1550TX FP 1310RX PIN-TIA Receptacle 1×5&1×9 BOSA(FC&ST)

OSMBIDI-5205x3xxAxxxxx (1×5 & 1×9)

Features:

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

Applications:

- Long distance digital transmission system
- Cable television system
- WDM systems
- Compatible with 100M/2000M

Absolute Maximum Ratings:

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+85	℃
Operating Case Temperature	Top	-40~+85	℃
Operation Relative Humidity		85	%
Forward Current (LD).	IFD	150	mA
Monitor PD Reverse Voltage (LD)	VrL	2	V
Monitor PD Reverse Voltage (PD)	VrP	10	V
Monitor PD Reverse Current (PD)	IrP	2	mA
PD Reverse Voltage	Vpd	15	V
TIA Supply Voltage	Vcc	3.3	V
Soldering Temperature (<10s)	Stemp	260	℃

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Electrical and Optical Characteristics – Transmitter:

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Threshold Current	Ith	—	11	15	mA	CW,T=25°C
		—	—	35		CW,T=0~85°C
Output Power	Pf	0.2	—	0.99	mW	CW, If=Ith+20mA
Operating Voltage	Vf	—	1.2	1.5	V	CW, If=Ith+20mA
Slope Efficiency	Se	0.01	0.025	0.05	mW/mA	CW, If=Ith+20mA
Peak Wavelength	λp	1530	1550	1570	nm	CW,If=Ith+20mA
Spectral Width(RMS)	Δλ	—	—	3	nm	CW,If=Ith+20mA
Rise Time/Fall Time	tr/tf	---	---	120	ps	CW,20~80%
Tracking Error	ΔPf	-1.5	---	1.5	dB	APC,-20℃/+85℃
Monitor Current	Im	0.1	—	—	mA	CW, If=Ith+20mA,VrP=1V
Dark Current	Id	—	—	0.1	uA	Poc=0,VrP=1.7V
PD Capacitance	C	—	10	20	pF	VrP=5V@1MHz

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	1255	1310	1360	nm	
Supply Voltage	Vcc	3.0	3.3	3.6	V	
Supply Current	Icc	20	—	59	mA	Vcc=3.3V
Saturation Power	Psat	-3	0	—	dBm	
Sensitivity	Sen	—	-37	-35	dBm	λ=1310nm,155M, RBS=2^7-1,BER=10^{-10},
		—	-32	-31	dBm	λ=1310nm,622M, RBS=2^{23}-1,BER=10^{-10},
		—	-28	-27	dBm	λ=1310nm,1.25G, RBS=2^7-1,BER=10^{-10},
		—	-24	-22	dBm	λ=1310nm,2.5G, RBS=2^{23}-1,BER=10^{-10}

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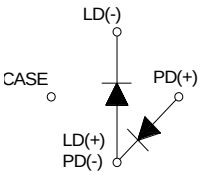
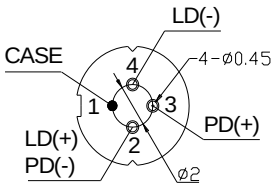
Pin Assignment:

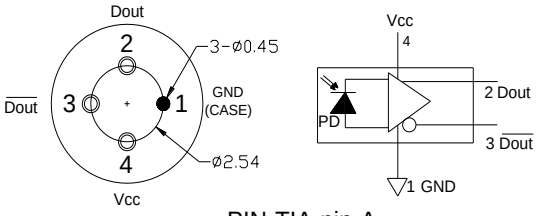
TYPE: 2





LD-pin-2 / TYPE: B

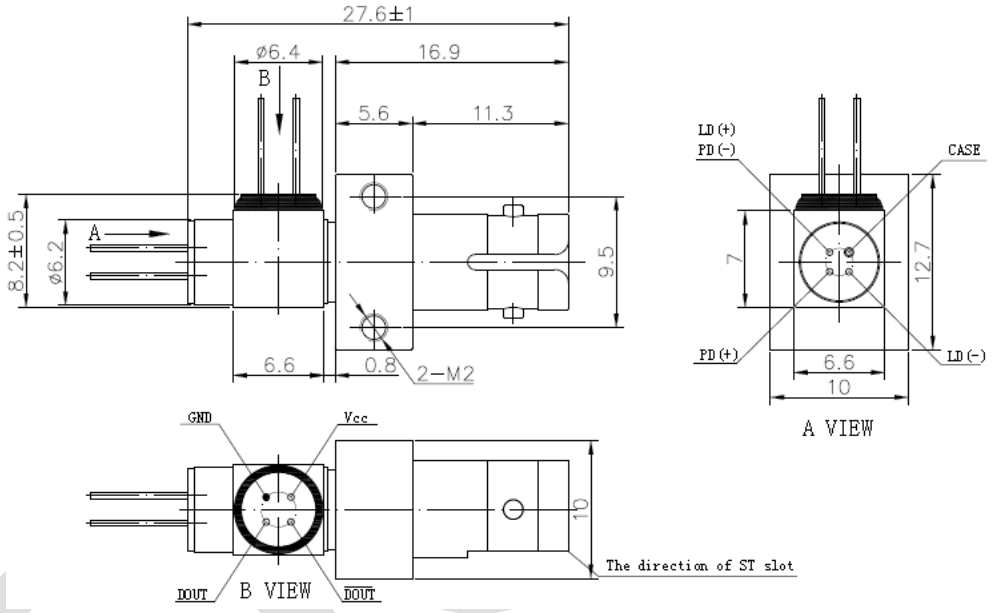
TYPE: A



PIN-TIA-pin-A

Package Dimension: *Note1

1×5 ST



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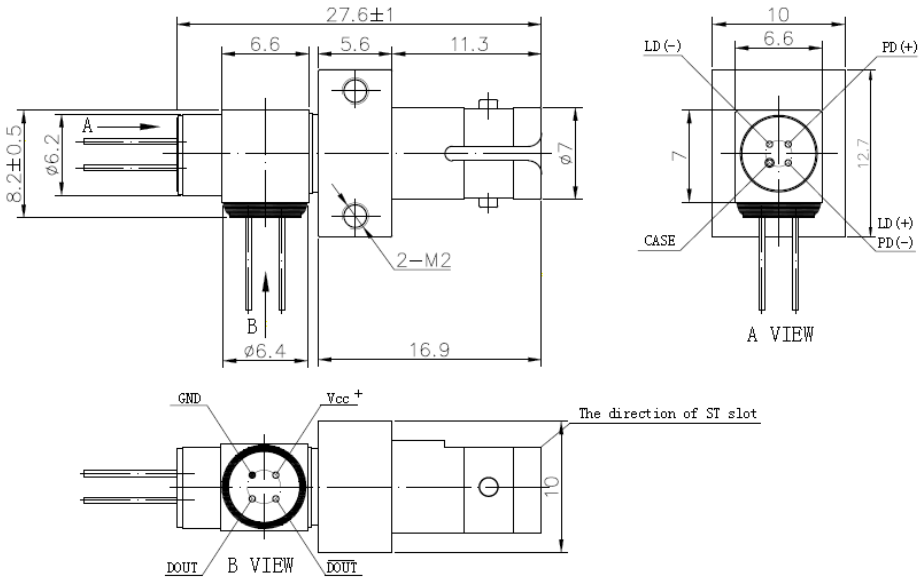

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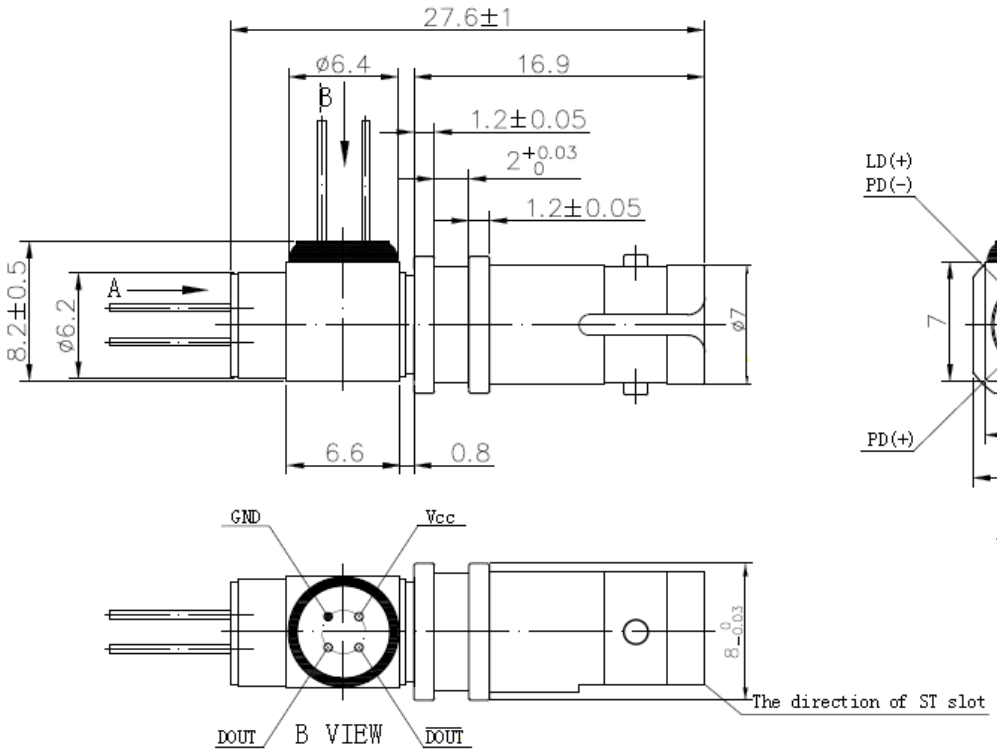
Code:D

1×9 ST



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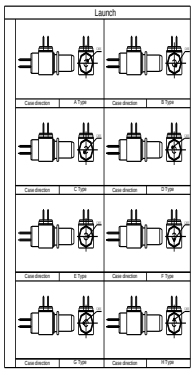

Code:D

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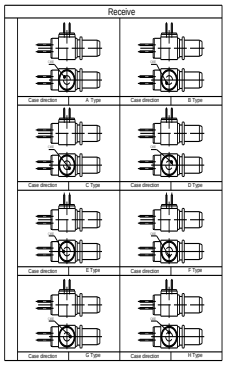
1×5 FC



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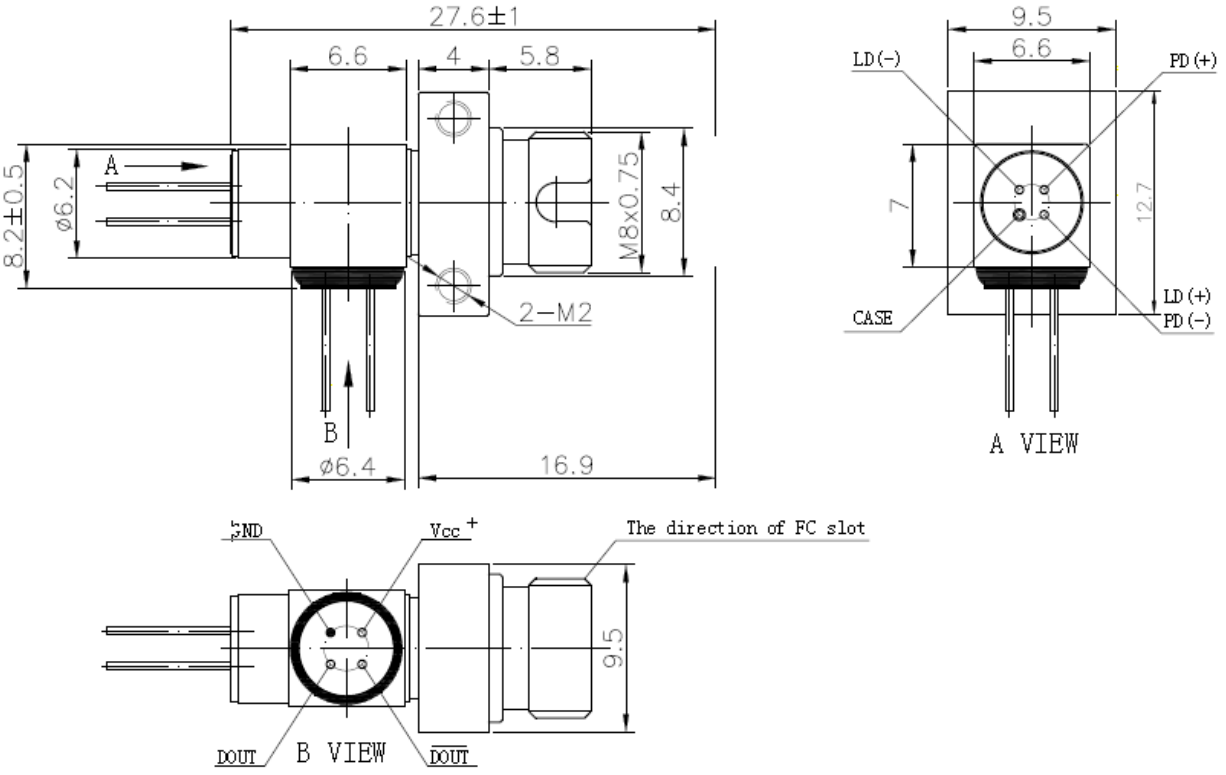

Code:D

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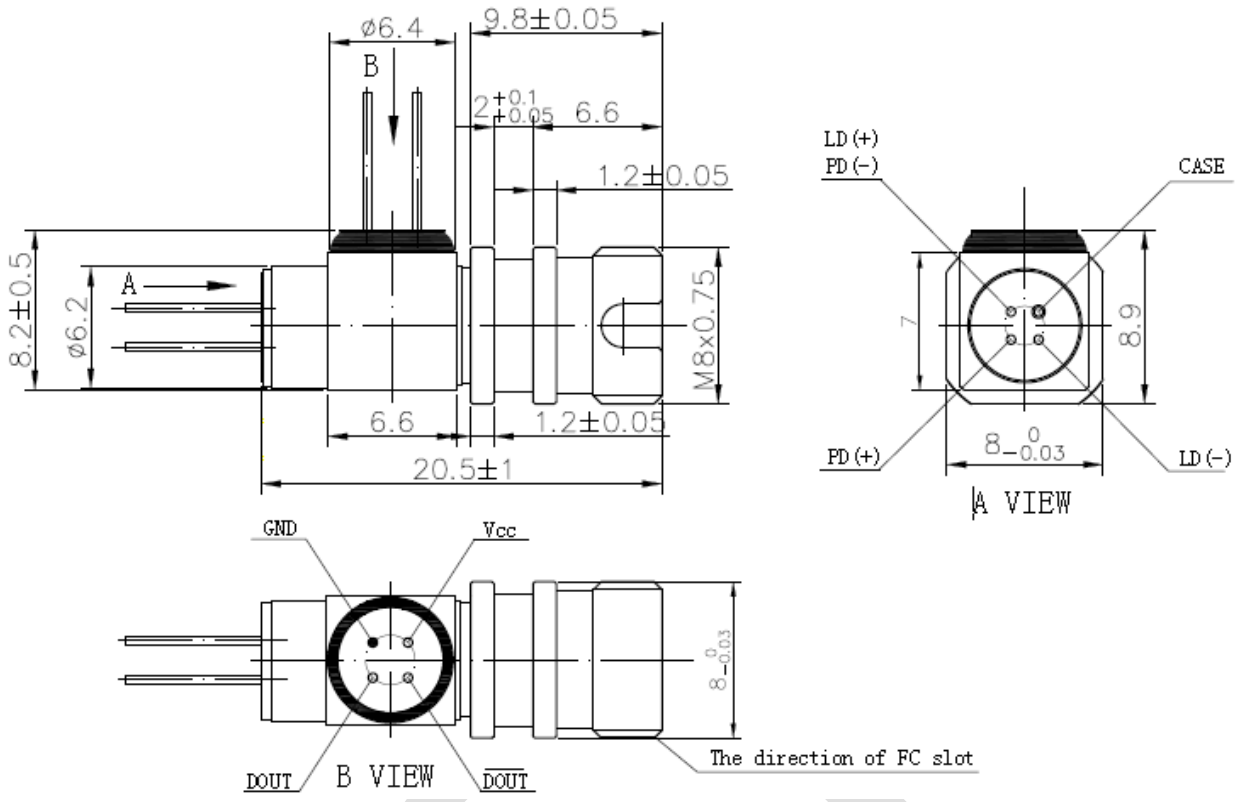
1×9 FC



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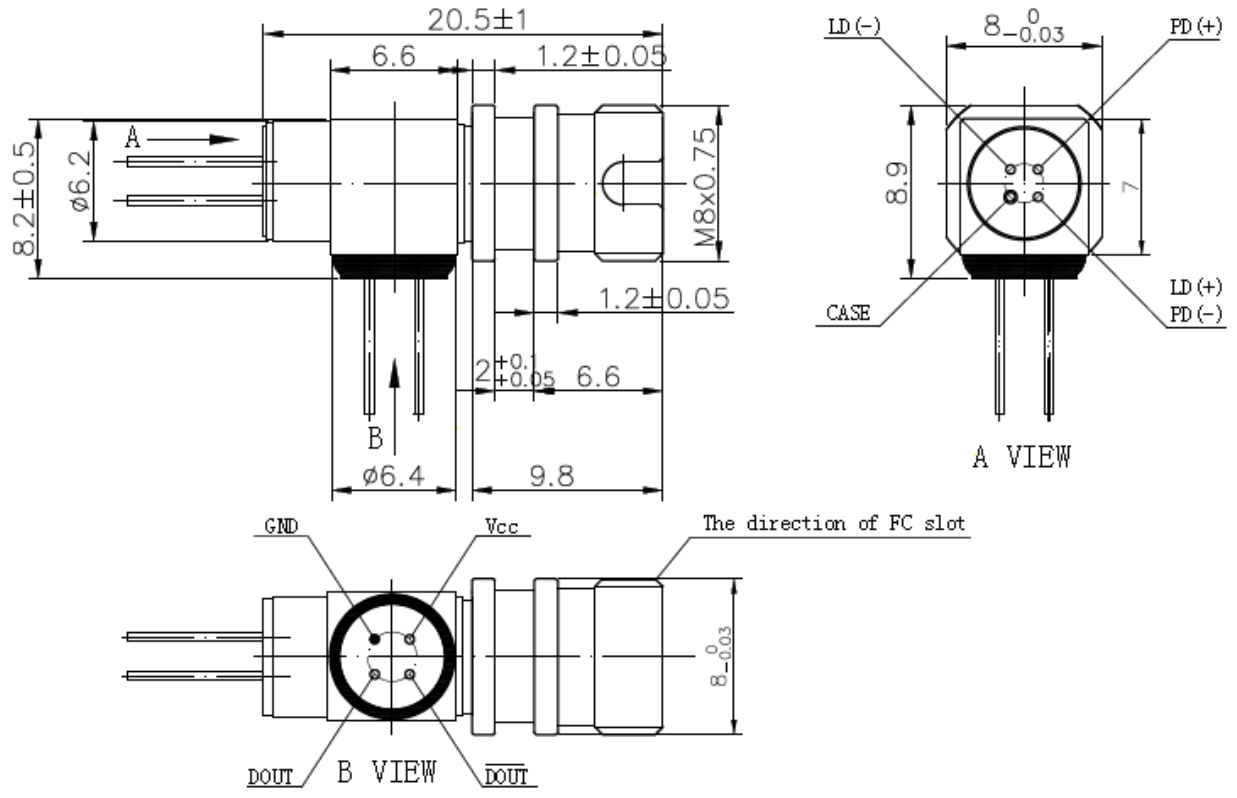

Code:D

Note1: PIN direction and laser mark can be customized.

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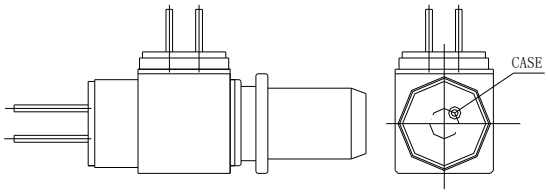
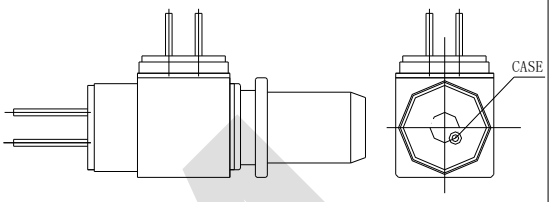
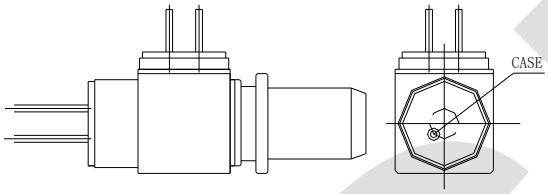
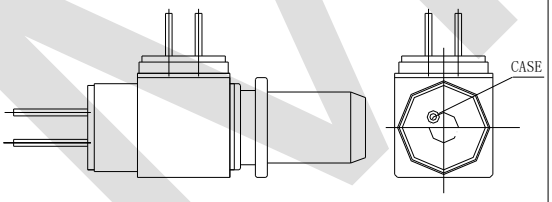
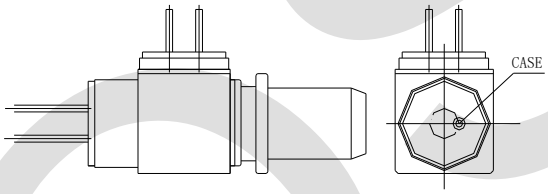
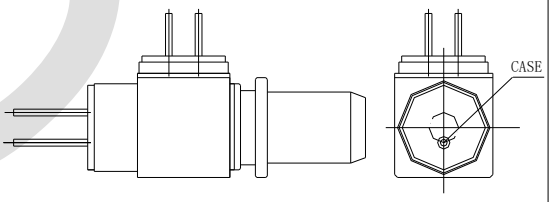
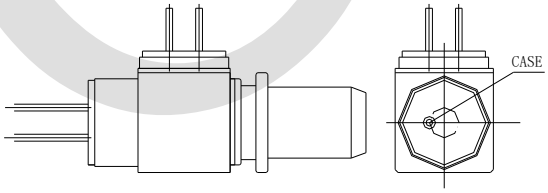
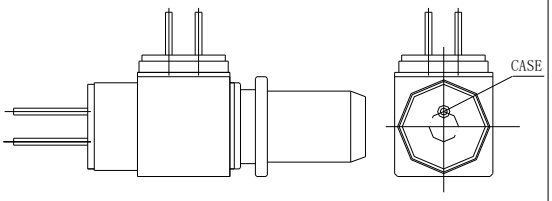
TX Pin Order Code:*Note2、3、4

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

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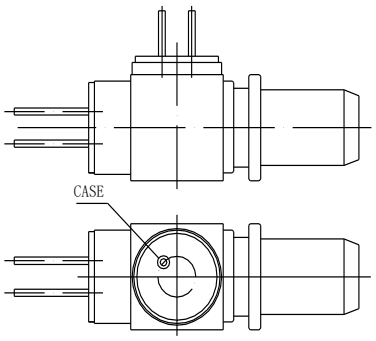
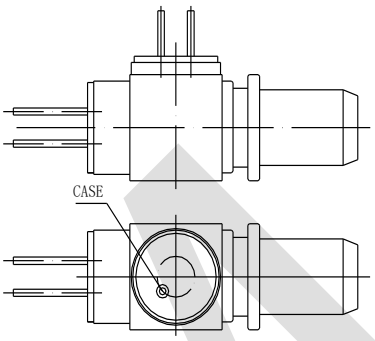
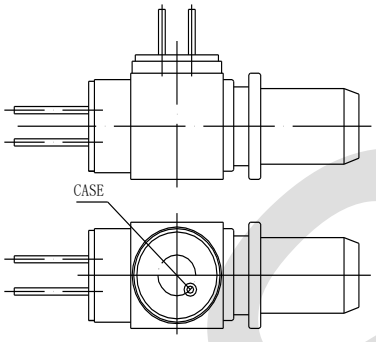
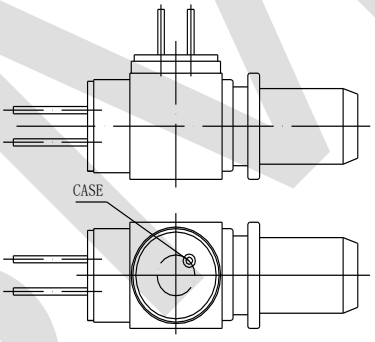
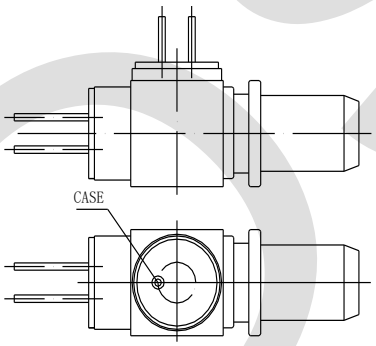
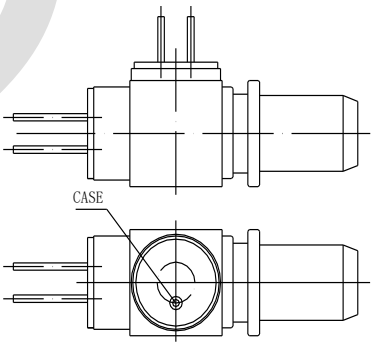
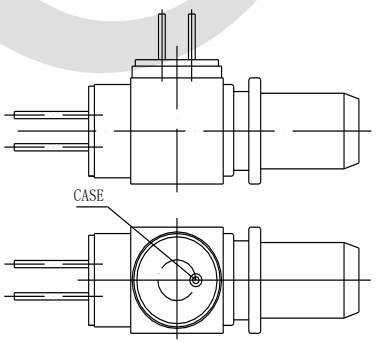
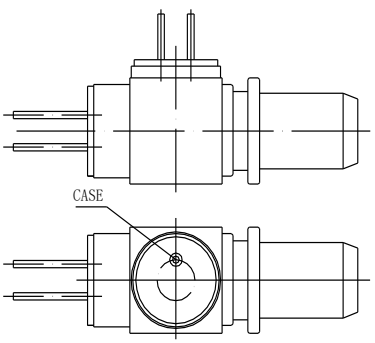
chip Pin direction.

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:

OSMBIDI-□ □ □ □ □ □ □ □ □ □ □ □ □ □

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

Code	Parameter	Detailed Description							
A	Laser Type	BLANK=FP LD				D=DFB LD			
B	Launch Wavelength	5=1550nm							
C	Launch Data Rate	1=1.25G				2=2.5G			
D	Output Power	05=0.2~0.99mW							
E	TX Pin Type	2=LD-pin-2							
F	Receiver Wavelength	3=1310nm							
G	Receiver Data Rate	3=155M		5=622M		7=1.25G		9=2.5G	
H	Receiver Voltage	0=3.3/5V		3=3V		5=5V			
I	RX Pin Type	A=PIN-TIA-pin-A							
J	Connector	E=1×5ST		F=1×5FC		M=1×9FC		W=1×9ST	
K	RX Direction Code	U=UP				D=DOWN			
L	TX Pin Package Direction	A	B	C	D	E	F	G	H
M	RX Pin Package Direction	A	B	C	D	E	F	G	H
N	RX TO Insulated With Shell	Blank= Insulation				N=NO Insulation			

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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