

Laser diode

L9278-14

TOSA type, 1310 nm FP (Fabry-Perot) laser diode



Features

- 1310 nm FP (Fabry-Perot) laser diode
- $\phi 1.25$ mm sleeve type TOSA (Transmitter Optical Sub-Assembly)
- High-speed response: 2.5 Gbps
- Optical output: 0.2 mW

Applications

- Optical fiber communication
- Gigabit ethernet
- Fiber channel

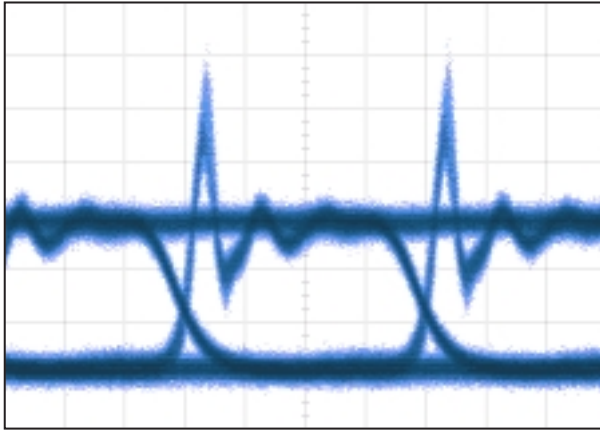
■ Absolute maximum ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Remark	Value	Unit
Forward current	IF Max.		Ith + 14 (CW)	mA
		Duty ratio 50 %	Ith + 28 (pulse)	
Maximum reverse voltage	VR Max.		2	V
Forward current (photodiode)	IFm Max.		2	mA
Maximum reverse voltage (photodiode)	VRm Max.		20	V
Operating temperature	Topr		-20 to +70	$^\circ\text{C}$
Storage temperature	Tstg		-40 to +85	$^\circ\text{C}$

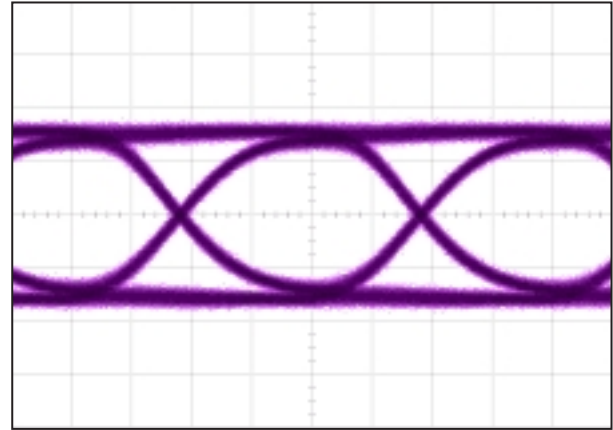
■ Electrical and optical characteristics [$T_a=25^\circ\text{C}$, $I_F=I_{th} + 10$ mA, SM fiber (9.5/125 μm), CW]

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage	VF		-	1.1	1.5	V
Threshold current	Ith		-	5	15	mA
Fiber end output	PF		-	0.2	-	mW
Peak emission wavelength	λ_p		1290	1310	1330	nm
Spectral half width	$\Delta\lambda$		-	1.0	4.0	nm
Rise/Fall times	tr, tf	20 to 80 %, I _{bias} =Ith	-	200	-	ps
Monitor current (photodiode)	Im	VR=2 V	-	0.35	-	mA
Dark current (photodiode)	Id	Dark state, VR=2 V	-	-	100	nA
Tracking error	TE	CW, APC	-	-	1.5	dB

■ Eye diagram

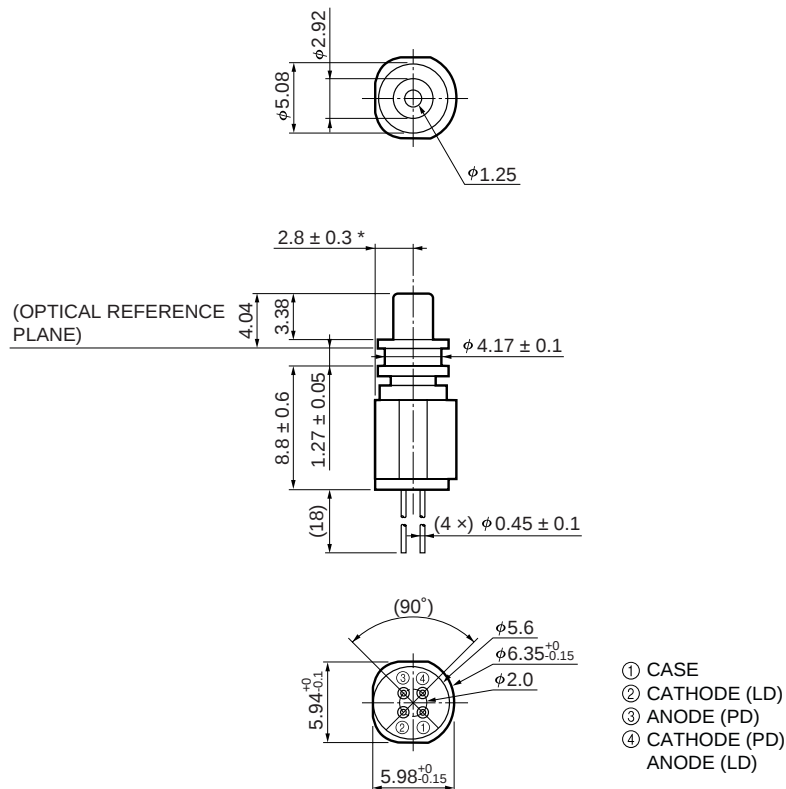


Bit rate=2.5 Gbps, NRZ, PN=31,
Bias current=Ith, Modulated current=20 mApp



Bit rate=2.5 Gbps, NRZ, PN=31
1.866 GHz, 4th Bessel filter used

■ Dimensional outline (unit: mm, tolerance unless otherwise noted: ± 0.2)



* The center of sleeve to the side surface

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