

1550nm FP Laser Diode SM TOSA

Features

- Center wavelength 1550nm
- Low threshold current
- High speed $t_r/t_f < 0.7\text{ns}$
- Built-in InGaAs monitor detector
- Four-lead package
- Wide operating temperature -40°C to 85°C
- Hermetically sealed TO-18 package in pigtailed or receptacle housing with FC, ST or SC connector



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Applications

- Fiber In The Loop
- ATM, SONET/SDH
- Motorway and railway networks
- Intra and interoffice links
- Subscriber loops
- Trunk supervision
- Test instruments

Specifications

Optical And Electrical Characteristics (T=25+/-3°C unless specified otherwise)

Parameter	Symbol	Test Conditions	Min	Typical	Max	Units
Center Wavelength	λ	25 °C -40 to 85 °C	1530 1500	1550 -	1570 1600	nm
Spectral Width	$\Delta\lambda$	P_0 (RMS, -20dB)	-	1	2.5	nm
Threshold Current	I_{th}	25 °C -40 to 85 °C		10 -	15 50	mA
Operating Voltage	V_{op}	P_0	-	1.1	1.5	V
Rise/Fall Time	t_r / t_f	10-90%	-	0.3	0.7	ns
Optical Output Power	P_0	$I_{th}+30\text{mA}$				
-1			0.1	0.25	-	mW
-2			0.4	0.55	-	mW
-3			0.7	0.9	-	mW
-4			1.2	-	-	mW
Differential Efficiency		P_0				
-1	-		0.01	-	-	mW/mA
-2	-		0.02	-	-	mW/mA
-3	-		0.03	-	-	mW/mA
-4	-		0.04	-	-	mW/mA
Monitor Current (PD)	I_m	$P_0, V_{RD} = 1\text{V}$	0.2	1.1	-	mA
Dark Current (PD)	I_d	$V_{RD} = 10\text{V}$	-	-	0.1	μA
Tracking Error	E_t	-40 to 85 °C	-	± 1.0	-	dB

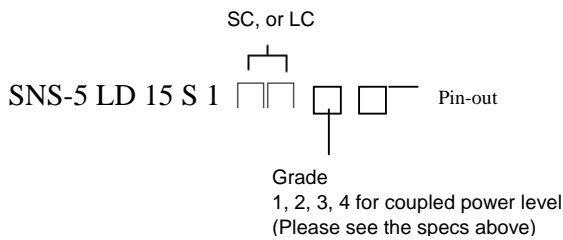
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Absolute Maximum Ratings (T=25 °C)

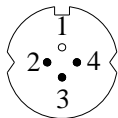
Parameter	Symbol	Min.	Max.	Unit
Forward Current (LD)	I_{op}	-	85	mA
Reverse Voltage (LD)	V_{RL}	-	2	V
Forward Current (PD)	I_{FD}	-	2	mA
Reverse Voltage (PD)	V_{RD}	-	20	V
Operating Temperature	T_O	-40	+85	°C
Storage Temperature	T_{sta}	-40	+125	°C
Lead Soldering Temperature (10 sec)	T_L	-	260	°C

Ordering Information



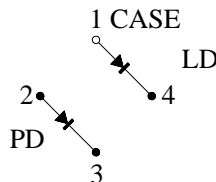
Pin Connections

BOTTOM VIEW

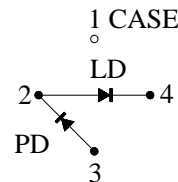


UNIT : MM

C TYPE PIN CONNECTIONS



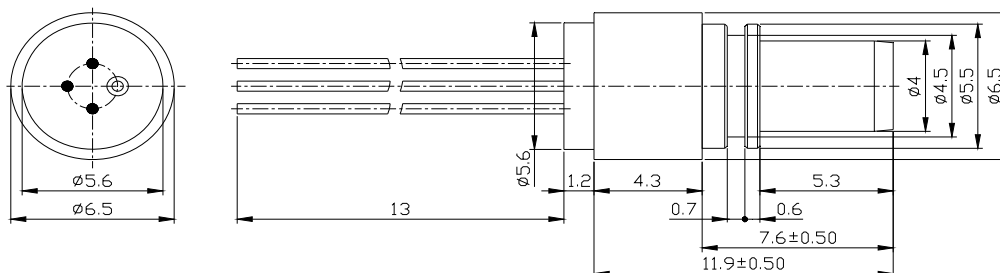
D TYPE PIN CONNECTIONS



Dimension Unit MM

SC Type

Power Grade 1, 2



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1550nm FP LD
Fiber-coupled Power vs. Drive Current

