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SPL1510-5-9-PDI

- **IR Pigtailed DFB Laser Diode**
- **1510 nm, 5 mW**
- **9 µm Single Mode Fiber**
- **Built-in Isolator**
- **Integrated Monitor PD**

RoHS COMPLIANT Pb Pb-Free

Description

SPL1510-10-9-PDI is an infrared pigtailed DFB laser diode, typically emitting at 1510 nm with an output power of 5 mW, integrated monitor photodiode, and **built-in optical isolator**. It comes in a coaxial package with heat sink, and **9 µm single mode fiber** with FC/PC connector. Variants without heat sink, different fiber connectors or fiber length 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}	- 20	+ 50	°C
Storage Temperature	T_{STG}	- 40	+ 100	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength		λ_P	1500	1510	1520	nm
Spectral Width		$\Delta\lambda$		0.3	1.0	nm
Side Mode Suppression Ratio (SMSR)				35		dB
Output Power		P_O		5		mW
Operating Voltage		V_F		1.4	1.7	V
Threshold Current		I_{th}		5	15	mA
Operating Current		I_O		60	70	mA
PD Current		I_M	0.1			mA
PD Current		I_{MD}			0.1	µA
PD Capacitance		C_M		10	20	pF
Optical Isolation				30		dB
Fiber Spec.	Type		Single Mode			
	Core diameter		9			µm
	Connector		FC/PC			
	Length			80		cm

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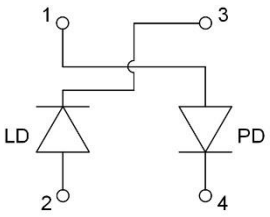
Electrical Connection

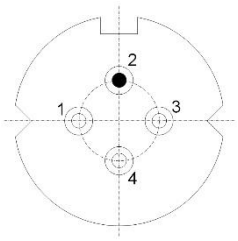
Pin Configuration*

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

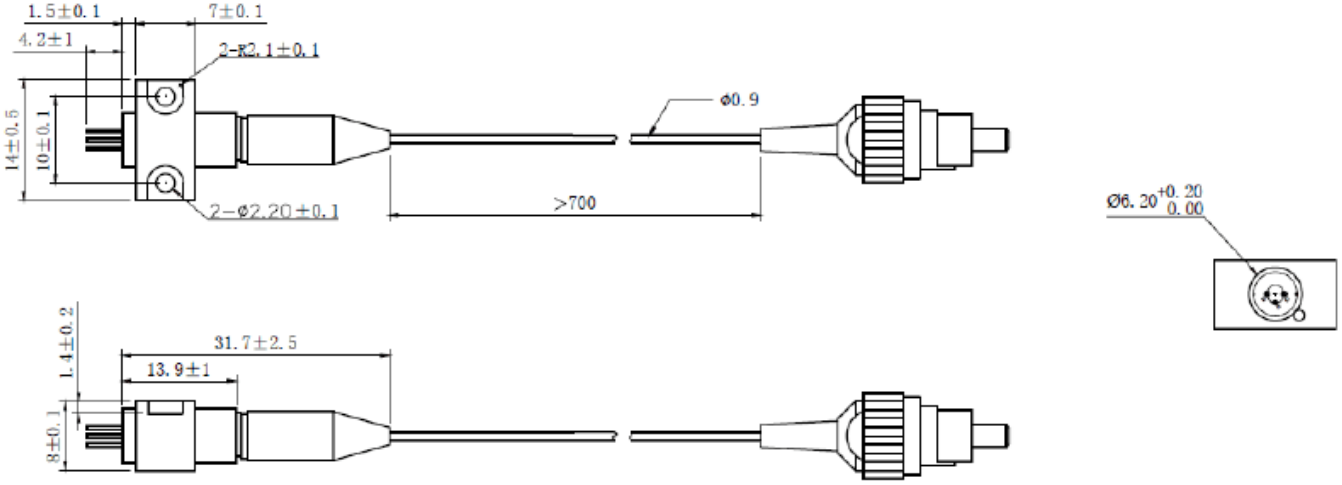
* subject to change



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.