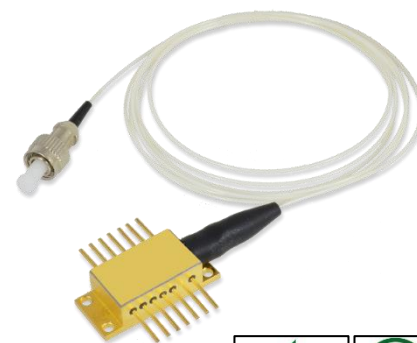




SPM1310-10-PM-PDT-14P-ISO

- IR Fiber-pigtailed Laser Diode Module
- 1310±10 nm, 10 mW
- PM Fiber
- Build-in PD and TEC
- Built-in optical isolator



Description

SPM1310-10-PM-PDT-14P-ISO is an infrared fiber-pigtailed laser diode module, typically emitting at **1310 nm**, with an output power of **10 mW**. It comes in a 14-pin package with **polarization maintaining fiber** and **optical isolator**, FC/APC connector, built-in TEC (thermo-electric cooler), thermistor and photodiode.

Maximum Ratings

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

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

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	1300	1310	1320	nm
Output Power	P_O		10		mW
Spectral Width (FWHM)	$\Delta\lambda$			2.0	nm
Operating Voltage	V_F		1.4	1.7	V
Threshold Current	I_{th}		5	15	mA
Operating Current	I_F		70	80	mA
Thermistor	R		10K		Ω
TEC	Current	I_{TEC}		1.3	A
	Voltage	V_{TEC}		4.0	V
Fiber spec.	Type	Polarization maintaining			
	Core		9		μm
	Numerical Aperture		0.12		
	Connector		FC/APC		
	Length		70		cm





Electrical Connection

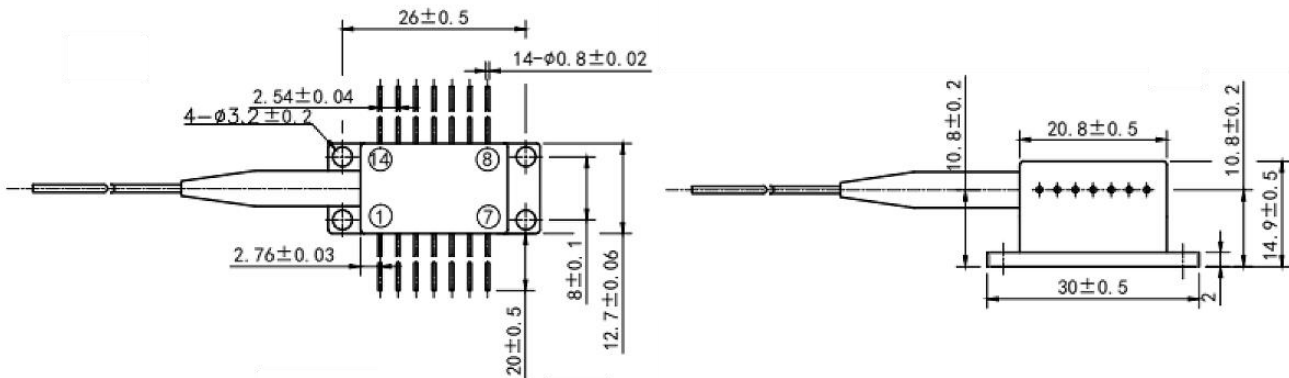
Pin Configuration*

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.

