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SPM450-3W5-50M-P2

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

RoHS COMPLIANT Pb-Free

Description

SPM450-3W5-50M-P2 is a blue pigtailed laser diode, typically emitting at 450 nm with an output power of typically 3.5 W. It comes in a 2-pin heat load package, and features a **50 µm 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	°C
Storage Temperature	T_{STG}	- 40	+ 85	°C
Soldering Temperature ($t_{max.}$ 3s)	T_{SOL}		+ 260	°C

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

Electro-Optical Characteristics (T_{CASE} = 25°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	3.0	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		50*			µm
	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., 105µm, 200µm, 400 µm core diameter, available on request
****** Length of fiber customizable

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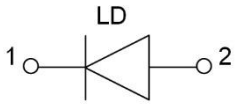
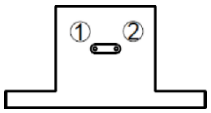
Electrical Connection

Pin Configuration*	
Pin #	**Function**
Pin 1	LD cathode
Pin 2	LD anode

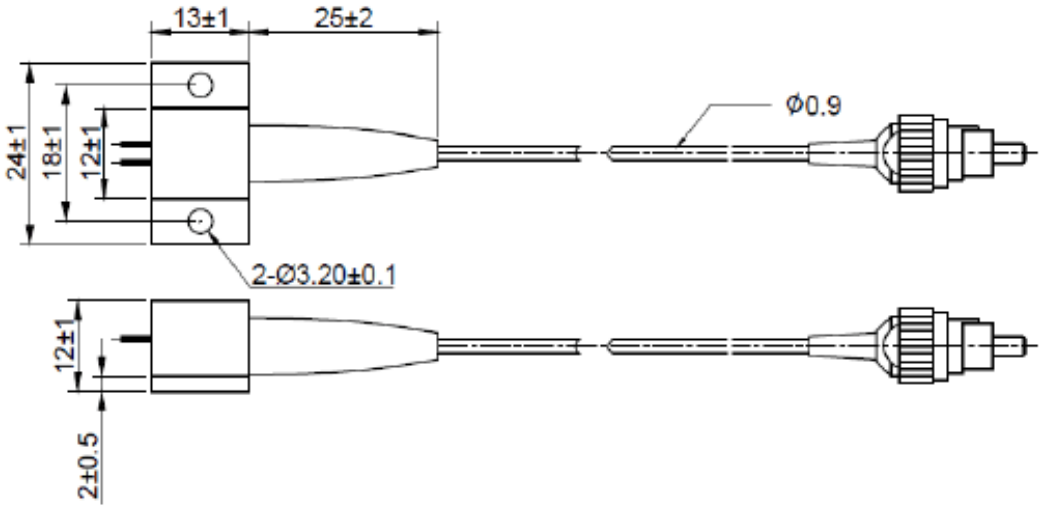
* subject to change



PIN Bottom View



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.