Feature

- High sensitivity (-28dBm)
- Low noise high speed TIA
- 10Gbps (OC-192)
- XMD compliant

Applications

- Optical communications
- Optical LAN
- OE converters

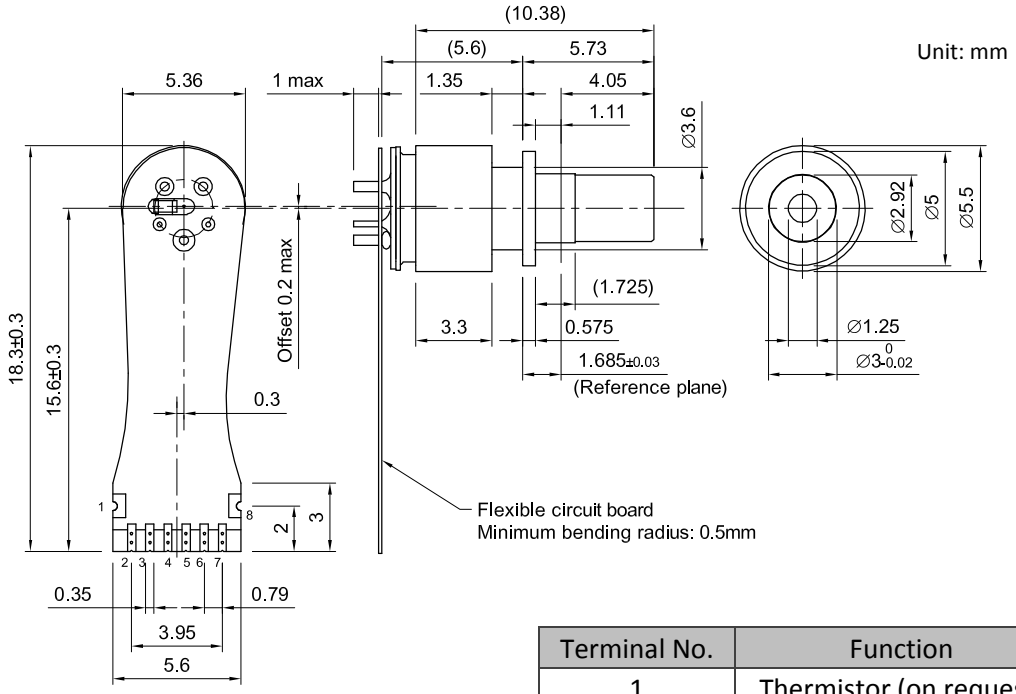
XMD-LC-ROSA
APD-TIA type

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Note
Supply voltage	V_{CC}	0 to 4.0	V	
Maximum optical power imput	P_{imax}	0.1	mW	
Operating temperature	T_{opr}	-40 to +85	°C	
Storage temperature	T_{stg}	-40 to +85	°C	

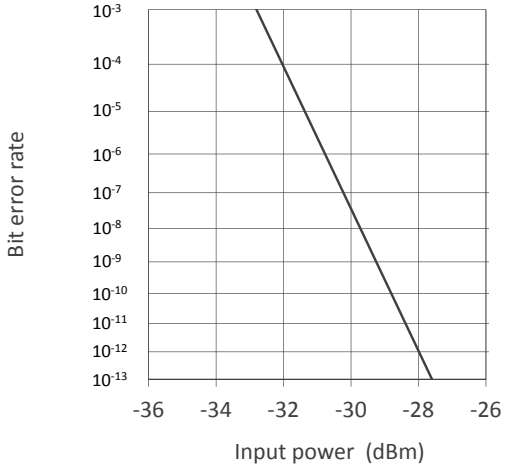
Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating voltage	V_{op}	3.1	3.3	3.5	V	
Supply current	I_{CC}	-	55	68	mA	V_{CC}=3.1 to 3.5
Breakdown voltage	V_B	25	30	40	V	I_D=10μA
Dark current	I_D	-	25	100	nA	V_R=V_B x 0.9
Responsivity	R	0.7	0.85	-	A/W	λ=1550nm, M=1
Bandwidth @-3dB	BW	-	9.0	-	GHz	P_i=-20dBm, M=10
Optical sensitivity	P_{imin}	-25	-28	-	dBm	BER=10^{-12} with 2^{23}-1 PRBS at 10Gbps
Transimpedance	Z_t	1.8	2.4	3.0	kΩ	P_i=-20dBm, M=10 R_L=50Ω, differential

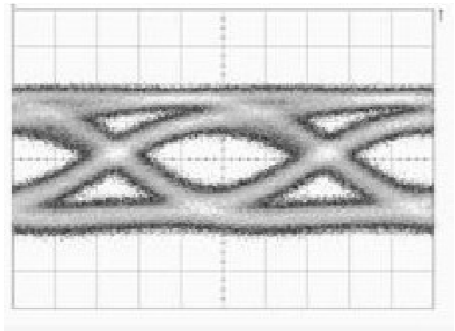


Terminal No.	Function
1	Thermistor (on request)
2	Vcc
3	Signal Ground
4	Out
5	Out_B
6	Signal Ground
7	No User Connection
8	V_{APD}

Bit Error Rate



Eye Diagram



Hor.:20ps/div, Ver.:30mV/div
Pi=-28dBm, BR=10Gbps, single ended

- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (EU2002/95/EC).

Opto-technologies for the Future

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