and connectors are optionally available.

Maximum Ratings

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	U_R		2.0	V
Operating Temperature	T_{OPR}	+ 10	+ 30	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	- 20	+ 80	$^{\circ}\text{C}$
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	$^{\circ}\text{C}$

Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}\text{C}$)

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	1440	1470	1500	nm
Recommended Case Temperature	T_C	25$^{\circ}\text{C}$			$^{\circ}\text{C}$
Temperature Coefficient	α		0.7		nm/ $^{\circ}\text{C}$
Output Power	P_O	2.0	2.5		W
Spectral Width (FWHM)	$\Delta\lambda$		10		nm
Operating Voltage	U_F		1.9	2.4	V
Threshold Current	I_{th}		0.5	0.8	A
Operating Current	I_F		9.0	11.0	A
TEC Current	I_{TEC}			6	A
TEC Voltage	U_{TEC}			9.8	V
Thermistor	R_T		10		k Ω
Fiber spec.	Type	Multi-mode			
	Core	105*			μm
	Numerical Aperture	0.22			
	Connector *	FC/PC*			
	Length	80			cm



* SC or SMA905 con. and 200 μm or 400 μm core diameter available on request



Electrical Connection

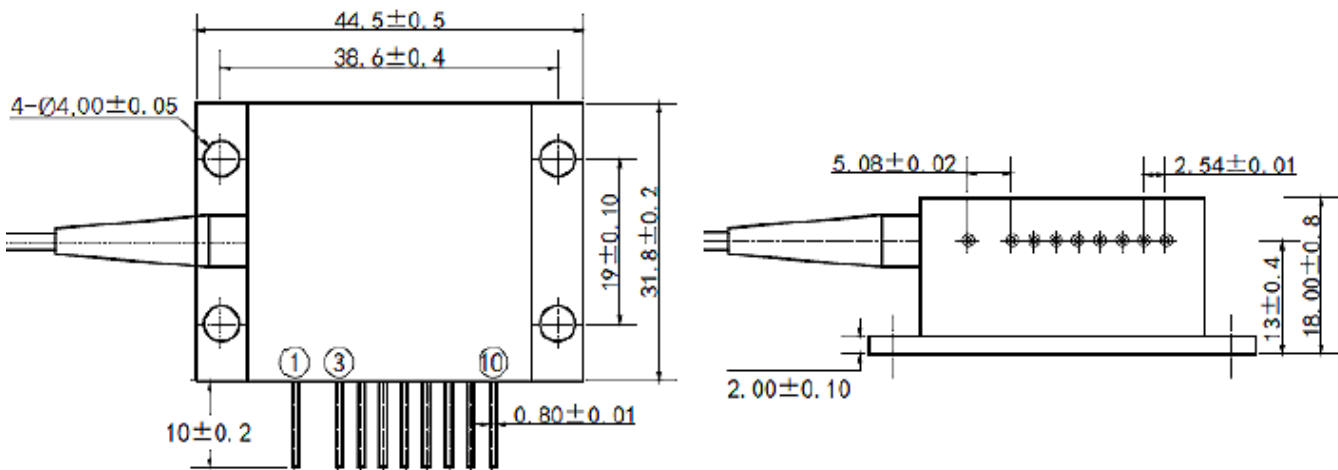
Pin Configuration*

PIN #	Function	PIN #	Function
1	TEC -	6	Thermistor
2	-	7	LD Cathode
3	Case	8	PD Anode
4	LD Anode	9	PD Cathode
5	Thermistor	10	TEC +



* subject to change

Outline Dimension



All dimensions in mm

Precautions

Safety

Laser light emitted from any laser diode may be harmful to the human eye. **Avoid looking directly into the laser diode's aperture.** The use of optical lenses will increase eye hazard



ESD Caution

Always do handle laser diodes with care to **prevent electrostatic discharge.** We advise to **wearing wrist straps, and grounding all applicable work surfaces,** when handling laser diodes

Operating Considerations

Usage of current regulated drive circuits is mandatory We advise to operate this laser diode with a current source and heat sink, and to never exceed the maximum specifications as outlined in this datasheet.



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