

1550nm TX DFB LD 1310nm RX PD 2GHz~3GHz BOSA

HETRPD52xxx310MxxxxG

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°C to +85°C
- ◆ RoHS Compliant Products Available

**Applications:**

- ◆ High Speed Optical Transmission System
- ◆ Cable television system
- ◆ WDM systems

Absolute Maximum Ratings:^{*Note1}

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+85	°C
Operating Case Temperature	Top	-20~+85	°C
Reverse Voltage (Monitor PD)	V _{RD}	20	V
Photodiode Forward Current (Monitor PD)	I _{FD}	2	mA
Lead Soldering (Temperature)/(Time)	---	260/10	°C/Sec
Reverse Voltage (Analog PD)	V _{RPD}	30	V
Forward Current (Analog PD)	I _{fPD}	10	mA

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

Electrical and Optical Characteristics – Transmitter:

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

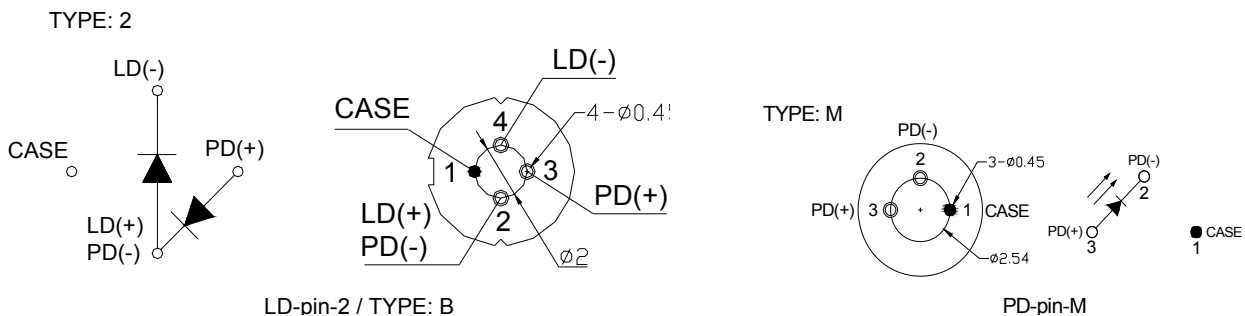
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	Ith	at Tc=25±3°C	---	10	15	mA
Output Power (After coupled)	Pf	CW, Iop=Ith+20mA	1.0	---	2.99	mW
Slope Efficiency	Se	CW, Average	0.05	---	0.15	mW/mA
Operating Voltage	Vop	CW, Iop=Ith+20mA	---	1.1	1.6	V
Peak Wavelength	λc	CW, Iop=Ith+20mA, Tc= -20~85°C	1530	1550	1570	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°C~+85°C	-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	---	1260	1310	1360	nm
Active Area	Φ	---	---	75	---	μm
-3dBm Bandwidth	BW	VR = 5V	2	---	3.2	GHz
Dark Current	Id	VR = 5V	---	---	1.0	nA
Responsivity	R	λ=1310nm	---	0.80	---	A/W

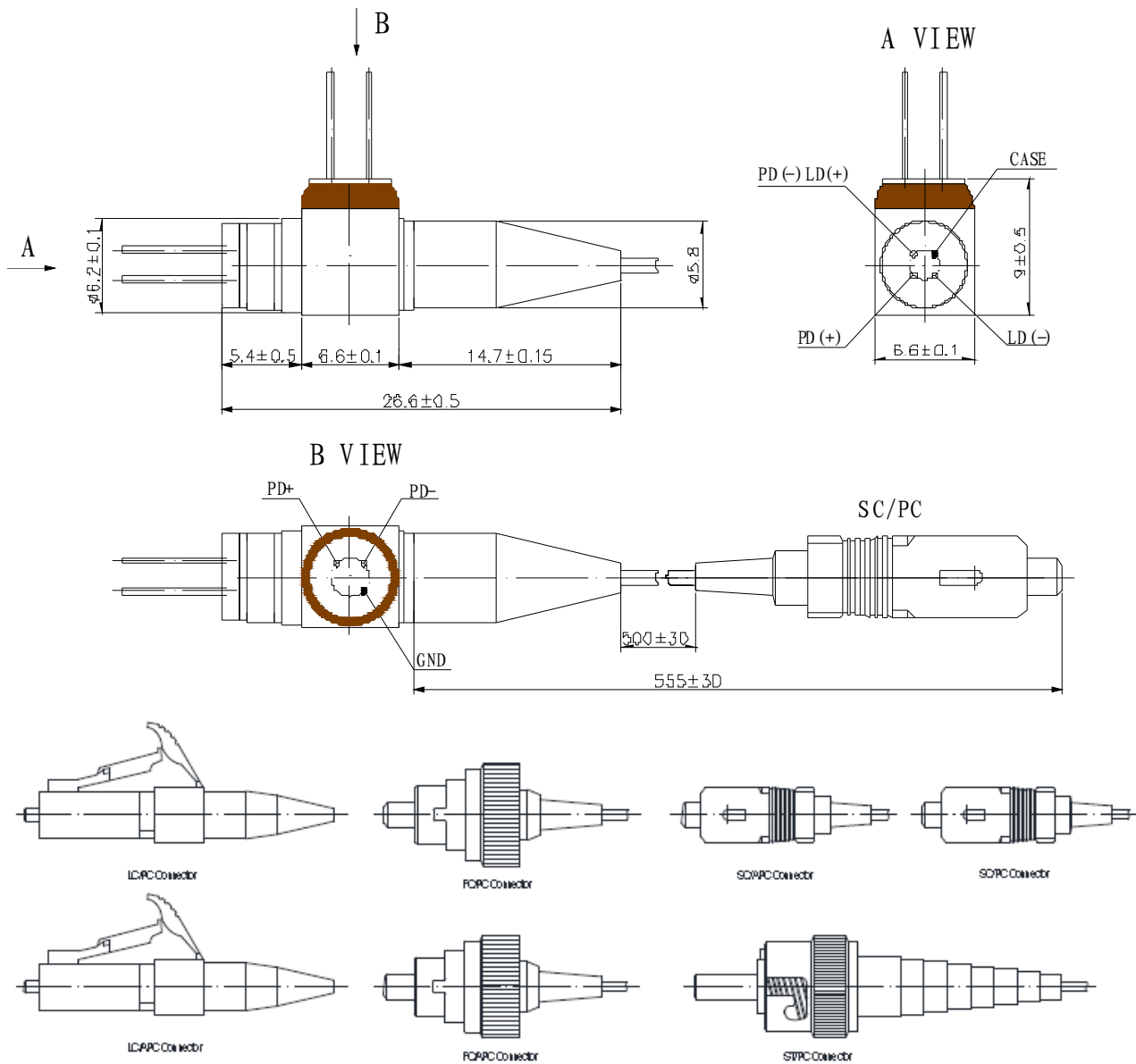
*Note2: Receiver Operating Wavelength can be customized.

Pin Assignment: ^{*Note3}

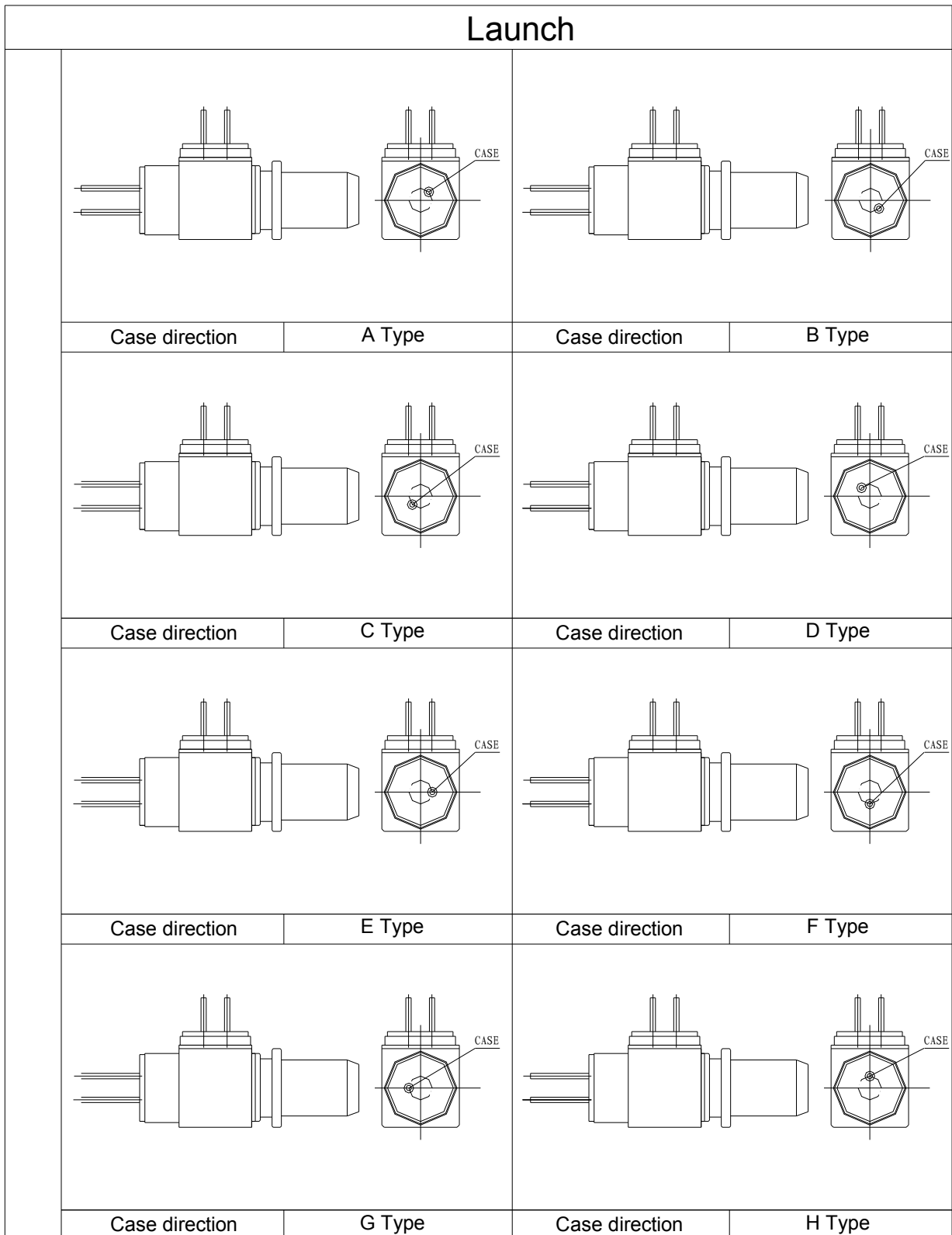


*Note3: Pin assignment can be customized.

Package Dimension: *Note4



*Note4: PIN direction and laser mark can be customized.

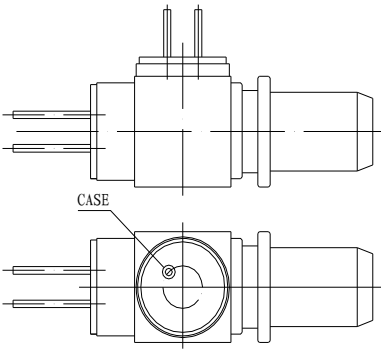
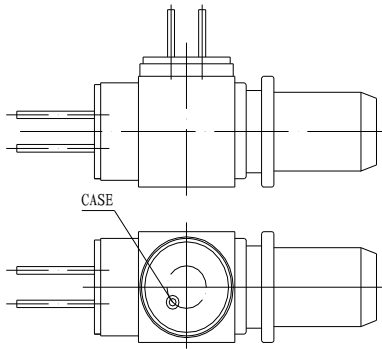
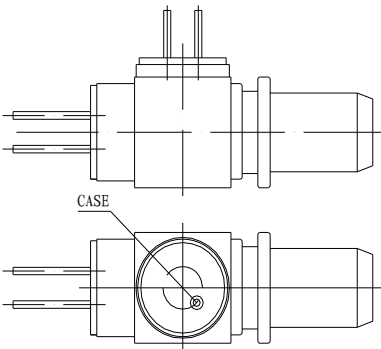
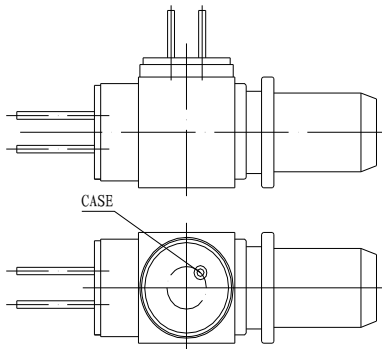
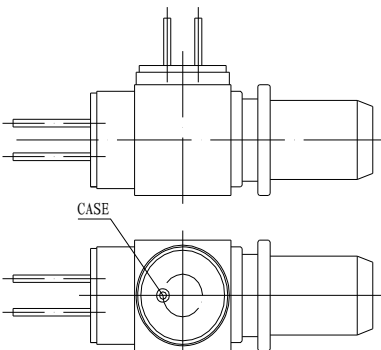
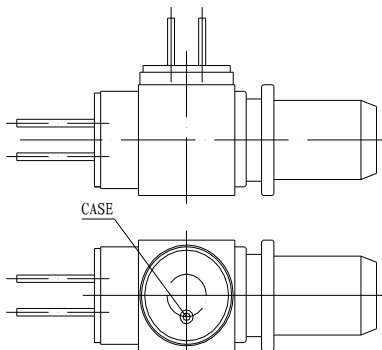
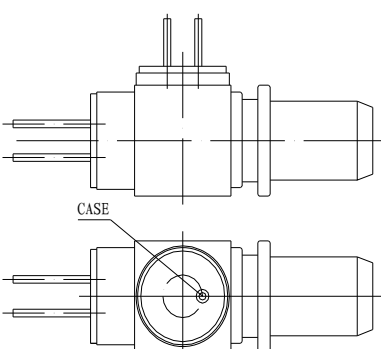
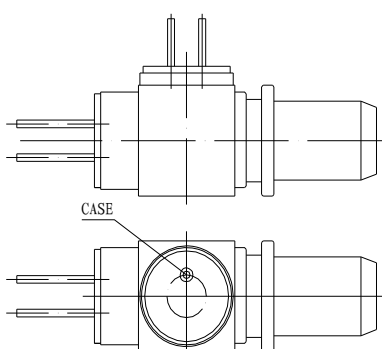
TX Pin Order Code: *Note5. 6. 7


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 "x-x" For example "A-B", "A" is TX chip Pin direction, "B" is RX 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

