

2.5Gbps 1550nm FP Laser Diode SM TOSA

Features

- Center wavelength 1550nm
- Low threshold current
- High speed $t_r/t_f < 0.12\text{ns}$
- Built-in InGaAs monitor detector
- Four-lead package
- Wide operating temperature -20°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
Threshold Current	I_{th}	P_o 85 °C	-	10 30	15 30	mA
Operating Voltage	V_{op}	P_o	-	1.1	1.8	V
Peak Wavelength	λ_c	P_o , -20~85°C	1530	1550	1570	nm
Spectral Width				1	3	nm
Optical Output Power	P_o	$I_{th}+30\text{mA}$				
-3			1	-	-	mW
-4			1.4	-	-	mW
Differential Efficiency		P_o				
-3			0.1	-	-	W/A
-4			0.14	-	-	W/A
Rise/Fall Time	tr/tf	2.5Gbps, 20~80%	-	80	120	ps
Tracking Error	TE	-20~+85 °C	-	±1.0	-	dB
Monitor Current (PD)	I_m	P_o , $V_{RD}=1\text{V}$	0.1	0.5	-	mA
Dark Current (PD)	I_d	$V_{RD}=5\text{V}$	-	-	0.1	µA
Capacitance (PD)	Ct	$V_{RD}=5\text{V}$, f=1MHz	-	10	20	pF
Return Loss			40	-	-	dB
Minimum Isolation (w/isolator)		To= 0~+60 °C	30	-	-	dB

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Forward Current (LD)	I_{op}	-	85	mA
Reverse Voltage (LD)	V_{RL}	-	2	V
Reverse Voltage (PD)	V_{RD}	-	20	V
Forward Current (PD)	I_{FD}	-	2	mA
Case Temperature	T_o	-20	+85	°C
Storage Temperature	T_{stg}	-40	+100	°C
Lead Soldering Temperature (10sec)	T_L	-	260	°C

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Ordering Information

SC or LC I for with Isolator
 X for without Isolator

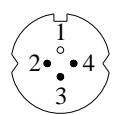
SNS-5 LD 1 5 S1

Grade 1 for with Isolator
 X for without Isolator

3 ,4 for optical power level
 (please see the specs above)

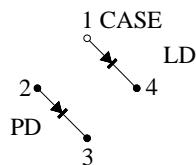
Pin Connections

BOTTOM VIEW

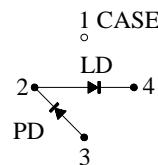


UNIT : MM

C TYPE
PIN CONNECTIONS

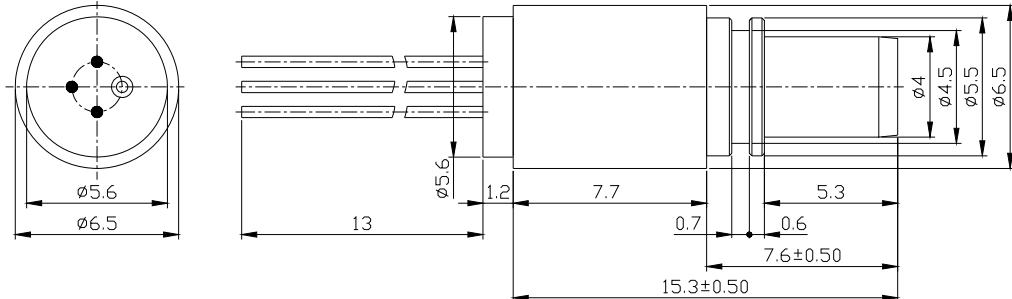


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PIN CONNECTIONS

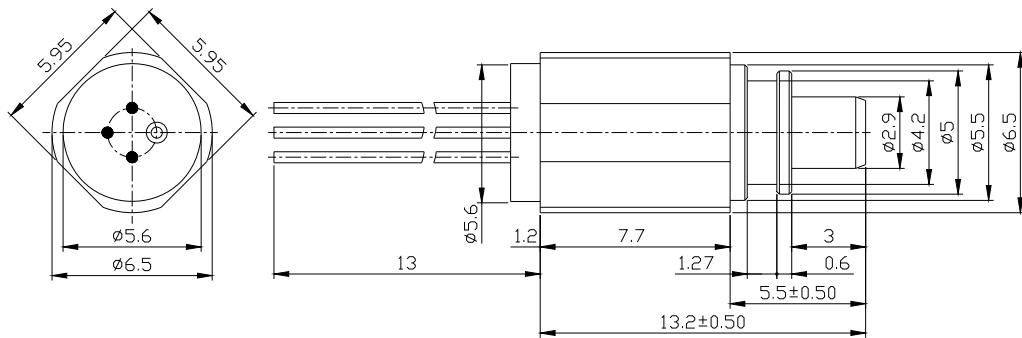


Dimension

SC Type



LC Type



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

