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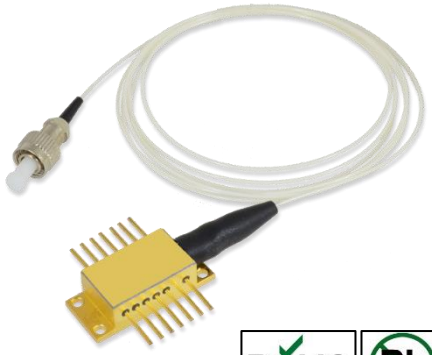
SPM1310-1W-105M-PDT-14P



- **IR Fiber-pigtailed Laser Diode Module**
- **1310±30 nm, 1 W**
- **105 µm Multi-mode Fiber**
- **Build-in PD and TEC**
- **14-Pin Package**

RoHS COMPLIANT Pb Pb-Free

Description

SPM1310-1W-105M-PDT-14P is an infrared fiber-pigtailed laser diode module, typically emitting at 1310 nm, with an output power of 1 **W**. It comes in a 14-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 Min.	Values Max.	Unit
Reverse Voltage	U_R		2.0	V
Operating Temperature	T_{OPR}	0	+ 30	°C
Storage Temperature	T_{STG}	- 20	+ 80	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength		λ_P	1280	1310	1360	nm
Output Power		P_O		1		W
Spectral Width (FWHM)		$\Delta\lambda$		8.0		nm
Temperature Coefficient		α		0.7		nm/°C
Operating Voltage		V_F		1.4	1.6	V
Threshold Current		I_{th}		0.4	0.7	A
Operating Current		I_F		3.3	3.5	A
TEC Current		I_{TEC}			2	A
TEC Voltage		V_{TEC}			8	V
Thermistor		R		10K		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, 400 µm core diameter available on request

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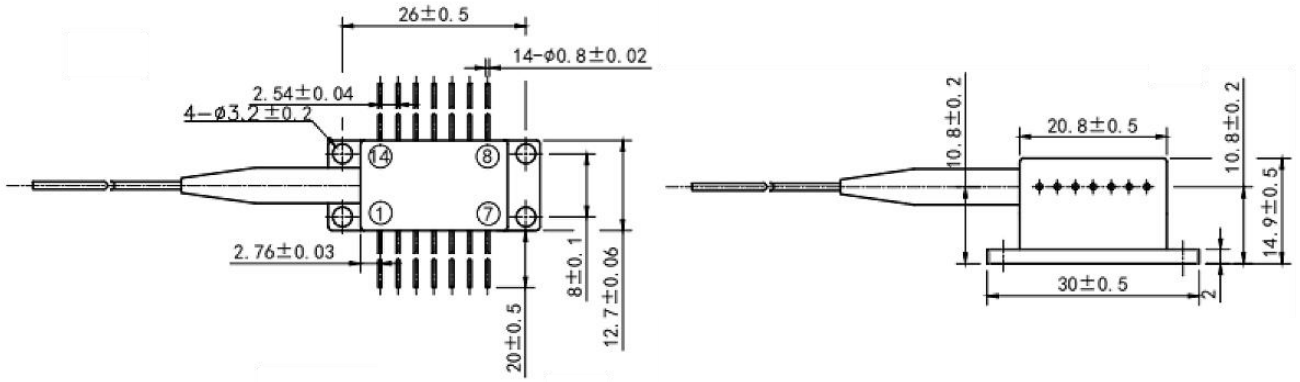
Electrical Connection

Pin Configuration*			
PIN #	**Function**	**PIN #**	**Function**
1	TEC +	14	TEC -
2	Thermistor	13	Case
3	PD +	12	n.c.
4	PD -	11	LD -
5	Thermistor	10	LD +
6	n.c.	9	n.c.
7	n.c.	8	n.c.

* 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.