



SPL445-50-105M

- Blue Pigtailed Laser Diode
- 450 nm, 50 mW
- 105 μm MM Fiber
- FC/PC connector
- Heat Sink



Description

SPL445-50-105M is a blue fiber pigtailed laser diode, typically emitting at 450 nm with an output power of 50 mW. It comes in a coaxial package with integrated heat sink, and **105 μm multi-mode fiber** with **FC/PC** connector. Variants without heat sink and different types of connectors are optionally available.

Maximum Rating

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	V_R		2.0	V
Operating Temperature	T_{OPR}	- 10	+ 70	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	- 40	+ 85	$^{\circ}\text{C}$
Soldering Temperature ($t_{max.}=3s$)	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	440	450	460	nm
Spectral Linewidth (FWHM)	λ_{Δ}		2.0		
Output Power	P_O		50		mW
Operating Voltage	V_F		6.0	7.0	V
Threshold Current	I_{th}		20	55	mA
Operating Current	I_o		100	120	mA
Fiber Spec.	Type	Multi-Mode			
	Core diameter	105*			μm
	Connector	FC/PC*			
	Length	80			cm

* SC or SMA905 con. and 62.5 μm core diameter available on request



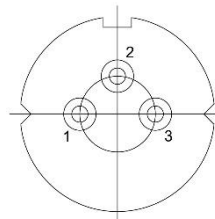
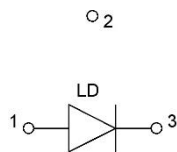


Electrical Connection

Pin Configuration*

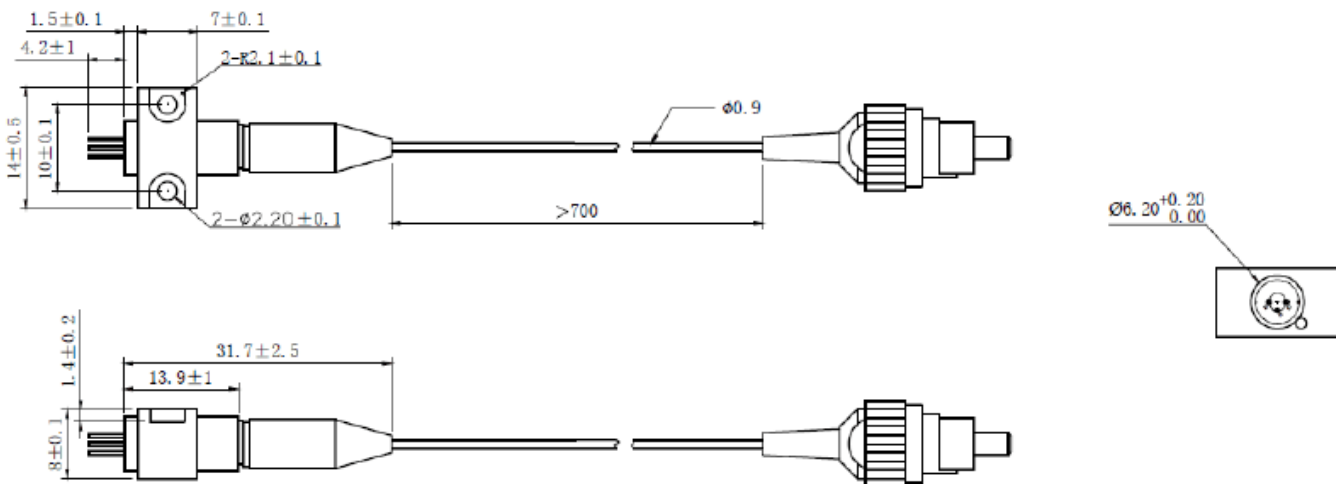
Bottom View

Pin #	Function
Pin 1	LD anode
Pin 2	GND
Pin 3	LD cathode



* 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.

