



## SPL1550-5-9-PDI

- IR Pigtailed DFB Laser Diode
- 1550 nm, 5 mW
- Bandwidth >2.5 GHz
- 9  $\mu\text{m}$  Single Mode Fiber
- FC/PC Connector
- Built-in Isolator



### Description



**SPL1550-5-9-PDI** is an infrared pigtailed DFB laser diode, typically emitting at 1550 nm with an output power of 5 mW with **built-in Isolator**, and **integrated monitor photodiode**. It comes in a coaxial package with heat sink, and **9  $\mu\text{m}$  single 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
PD Reverse Voltage	$V_{RP}$		15	V
Operating Temperature	$T_{OPR}$	- 10	+ 50	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	- 40	+ 100	$^{\circ}\text{C}$
Soldering Temperature (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	$\lambda_P$	1540	1550	1560	nm
Output Power	$P_O$		5		mW
Spectral Width	$\Delta\lambda$			2	nm
Operating Voltage	$V_F$		1.4	1.7	V
Threshold Current	$I_{th}$		5	15	mA
Operating Current	$I_O$		60	70	mA
Bandwidth	$f$	2.5			GHz
Side Mode Suppression Ratio			35		dB
PD Current	$I_M$	0.1			mA
Fiber Spec.	Type	Single Mode			
	Core diameter		9		$\mu\text{m}$
	N.A.		0.12		
	SMSR		35		
	Connector		FC/PC*		
	Length		80		cm



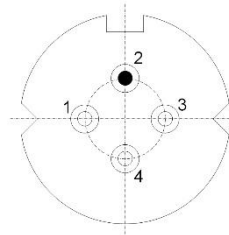
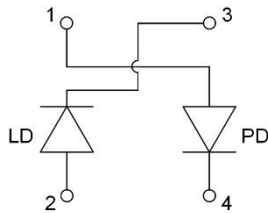


## Electrical Connection

Pin Configuration\*

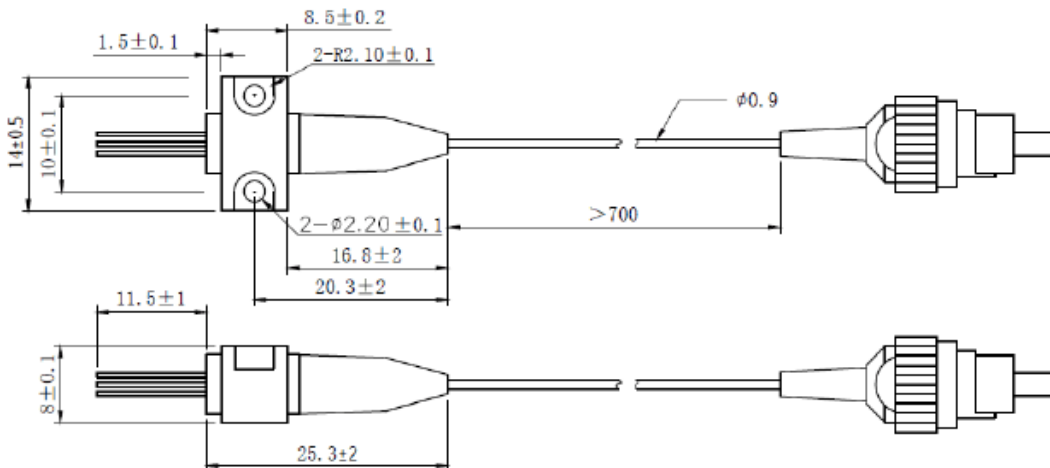
Bottom View

Pin #	Function
Pin 1	PD Anode
Pin 2	LD Anode, Ground
Pin 3	LD Cathode
Pin 4	PD 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.

