



SPM450-3W5-105M-P2

- Blue Pigtailed Laser Diode
- 450 nm, 3.5 W
- 105 μ m Multi Mode Fiber
- FC/PC Connector
- 2-Pin Heat Load Package



Description

SPM450-3W5-105M-P2 is a blue pigtailed laser diode, typically emitting at 450 nm with an output power of 3.5 W. It comes in a 2-pin heat load package, and features a **105 μ m multi-mode fiber** with FC/PC connector. Different fibers and connectors as well as built-in PD and TEC are optionally available.

Maximum Ratings*

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Current	I_R		80	mA
Operating Temperature	T_{OPR}	0	+ 60	$^{\circ}$ C
Storage Temperature	T_{STG}	- 40	+ 85	$^{\circ}$ C
Soldering Temperature ($t_{max.}$ 3s)	T_{SOL}		+ 260	$^{\circ}$ C

* Operating close to or exceeding these parameters may damage the device

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

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	435	450	465	nm
Spectral Width (FWHM)	$\Delta\lambda$		3.0		nm
Output Power	P_O		3.5		W
Operating Voltage	U_F		4.5	5.5	V
Threshold Current	I_{th}		0.3	0.5	A
Operating Current	I_O		3.0	3.3	A
Fiber Spec.	Type	Multi-mode			
	Core diameter		105*		μ m
	Numerical Aperture [N.A.]		0.22		
	Connector		FC/PC*		
	Length		80*		cm
Built-in Photodiode			optional		
Built-in TEC			optional		

* FC/APC, SC, SMA905 con., 200 μ m, 400 μ m core diameter, available on request

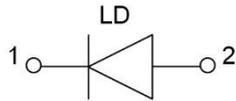
** Length of fiber customizable



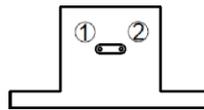
Electrical Connection

Pin Configuration*

Pin #	Function
Pin 1	LD cathode
Pin 2	LD anode

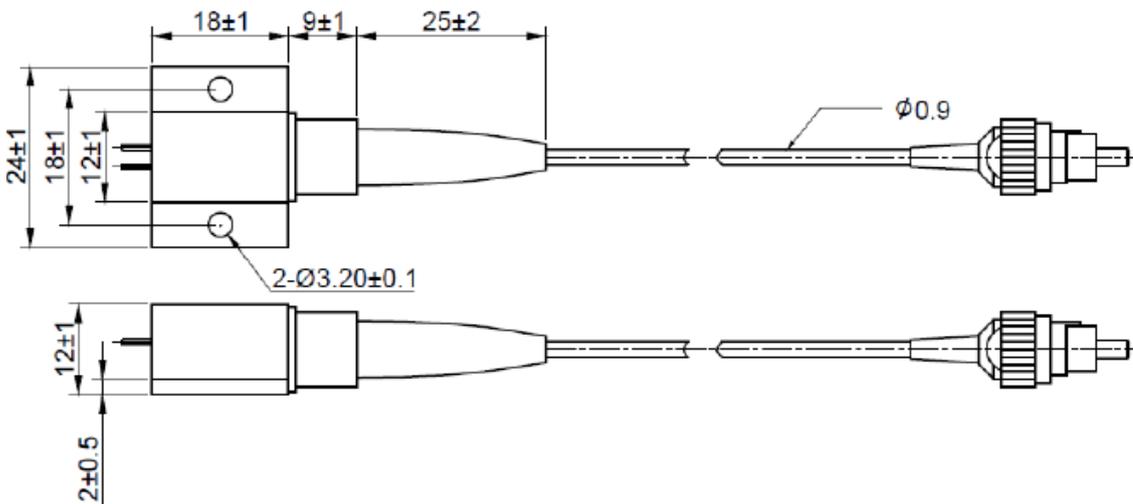


PIN Bottom View



* 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.

