GPON OLT BOSA (1490nmTX DFB 1.25G/1310nmRX PIN-TIA 1.25G)

Features:

- Coaxial Package
- InGaAsP/InP MQW-DFB Laser Diode
- Low threshold, high slope efficiency and high output power
- Operating Case Temperature: -40℃ to +85℃
- Single -mode fiber-stub with LC connector
- High channel isolation
- Low return loss

Applications:

- Long distance digital transmission system
- Cable television system
- WDM systems

Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+85	℃
Operating Case Temperature	Top	-40~+85	℃
Operation Relative Humidity		85	%
Reverse Voltage (LD)	VrL	2	V
Reverse Voltage (PD)	VrP	20	V
Monitor PD Forward Current (PD)	IrP	2	mA
TIA Supply Voltage	Vcc	3.6	V
Soldering Temperature (<10s)	Stemp	260	℃

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Electrical and Optical Characteristics – Transmitter:

(If=Ith+20mA, Pf=1mW, SMF, Tc=+25+/-2°C, unless otherwise noted.)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	CW	—	8	15	mA
		CW, Tc=-40~+85	—	—	40	
Output Power (After coupled)	Po	CW, If=Ith+20mA	0.2	—	0.99	mW
Operating Current	If	CW	—	30	40	mA
		CW, Tc=-40~+85	—	40	70	
Operating Voltage	Vf	CW, Tc=-40~+85	—	1.1	1.5	V
Side Mode Suppression Ratio	SMSR	CW	35	40	—	dB
Wavelength	λ_C	CW	1480	1490	1550	nm
Spectrum Width(-20dB)	Δλ	CW, Iop=Ith+20mA,	—	—	1.0	nm
Tracking Error	ΔPf	APC, -40℃/+25℃, +25℃/+85℃	-1.5	—	1.5	dB
Monitor Current	Im	CW, VrP=5V, Tc=-40~+85	0.1	0.4	2.0	mA
Monitor Dark Current	Id	CW, Vrp=5V	—	—	0.1	uA
Monitor Capacitance	C	Vrp=5V, f=1MHz	—	—	10	pF
Connector Repeatability	—		-1	—	1	dB

Electrical / Optical Specifications – Receiver:

(Unless specified else,the specifications below are defined at Tc=25℃,SMF)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Wavelength	λ	1300	1310	1330	nm	
Supply Current	Icc	23	28	35	mA	
Saturation Power	Psat	—	-3	—	dBm	
Small-Signal Bandwidth	BW	730	812	893	MHz	
Sensitivity	Sens	—	—	-26	dBm	λ =1310nm PRBS7, BER=10^{-10}, @1.25G
Output Impedance	Zo	—	50	—	Ω	Single ended

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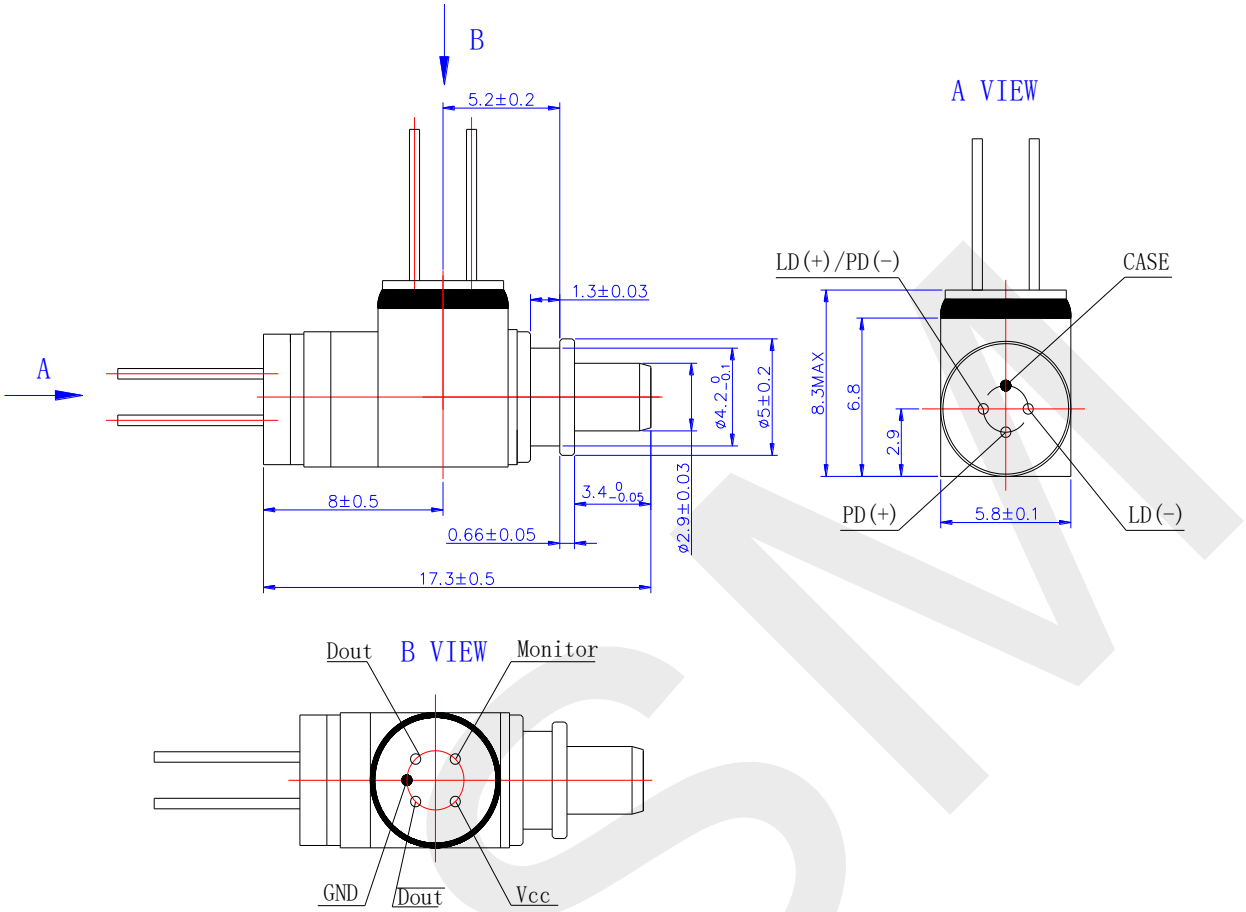
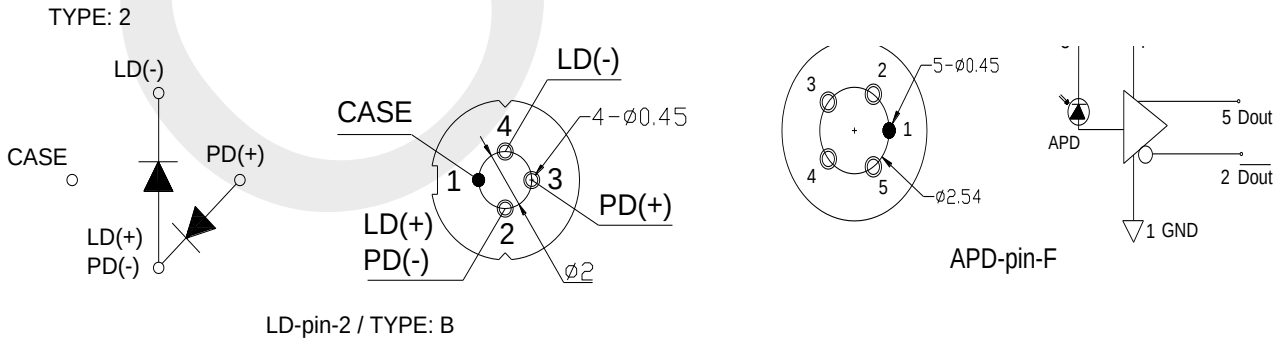
Package Dimension: *Note1



Note1: PIN direction and laser mark can be customized.

Pin Assignment:



LD-pin-2 / TYPE: B

APD-pin-F

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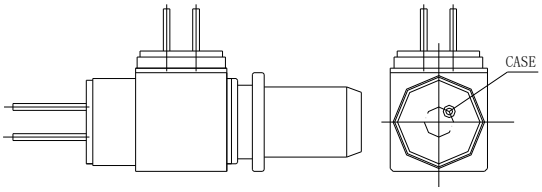
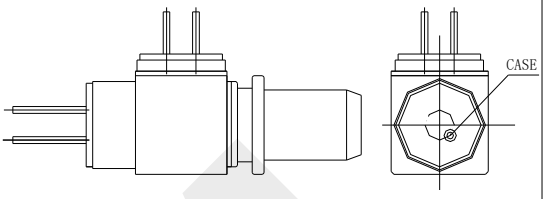
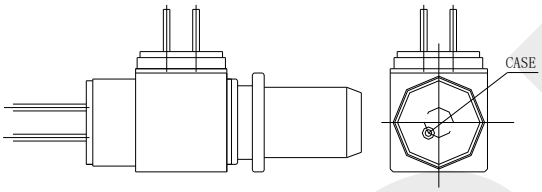
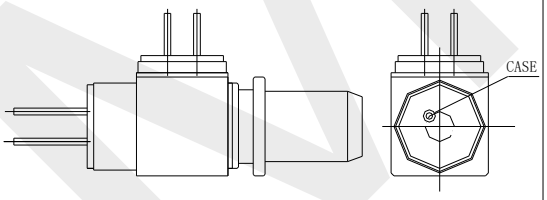
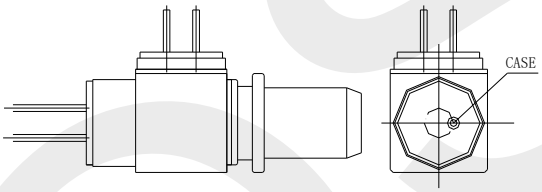
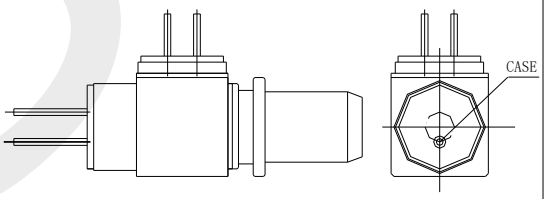
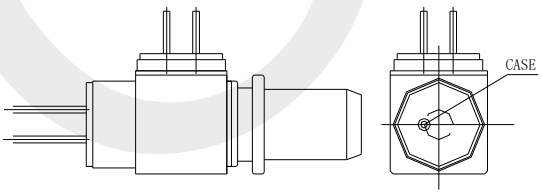
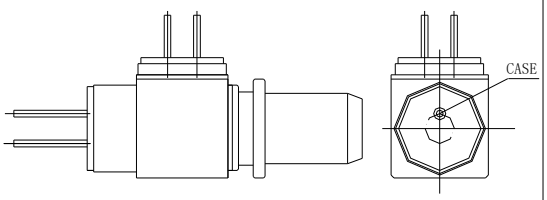
TX Pin Order Code:*Note2、3、4

Launch			
			
Case direction	A Type	Case direction	B Type
			
Case direction	C Type	Case direction	D Type
			
Case direction	E Type	Case direction	F Type
			
Case direction	G Type	Case direction	H Type

Note2、This picture is for pluggable, pigtail BIDI chip PIN package direction's reference

Note3、This picture is suitable for RX Pin direction comparison .

Note4、The package direction is described as "×-×" For example "A-B", "A" is TX chip Pin direction, "B" is RX chip Pin direction.

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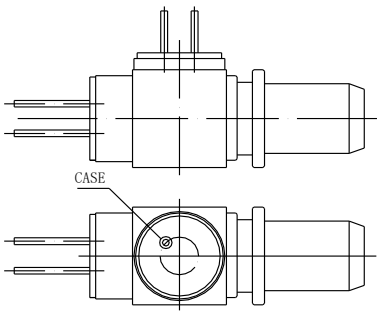
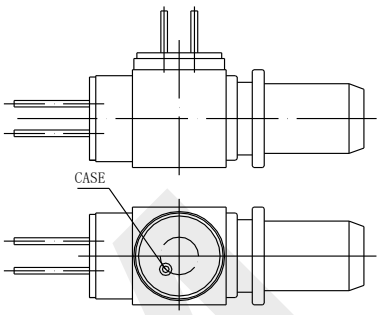
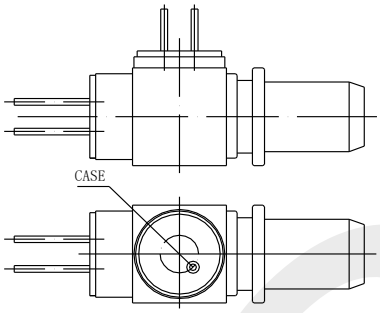
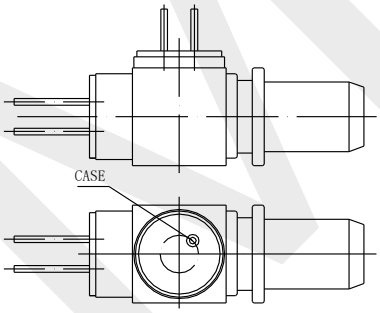
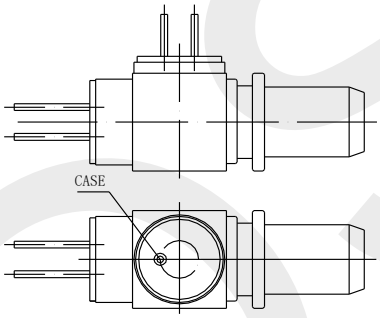
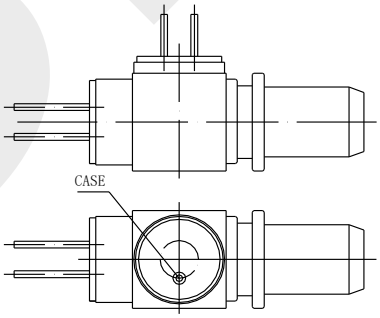
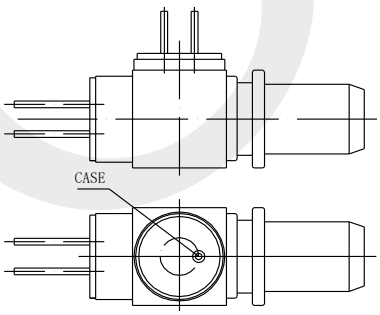
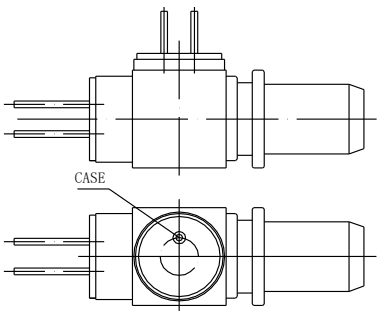
RX Pin Order Code:

Receive	
	
Case direction A Type	Case direction B Type
	
Case direction C Type	Case direction D Type
	
Case direction E Type	Case direction F Type
	
Case direction G Type	Case direction H Type

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Nomenclature:

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A B C D E F G H I J K L

Code	Parameter	Detailed Description							
A	Laser Type	D=DFB LD							
B	Launch Wavelength	L=1490nm							
C	Launch Data Rate	1=1.25G							
D	Output Power	05=0.2~0.99							
E	TX Pin Type	2=LD-pin-2							
F	Receiver Wavelength	3=1310nm							
G	Receiver Data Rate	7=1.25G							
H	Receiver Voltage	3=3.3V							
I	RX Pin Type	E= pin-E							
J	Connector	L=LC/PC							
K	TX Pin Package Direction	A	B	C	D	E	F	G	H
L	RX Pin Package Direction	A	B	C	D	E	F	G	H

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.

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