

1.25Gbps 1310nm DFB Laser Diode TOSA

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Features

- Center wavelength 1310nm
- Low threshold current
- High speed $t_r/t_f < 0.4\text{ns}$
- 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



Applications

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

Specifications

Optical And Electrical Characteristics ($T=25\pm 3^\circ\text{C}$ unless specified otherwise)

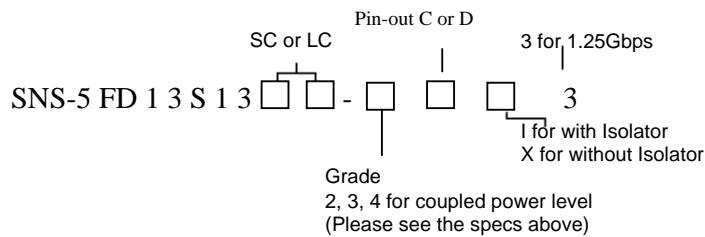
Parameter	Symbol	Test Conditions	Min	Typical	Max	Units
Peak Wavelength	λ_C	$P_o, T_o=-20\text{--}85^\circ\text{C}$	1290	1310	1330	nm
Threshold current	I_{th}	$P_o, T_c=85^\circ\text{C}$	-	6 30	20 40	mA
Operating voltage	V_{op}	P_o	-	1.1	1.8	V
Optical output power	P_o	$I_{th}+20\text{mA},$				
-2			0.4	-	-	mW
-3			0.7	-	-	mW
-4			1.2	-	-	mW
Rise time/Fall time	tr/tf	1.25Gbps, 10~90pst	-	200	400	ps
Side Mode Suppression Ratio	SMSR	$P_o, T_o=-20\text{--}+85^\circ\text{C}$	30	40		dB
Tracking error	TE	$P_o, T_o=-20\text{--}+85^\circ\text{C}$	-1.0	-	1.0	dB
Monitor Current (PD)	I_m	$P_o, V_{RD}=1\text{V}, R_L=10\Omega$	0.05	0.5	-	mA
Dark Current (PD)	I_d	$V_{RD}=5\text{V}$	-	-	0.1	μA
Capacitance (PD)	Ct	$V_{RD}=5\text{V}, f=1\text{MHz}$	-	10	20	pF
Minimum Isolation (w/isolator)		$T_o=0\text{--}+60^\circ\text{C}$	40	-	-	dB

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	unit
Optical Output Power	P_o		3	mW
Operating Current (LD)	I_{op}	-	150	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	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40	+100	$^\circ\text{C}$
Lead Soldering temperature (10sec)	T_L	-	260	$^\circ\text{C}$

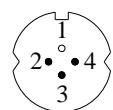
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Ordering Information



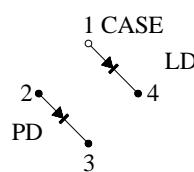
Pin Connections

BOTTOM VIEW

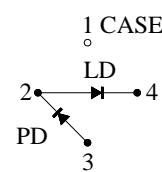


UNIT : MM

C TYPE
PIN CONNECTIONS



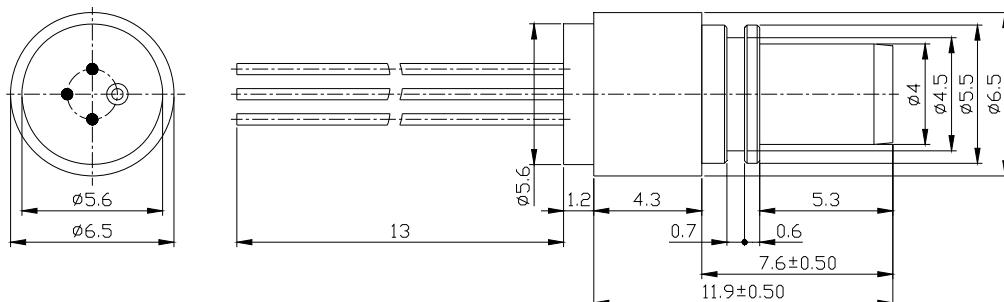
D TYPE
PIN CONNECTIONS



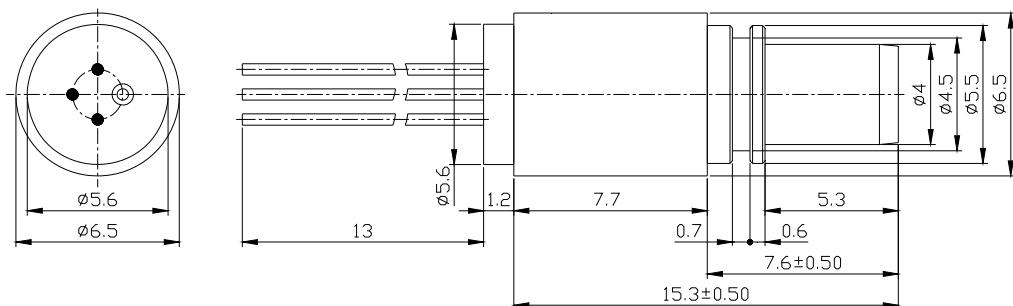
Dimension

SC Type

Power Grade 2



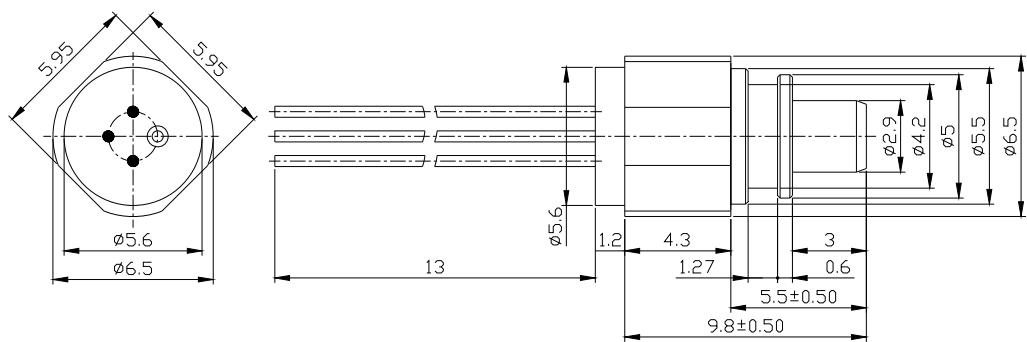
Power Grade 3,4



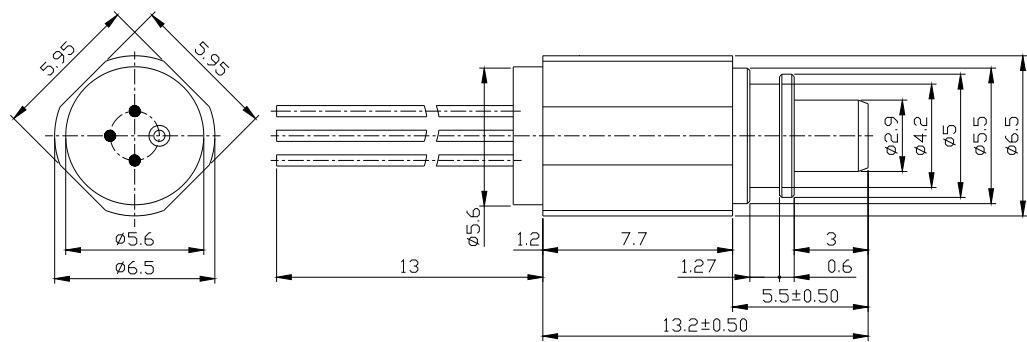
1.25Gb/s 1310nm DFB Laser Diode TOSA

LC Type

Power Grade 2



Power Grade 3, 4



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1310 nm DFB LD
Fiber-coupled Power vs. Drive Current (-4 grade)

