

## 1310TX FP/1310RX PIN-TIA 1.25G/2.5G FP BOSA

### Features:

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-DFB Laser Diode
- ◆ Low threshold, high slope efficiency and high output power
- ◆ Operating Case Temperature: -40°C to +85°C
- ◆ SC FC ST or LC connector
- ◆ Optional with Isolator



### Applications:

- ◆ FTTx network
- ◆ SONET/SDH /ATM equipment interconnect
- ◆ Point to point link with a single fiber

### Absolute Maximum Ratings:

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	°C
Operating Case Temperature	Topr	-40	85	°C
Reverse Voltage(LD)	V <sub>RL</sub>	---	2	V
Reverse Voltage(PD)	V <sub>RD</sub>	---	15	V
Photodiode Forward Current(PD)	I <sub>FD</sub>	---	10	mA
Lead Soldering (Temperature)/(Time)	---	---	260/10	°C/Sec

### Transmitter Specifications:

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

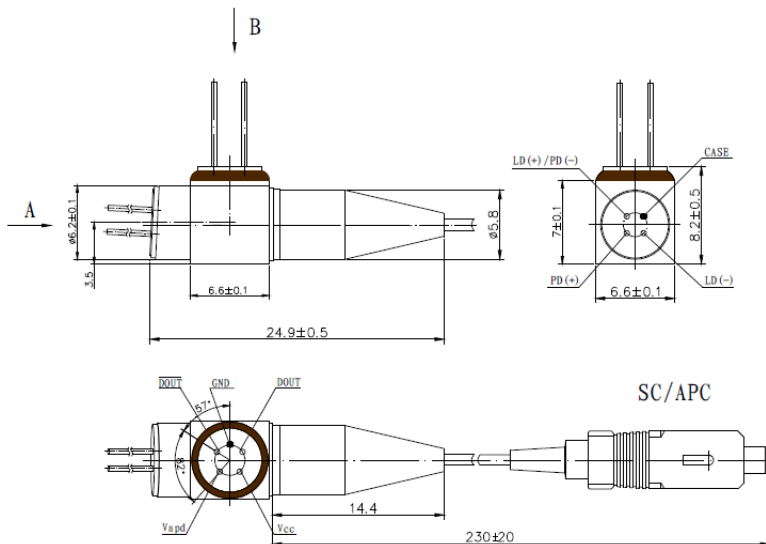
Description	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I <sub>th</sub>	---	10	15	mA	at Tc=25°C
Output Optical Power	P <sub>o</sub>	0.1	---	---	mW	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Center Wavelength	λ	1290	1310	1330	nm	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Operating Voltage	V <sub>op</sub>	---	1.2	1.5	V	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
RMS Spectrum Width(MAX)	Δλ	---	1.5	3.0	nm	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Tracking Error	TE	-1.5	---	1.5	dB	APC, -40°C/+25°C, +25°C/+85°C
Monitor Current	I <sub>mon</sub>	0.1	---	1.0	mA	CW, I <sub>op</sub> =I <sub>th</sub> +20mA,
Monitor Dark Current	I <sub>d</sub>	---	---	0.1	μA	VRD=1.7V

## Receiver Specifications:

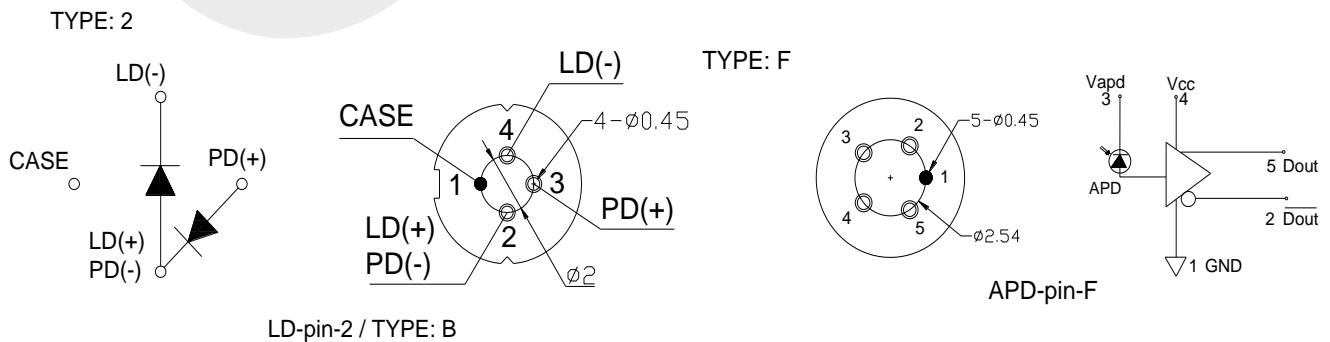
Unless specified else, the specifications below are defined at  $TC=25\pm 3^{\circ}C$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Operating Wavelength	$\lambda$	---	1310	---	nm	---
Voltage	Vcc	3.0	3.3	3.6	V	---
Supply Current	Icc		28	35	mA	no loads
Bandwidth	BW	730	---	---	MHz	---
Rise/Fall Time	Tr/Tf	0.2	0.3	0.4	ns	20%-80%
Saturation Power	Psat	-3	---	---	dBm	---
Crosstalk Sensitivity	CT	---	---	-22	dBm	---
Sensitivity	Sens	---	---	-22	dBm	$\lambda=1310$ nm PRBS7, BER=10 <sup>-10</sup> , @1.25G

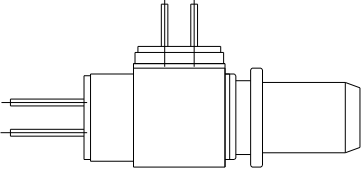
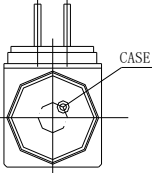
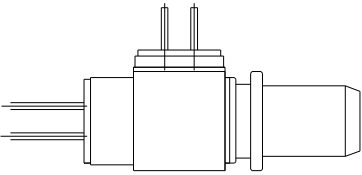
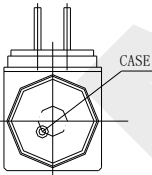
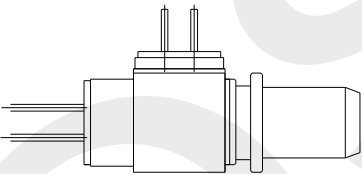
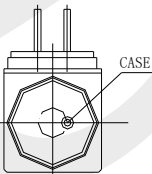
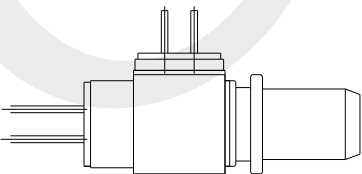
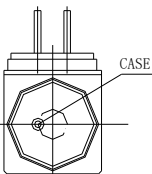
## Pigtail Package Series:



## Pin Assignment:



**TX Pin Order Code:** \*Note1、 2、 3

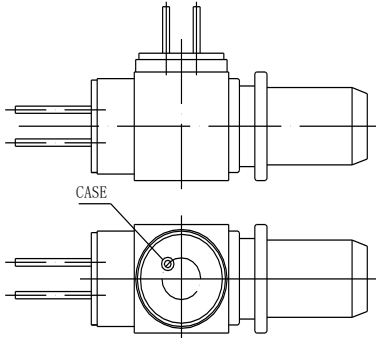
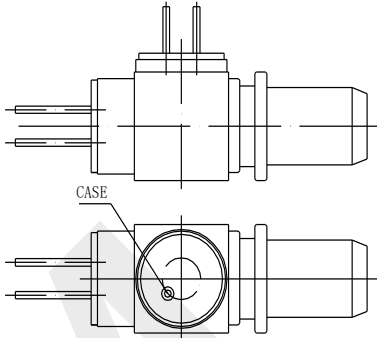
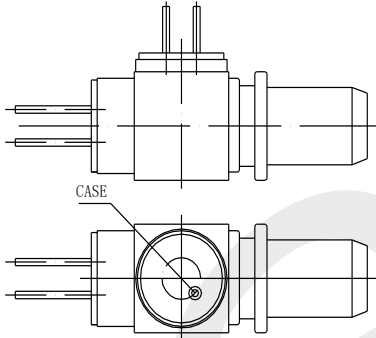
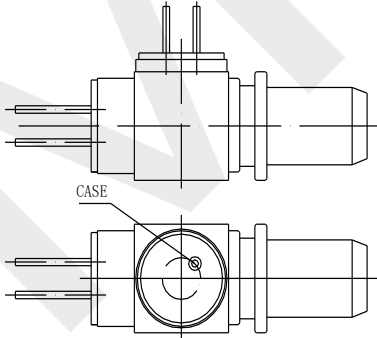
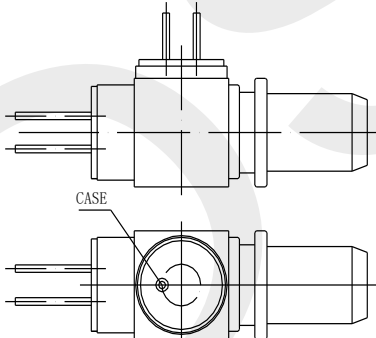
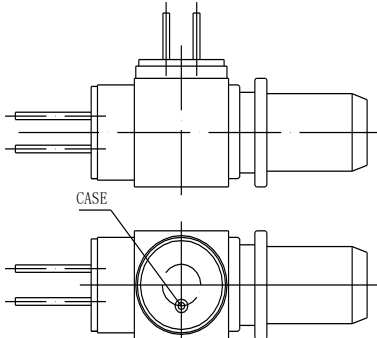
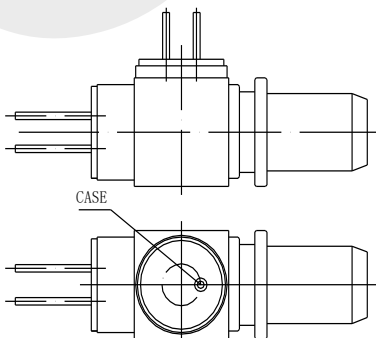
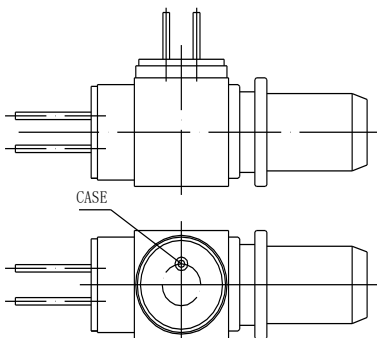
Launch			
			
Case direction	A Type	Case direction	B Type
			
Case direction	C Type	Case direction	D Type
			
Case direction	E Type	Case direction	F Type
			
Case direction	G Type	Case direction	H Type

Note1、 This picture is for pluggable, pigtail BIDI chip PIN package direction's reference.

Note2、 This picture is suitable for RX Pin direction comparison.

Note3、 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

**Nomenclature:**

OSMBIDI-

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

Code	Parameter	Detailed Description							
A	Laser Type	BLANK=FP LD							
B	Launch Wavelength	3=1310nm							
C	Launch Data Rate	1=1.25G				2=2.5G			
D	Output Power	01=0.3~0.5mW				02=0.51~1mW			
E	TX Pin Type	2=LD-pin-2							
F	Receiver Wavelength	3=1310nm							
G	Receiver Data Rate	7=1.25G				9=2.5G			
H	RX Pin Type	F= pin-F							
I	Connector	F=FC/PC		S= SC/PC		T=ST/PC		N =None	
J		FA=FC/APC			SA= SC/APC			L=LC/PC	
	TX Pin Package Direction	A	B	C	D	E	F	G	H
K	TX Pin Package Direction	A	B	C	D	E	F	G	H
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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