

Tx 10G 1270nm DFB / Rx 10G 1577 APD-TIA SC/APC

XGSPON ONU Pigtail ONU BOSA

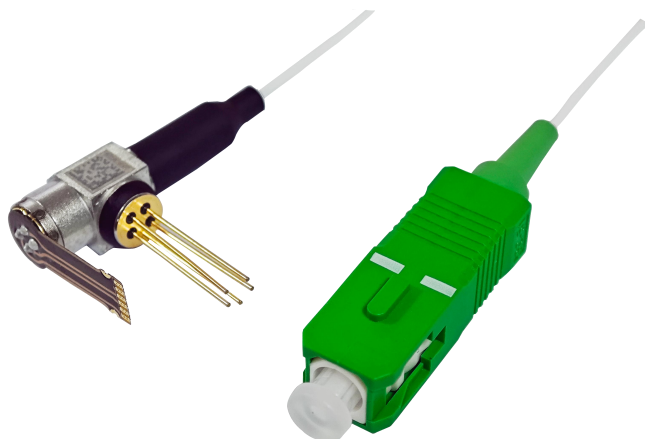
CL-LA-XGSONU-SU-P

Features

- ◆ DFB uncooled laser diode
- ◆ High sensitive APD-TIA
- ◆ SC/APC Pigtail

Descriptions

- ◆ 10Gbps Tx 1270nm DFB LD/Rx 1577nm integrated WDM filter Pigtail 5 Pin BOSA
- ◆ The Case is isolator with the GND PIN of APD-TIA
- ◆ Compliant the with ROHS (Restriction on Hazardous Substance) standard
- ◆ Compliant the MIL-STD-883E



1. Absolute Maximum Ratings($T_c=25\pm3^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	$^{\circ}\text{C}$
Operating Case Temperature	Top	-5	85	$^{\circ}\text{C}$
Reverse Voltage(LD)	V_{RL}	---	2	V
Reverse Voltage(MPD)	V_{RD}	---	10	V
Photodiode Forward Current(MPD)	I_{FD}	---	2	mA
Forward Current (LD)	I_{FL}	---	120	mA
Lead Soldering (Temperature)/(Time)	---	---	260/10	$^{\circ}\text{C}/\text{Sec}$
ESD	500	---	---	V

2. Transmitter Optical And Electrical Characteristics

(Unless specified else , the specifications below are defined at $T_C=25\pm3^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Output Optical Power	Pf	2.5	---	4.0	mW	CW, Iop=Ith+20mA
Threshold Current	Ith	---	---	15	mA	CW , Tc=25°C
		---	---	45	mA	CW , Tc=-5 ~ 85°C
Center Wavelength	λ_c	1260	1270	1280	nm	CW, Iop=Ith+20mA
Side Mode Suppression Ratio	SMSR	35	---	---	dB	CW, Pop=Ith+20mA
Spectrum Width (-20dB)	$\Delta\lambda$	---	---	1.0	nm	CW, Pop= Ith+20mA
Operating Voltage	Vop	---	1.2	1.8	V	CW, Iop= Ith+20mA
Monitor Current	Imon	0.1	---	1.2	mA	CW, Iop=I Ith+20mA
Monitor Dark Current	Id	---	---	100	nA	Vrd=5V
Tracking Error	TE	-1.5	---	1.5	dB	APC,Pf(Iop=Ith+20mA)-5°C/+25°C, +25°C/+85°C

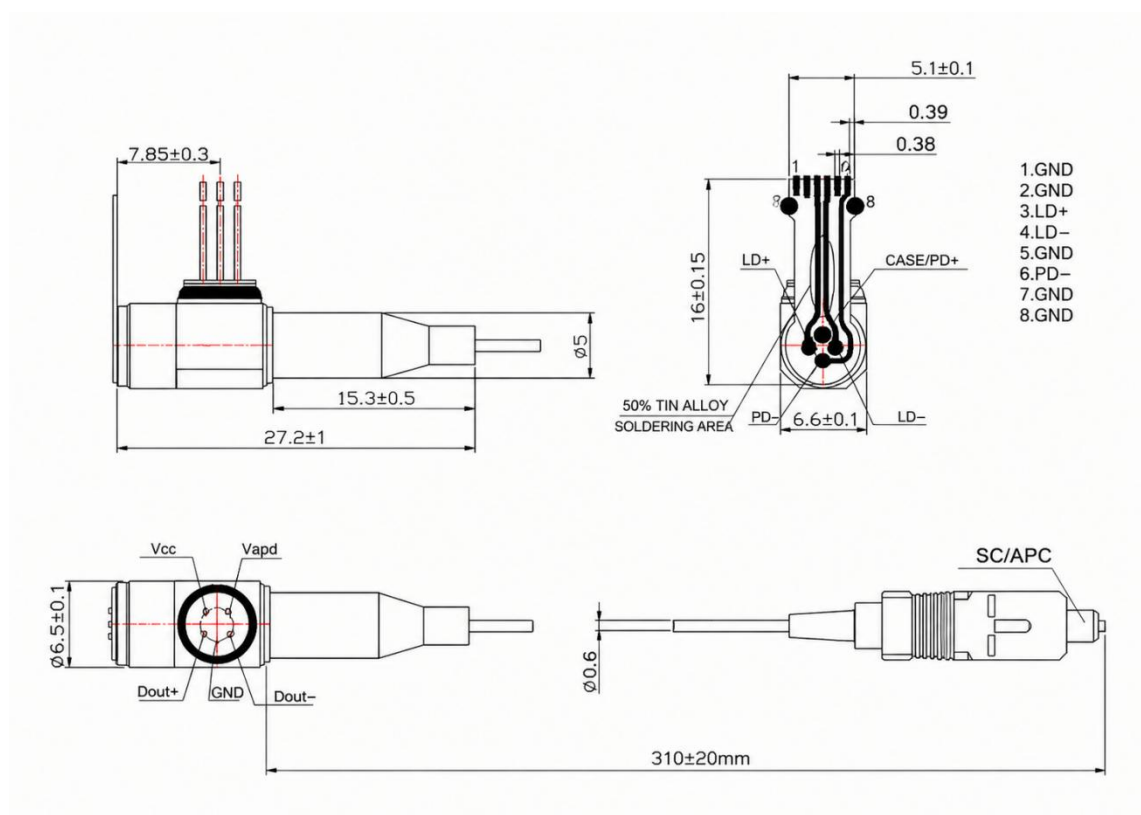
3. Receiver Optical-Electro Characteristics ($T_C=25^\circ\text{C}$, $V_{cc}=3.3\text{V}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Operating Wavelength	λ	1575	1577	1580	nm	
Receiver Data Rate		---	9.95	---	Gb/s	
Supply Voltage	Vcc	2.97	3.3	3.46	V	
TIA Supply Current	Icc	18	27	50	mA	Vcc=3.3V



Sensitivity	Sen	---	---	-29.5	dBm	$\lambda=1577\text{nm}$, 10Gbps PRBS=2 ³¹ -1, ER=8dB, BER $\leq 10^{-3}$, Vbr-3V · 25°C
Breakdown voltage	Vbr	25	---	50	V	I=10uA
Overload Power	Pol	-7	---	---	dBm	$\lambda=1577\text{nm}$, 10Gbps PRBS=2 ³¹ -1, ER=8dB, BER $\leq 10^{-3}$, Vbr-3V
Optical Crosstalk From Internal Laser	Xopt	---	---	-40	dB	1270nm/1577nm
Dark Current	Id	---	---	100	nA	Vcc=3.3V, Vbr-3V, 25°C
Rx filter specification	Isolation	30	---	---	dB	1310~1550nm

4. Dimension Outline



Unit: mm, undeclared tolerance $\pm 0.05\text{mm}$