1310TX DFB 1550RX PD BOSA 2GHz CATV Transmission

HETRPD32xxx510MxxxxG

Features:

- Coaxial Package
- InGaAsP/InP MQW-DFB Laser Diode
- Low threshold, high slope efficiency and high output power
- Data Rate up to 2.5G
- Single-mode fiber pigtailed with SC FC ST or LC connector
- High channel isolation
- Low return loss
- Optional with Isolator
- Operating Case Temperature: -20℃ to +85℃
- RoHS Compliant Products Available

Applications:

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

Absolute Maximum Ratings:*Note1

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+85	℃
Operating Case Temperature	Top	-20~+85	℃
Reverse Voltage (Monitor PD)	V_{RD}	20	V
Photodiode Forward Current (Monitor PD)	I_{FD}	2	mA
Lead Soldering (Temperature)/(Time)	---	260/10	℃/Sec
Reverse Voltage (Analog PD)	Vrpd	30	V
Forward Current (Analog PD)	Ifpd	10	mA

*Note1: Exceeding any one of these values may destroy the device immediately.

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Electrical and Optical Characteristics – Transmitter:

(If=Ith+20mA, Pf=1mW, SMF (9.5/125μm), Tc=+25+/-2°C, unless otherwise noted.)

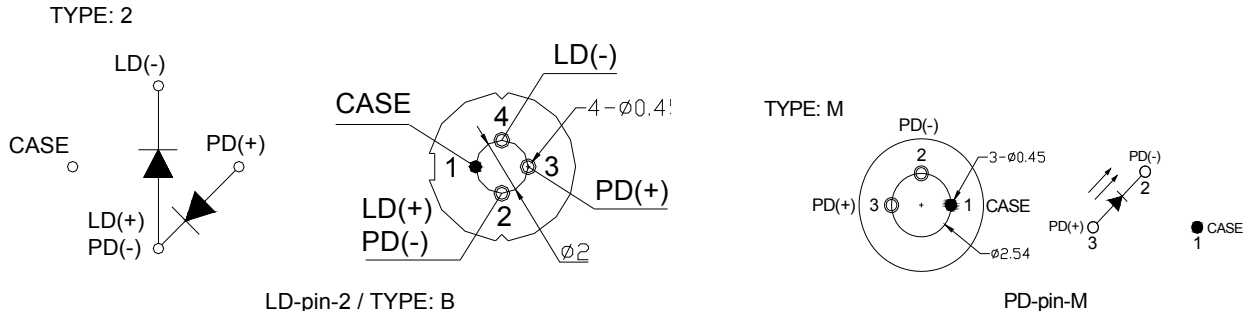
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	at Tc=25±3℃	---	10	15	mA
Output Power (After coupled)	Pf	CW, Iop=Ith+20mA	1.0	---	2.99	mW
Slope Efficiency	Se	CW, Average	0.05	---	0.15	mW/mA
Operating Voltage	Vop	CW, Iop=Ith+20mA	---	1.1	1.6	V
Peak Wavelength	λc	CW, Iop=Ith+20mA, Tc= -20~85°C	1290	1310	1330	nm
Side Mode Suppression Ratio	SMSR	CW, Iop=Ith+20mA, Tc= -20~85°C	35	40	---	dB
Monitor Current	Imon	CW, Iop=Ith+20mA	0.1	---	1.0	mA
Monitor Dark Current	Id	VRD=5V	---	---	0.1	μA
Relative intensity Noise	---	---	---	---	-145	dB/Hz
Optical Isolation	Iso	---	30	---	---	dB
Tracking Error	TE	APC,-20℃~+85℃	-1.5	---	1.5	dB
Rise/Fall Time	Tr/Tf	Ib=Ith, 20~80%	---	0.1	0.15	ns

Electrical / Optical Specifications – Receiver:

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Operating Wavelength*Note2	λ	---	1500	1550	1600	nm
Active Area	Φ	---	---	75	---	μm
-3dBm Bandwidth	BW	VR = 5V	2	---	---	GHz
Dark Current	Id	VR = 5V	---	---	1.0	nA
Responsivity	R	λ=1550nm	---	0.80	---	A/W

*Note2: Receiver Operating Wavelength can be customized.

Pin Assignment: *Note3



LD-pin-2 / TYPE: B

PD-pin-M

*Note3: Pin assignment can be customized.

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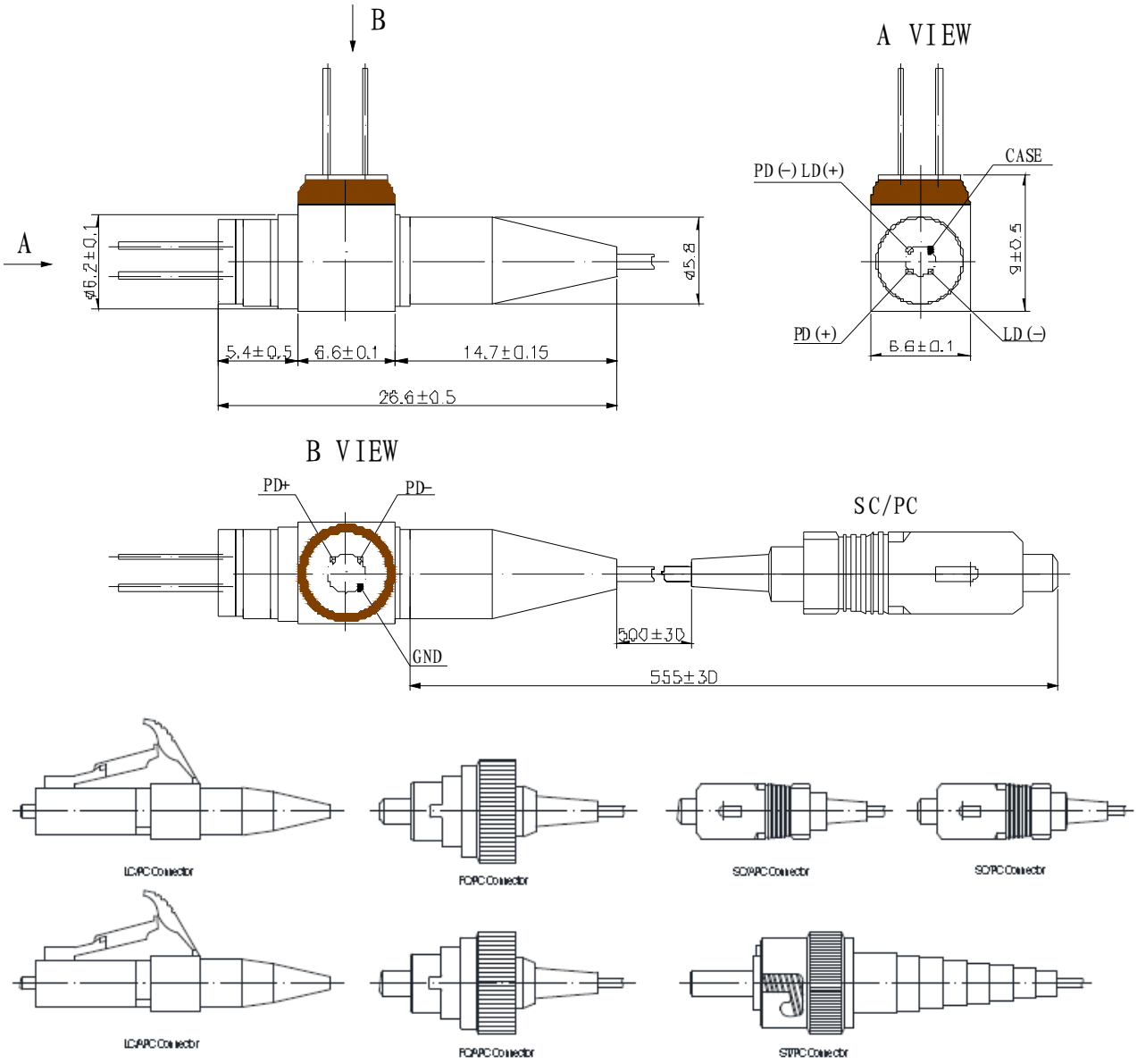
Package Dimension: *Note4



*Note4: PIN direction and laser mark can be customized

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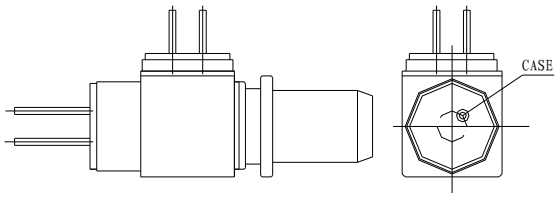
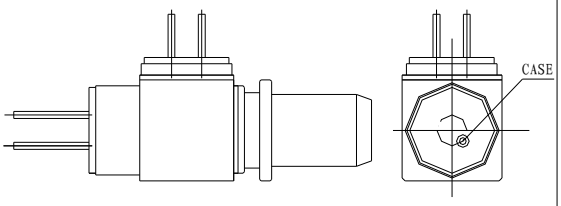
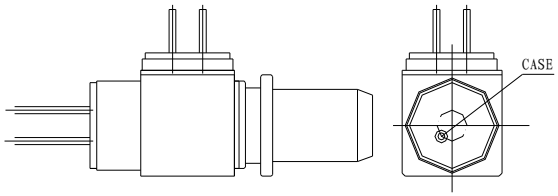
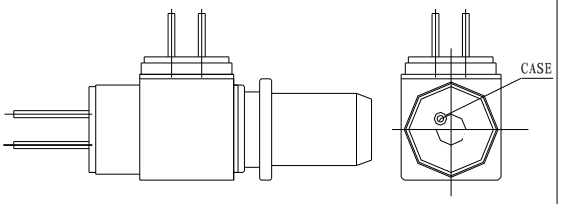
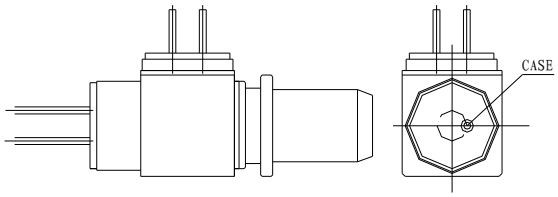
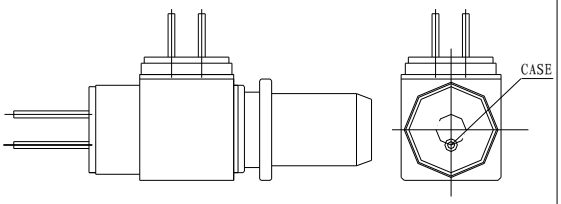
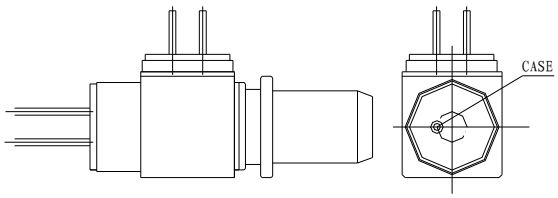
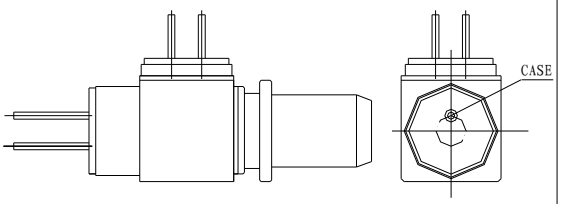
TX Pin Order Code:*Note5、6、7

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

Note5、This picture is for pluggable, pigtail BIDI chip PIN package direction's reference.

Note6、This picture is suitable for RX Pin direction comparison .

Note7、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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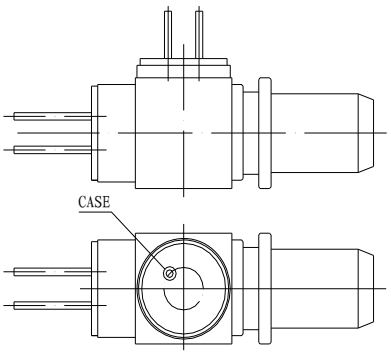
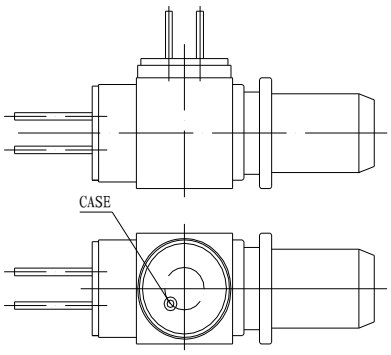
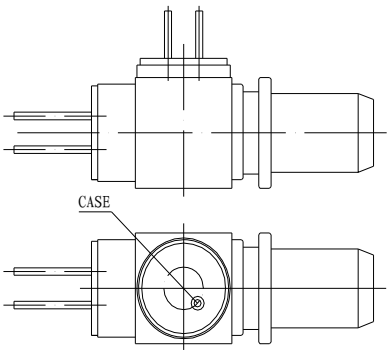
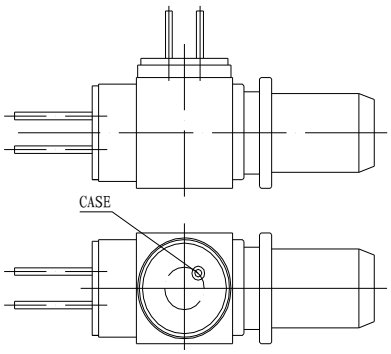
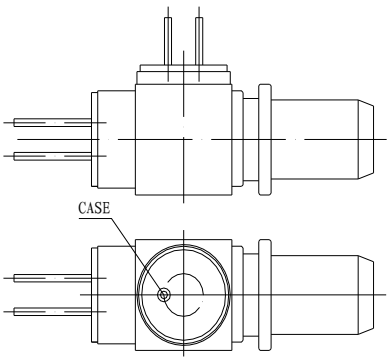
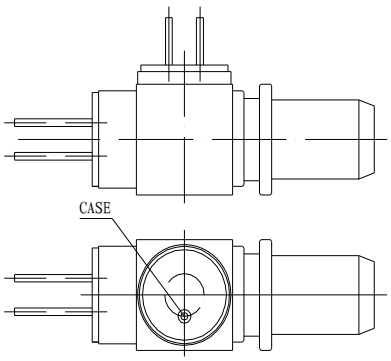
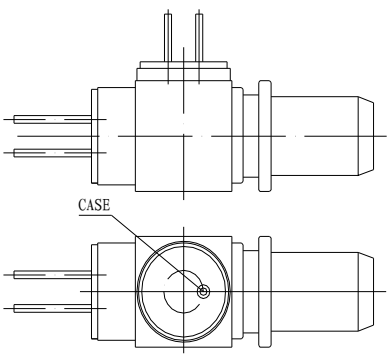
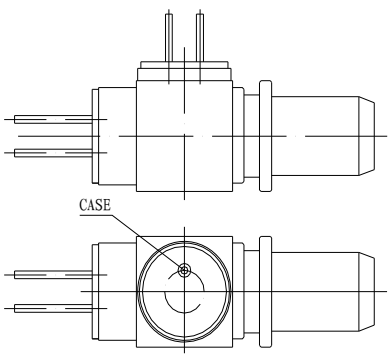
RX Pin Order Code:

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:

HEBIDI-□ □ □ □ □ □ □ □ □ □ □ □ □

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

Code	Parameter	Detailed Description							
A	Laser Type	D=DFB LD							
B	Launch Wavelength	3=1310nm							
C	Launch Data Rate	1=1.25G				2=2.5G			
D	Output Power	10=1~1.99mW				20=2.0~2.99mW			
E	Receiver Wavelength	5=1550nm							
F	Active Diameter	1=75um							
G	Bandwidth	0≤2GHz		1≤2.5GHz		2≤3.2GHz			
H	Connector	F=FC/PC		S= SC/PC		T=ST/PC		L=LC/PC	
		SA= SC/APC		FA=FC/APC		LA=LC/APC		BLANK =None	
I	TX Pin Package Direction	A	B	C	D	E	F	G	H
J	RX Pin Package Direction	A	B	C	D	E	F	G	H
K	RX TO Insulated With Shell	Blank= Insulation				N=NO Insulation			
L	Isolator	Blank=None				G=with Ⅰ			
M	Fiber Length	Blank=50cm		035=35cm		100=100cm		XXX=Custom	

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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