

10G EPON OLT BOSA(10G1577T 10G1270R)
Features:

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-DFB Laser Diode
- ◆ Low threshold, high slope efficiency and high output power
- ◆ Operating Case Temperature: -5°C to +75°C
- ◆ High channel isolation
- ◆ Low return loss
- ◆ Optional with Isolator

Applications:

- ◆ EPON OLT side
- ◆ Long distance digital transmission system
- ◆ Cable television system
- ◆ WDM systems

Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
10G 1577nm EML Transmitter				
Storage Temperature	Tstg	-40	85	°C
Operating Case Temperature	Topr	-5	75	°C
Soldering Temperature	Tsld	---	260<10s	°C
EML LD Reverse Voltage	V _{RL}	---	2	V
EML LD Forward Current	I _f	---	150	mA
EA Reverse Voltage	V _m	-3	1	V
EML MPD Reverse Voltage	V _{mon}	---	20	V
EML MPD Forward Current	I _{mon}	---	2	mA
TEC Cooling Voltage	VTEC	---	1.5	V
TEC Cooling Current	ITEC	---	1.2	A
10G 1270nm APD Receiver				
Storage Temperature	Tstg	-40	85	°C
Operating Case Temperature	Topr	-40	85	°C
Lead Soldering (Temperature)/(Time)	---	---	260/10	°C/Sec

Electrical and Optical Characteristics – Transmitter:

Unless otherwise specified, the specifications below are defined at TC=25±3°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Laser Operating Temperature	T _{ld}	---	45	---	°C	CW, I _{op} =I _{th} +20mA, T _c =25°C
Threshold Current	I _{th}	---	20	40	mA	at T _c =25°C
Operating Current	I _{op}	---	---	115	mA	at T _c =25°C P _f =6.8dBm
LD Forward Voltage	V _f	---	---	2.5	V	I _f =I _{op}
Center Wavelength	λ _c	1575	1577	1580	nm	CW, P _{op} =4ddBm, T _{ld}
Spectral Width(-20dB)	Δλ	---	0.2	0.4	nm	CW, P _{op} =4ddBm, T _{ld}
Side Mode Suppression Ratio	SMSR	35	---	---	dB	CW, P _{op} =4ddBm, T _{ld}
Monitor Current	I _{mon}	50	---	2000	μA	at T _c =25°C P _f =6.8dBm
Monitor Dark Current	I _d	---	---	0.1	μA	V _{RD} =1V
Rise/Fall Time	T _r /T _f	---	---	45	ps	20%~80%
Thermistor Resistance	R _{th}	9.5	10	10.5	ΩK	at T _c =25°C T _{ld}
B constant of R _{th}	B	3800	3930	4000	K	---
Optical Isolation	ISO	30	---	---	dB	---
Tracking Error	TE	-1.2	---	1.0	dB	APC, -5/°C+75°C, +75°C/+25°C

Electrical / Optical Specifications – Receiver:

Unless otherwise specified, the specifications below are defined at TC=25±3°C

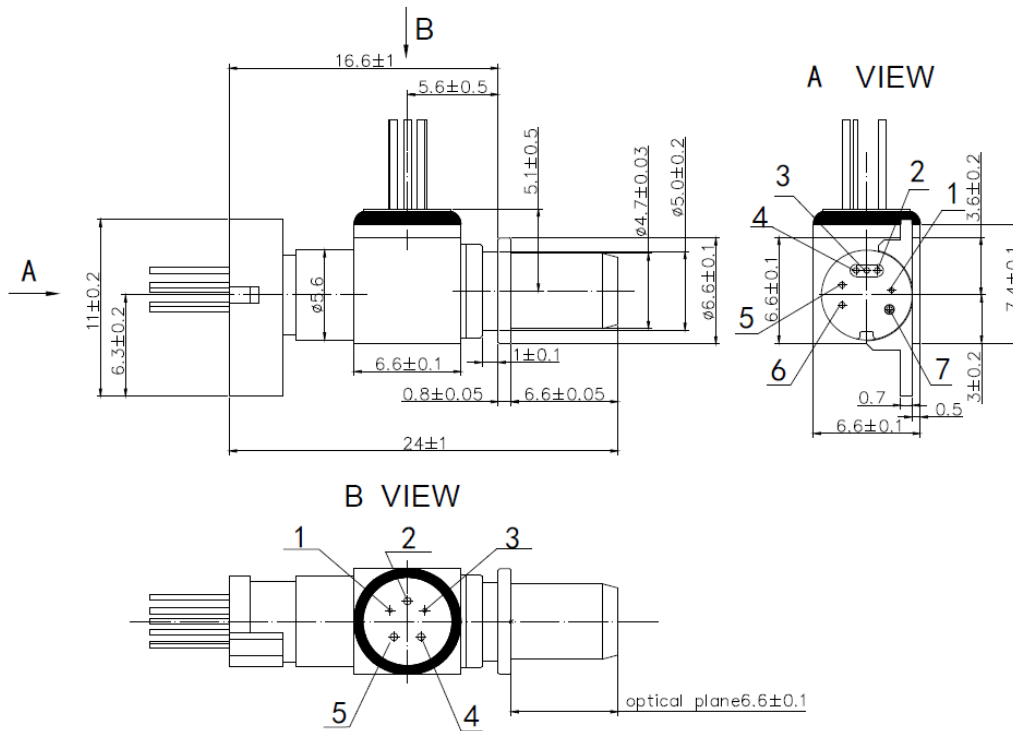
Description	Symbol	Min.	Typ.	Max.	Unit	Note
Operating wavelength	λ	1260	1270	1280	nm	---
TIA Supply Voltage	V _{cc}	3.0	3.3	3.6	V	---
Supply Current	I _{cc}	---	40	---	mA	---
Break Down Voltage	V _{br}	22	27	32	V	I _d =10μA
Operating Current	I _{op}	8.0	---	---	μA	λ=1270nm P _{in} =-30dBm V _{op} =V _{br} -2V
Optical crosstalk	X _{opt}	---	---	-40	dB	---

Pin Assignment:

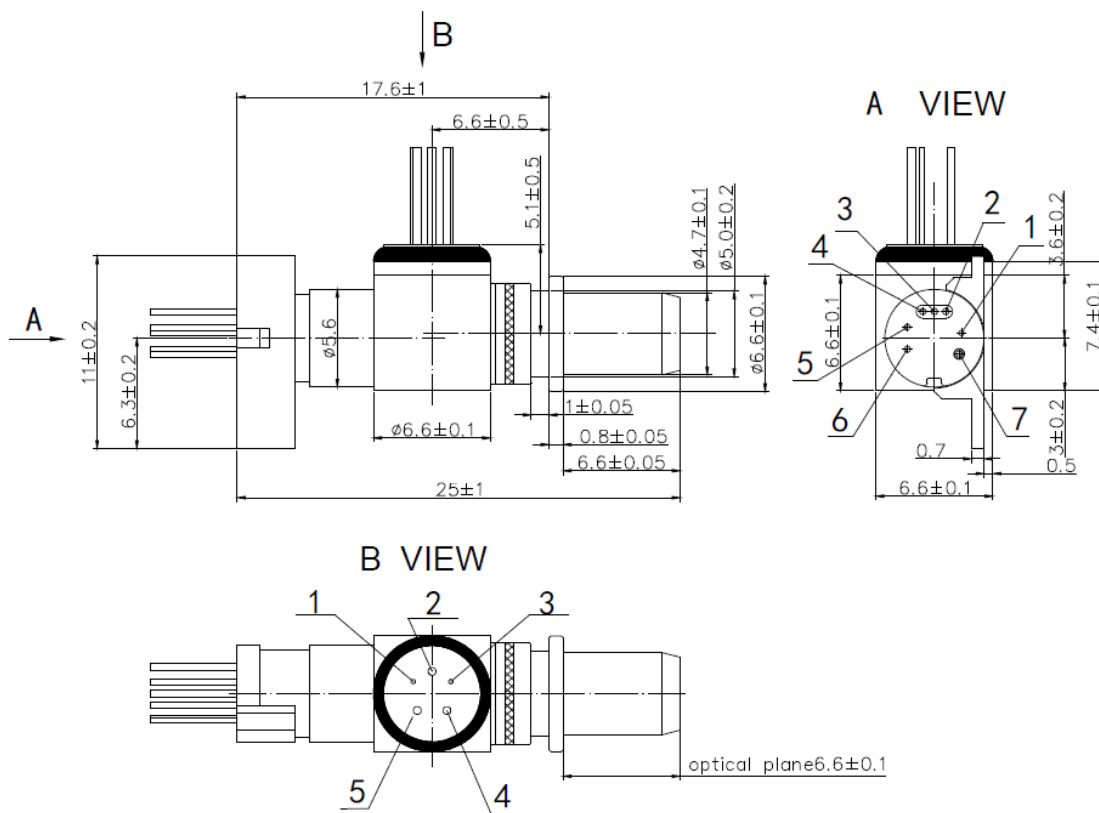
EA-LD	
PIN Number	Function
1	EAM Data(Anode)
2	PD Anode
3	TEC Anode
4	TEC Cathode
5	LD Bias(Anode)
6	Thermistor
7	Signal GND

APD-TIA	
PIN Number	Function
1	Dout-
2	Case
3	Dout+
4	V _{cc}
5	V _{apd}

Package Dimension:



SC/PC receptacle (Non-electrical isolation)



SC/PC receptacle (Electrical isolation)

Nomenclature:HEBS - □ □ □ □ □ □ □
A B C D E F G

Code	Parameter	Detailed Description	
A	Laser Type	E=EML	
B	Launch Wavelength	A=1577	
C	Launch Data Rate	10=10G	
D	Receiver Wavelength	H=1270	
E	Receiver Data Rate	T=10G	
F	Connector	L=LC/PC	
G	Isolator	G=with I	
H	Connector Type	1= Non-electrical isolation	2= Electrical isolation

Precaution:

- (1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Notice:

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