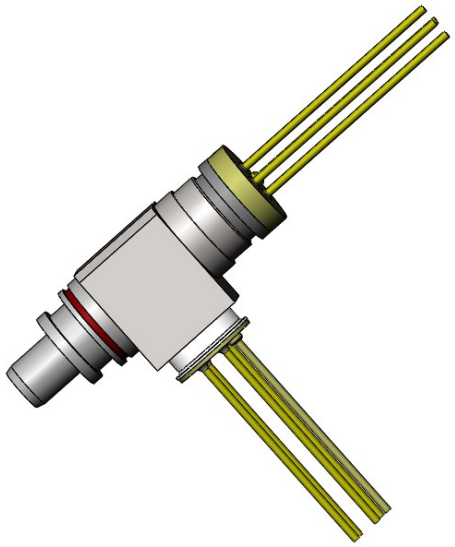
ETRRDxWxxFKxW3YKXGEGIxx-x



Features

- Coaxial Package
- Data rates up to 25.78Gb/s
- Low threshold, high slope efficiency and high output power
- Operating Case temperature: -40℃ to +90℃
- single -mode fiber-stub with LC connector
- Low return loss

Applications

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

Absolute maximum ratings*Note1

Parameter	Symbol	Ratings	Unit	Conditions
Storage temperature	Tstg	-40~+90	℃	
Operation Temperature	Top	-40~+90	℃	
Forward current (LD)	IFD	150	mA	
Reverse voltage (LD)	VrL	2	V	
Reverse voltage (PD)	VrP	20	V	
Reverse current (PD)	IrP	2	mA	
Power Supply Voltage	V_P	0~5	V	
Optical Power	Pin	5	dBm	
Soldering temperature (<10s)	Stemp	260	℃	

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

Transmitter Optical And Electrical Characteristics

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

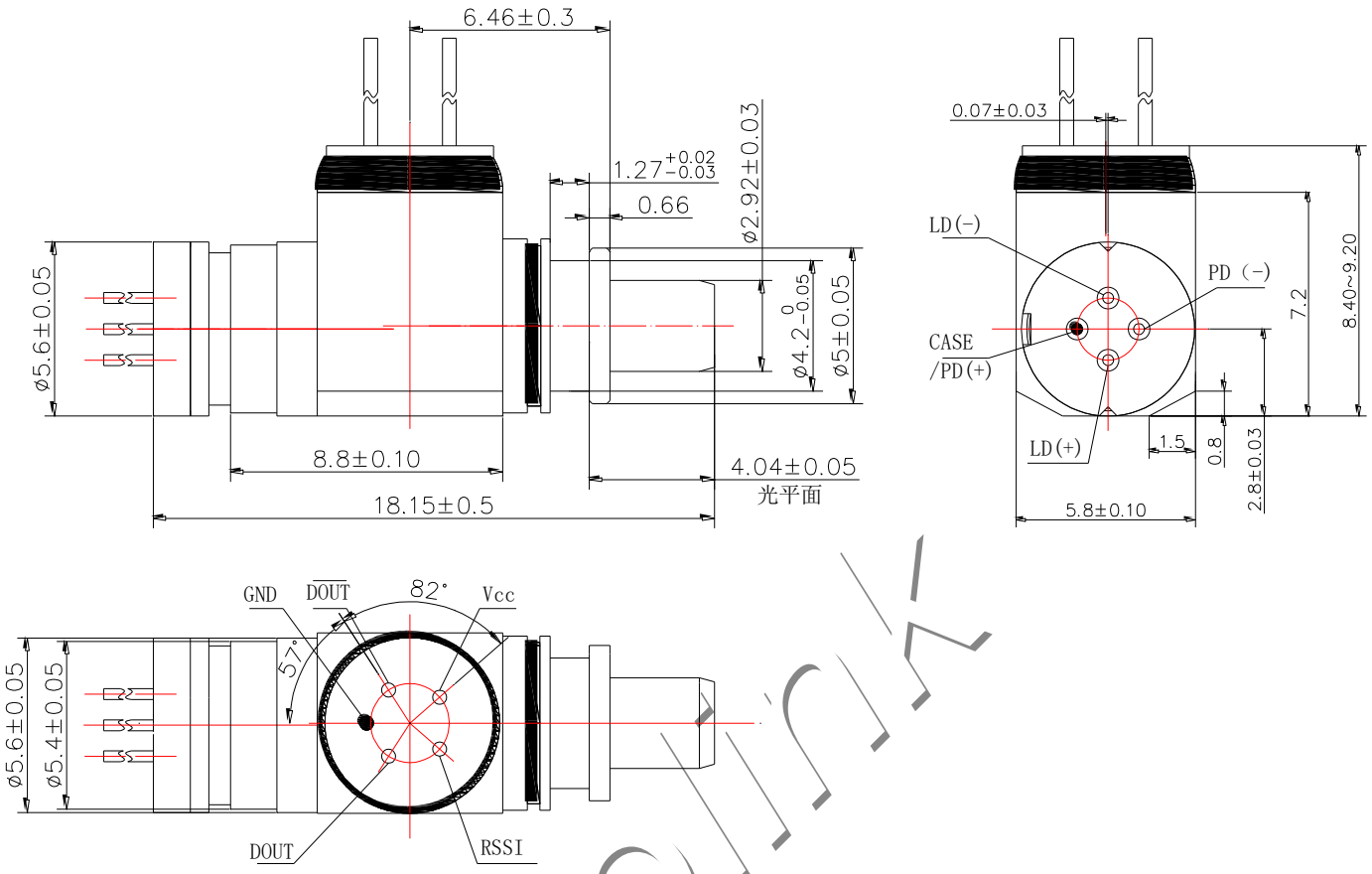
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Threshold Current	Ith	-	8	15	mA	at Tc=25℃
		-	17	25	mA	at Tc=90℃
Operating Voltage	Vop	-	1.3	2.0	V	CW, Iop=Ith+30mA,
Output Optical Power	Pf	0.5	-	3.0	mW	CW, Iop=Ith+30mA
Center Wavelength	λc	1260	1270	1280	nm	CW, Iop=Ith+30mA, Tc=-40~90℃
		1320	1330	1340		
Spectrum Width (-20dB)	△λ	-	-	1.0	nm	CW, Iop=Ith+30mA, Tc=-40~90℃
Side Mode Suppression Ratio	SMSR	35	-	-	dB	CW, Iop=Ith+30mA, Tc=-40~90℃
Monitor Current	Imon	0.1	-	1.5	mA	Vrp=5V, CW, Iop=Ith+30mA
Monitor Dark Current	Id	-	-	0.1	μA	Vrp=5V
Tracking Error	TE	-2.5	-	0.5	dB	-40℃/+25℃
		-1.5		1.5	dB	+25℃/+90℃

Receiver Optical And Electrical Characteristics

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

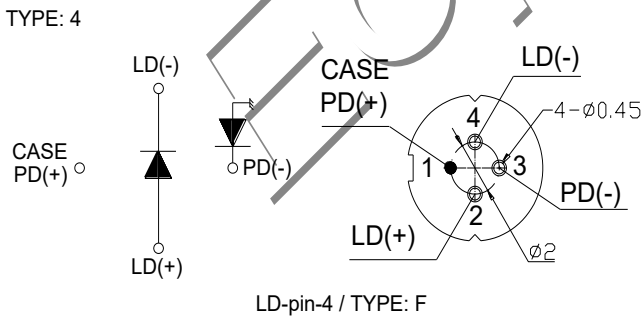
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Operating Wavelength	λ	1320	1330	1340	nm	
		1260	1270	1280		
Supply Voltage	Vcc	3.0	3.3	3.6	V	
Supply Current	Icc	-	27	34	mA	RL = 50 Ω
Saturated power	Psat	2.5	-	-	dBm	
Sensitivity	Sen	-	-	-14	dBm	λ=1330nm&1270nm,25G,PRBS231-1 ER=5dB, BER=10-12
Responsivity	R	0.35	-	-	A/W	λ=1330nm, -20dBm
		0.37	-	-	A/W	λ=1270nm, -20dBm
Return loss	RL	-	-	-27	dB	λ=1330nm&1270nm
Insulation Resistance	IR	200			MΩ	
Dark Current	Id	-	50	100	nA	Vrd=3.3V

Receptacle Package series*Note2



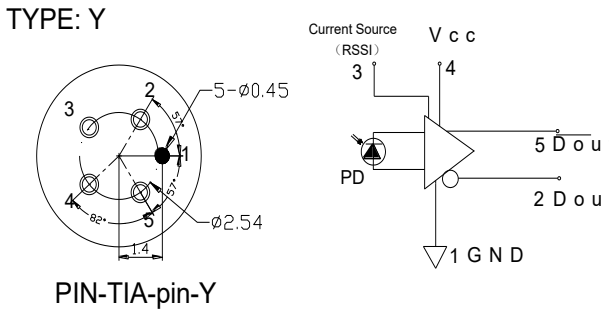
Note2: PIN direction and laser mark can be customized.

Pin Assignment



LD-pin-4 / TYPE: F

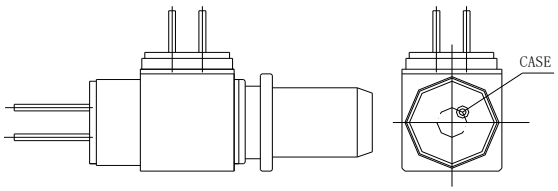
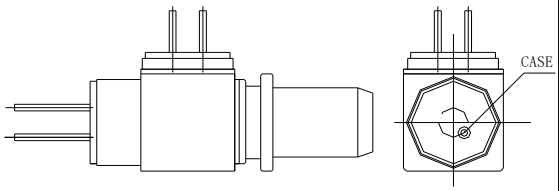
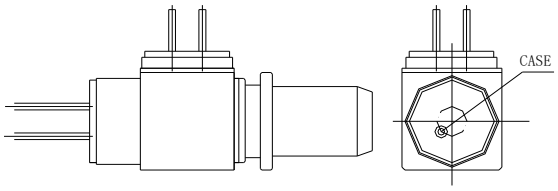
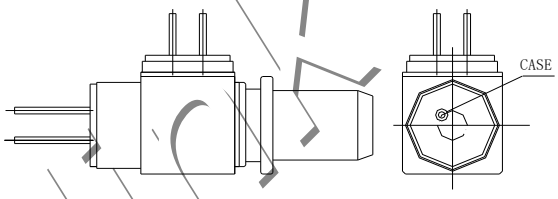
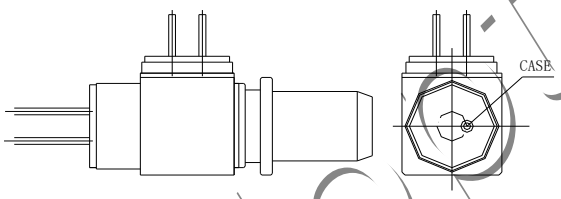
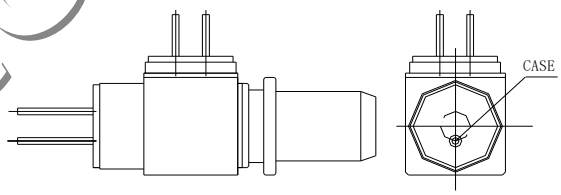
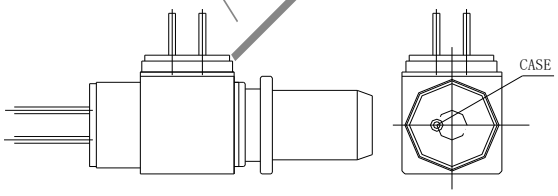
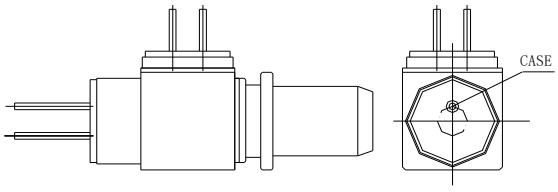
LD-pin-F



PIN-TIA-pin-Y

PIN-TIA-pin-Y

TX Pin Order Code*Note3.4.5

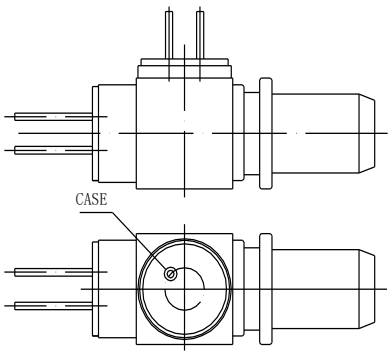
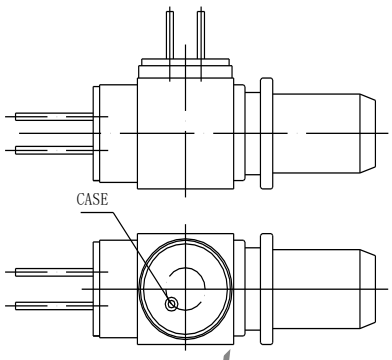
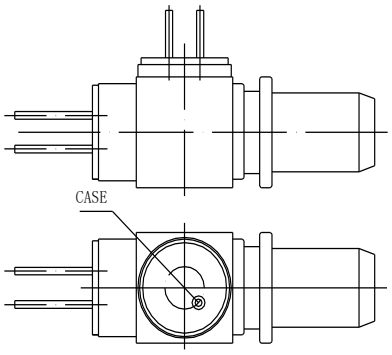
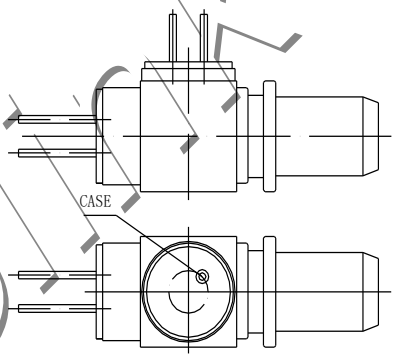
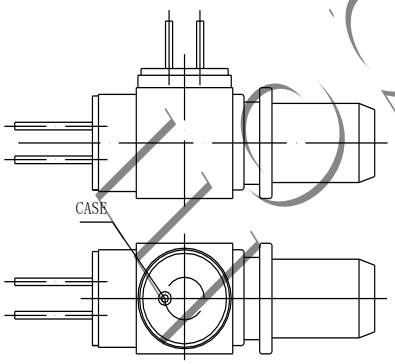
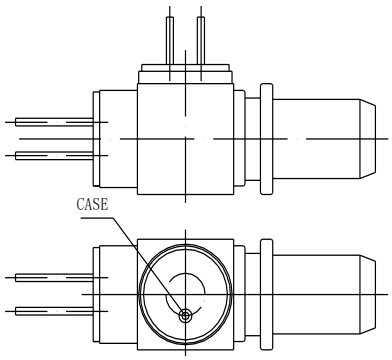
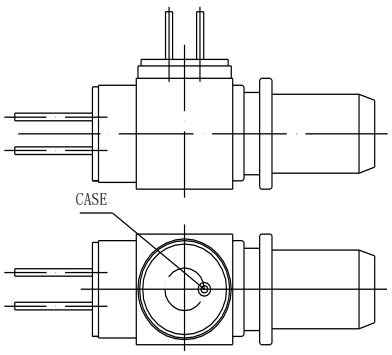
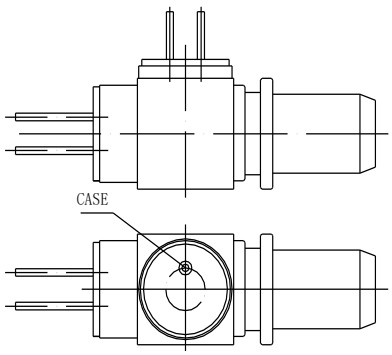
Launch			
			
Case direction	A Type	Case direction	B Type
			
Case direction	C Type	Case direction	D Type
			
Case direction	E Type	Case direction	F Type
			
Case direction	G Type	Case direction	H Type

Note3:This picture is for pluggable, pigtail BIDI chip PIN package direction's reference

Note4:This picture is suitable for RX Pin direction comparison .

Note5:The package direction is described as "×-×" 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

Ordering information (Standard version)

ETRR □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ -□

A B C D E F G H I J K L M N O P Q R

Code	Parameter	Detailed Description							
A	Laser Type	D=DFB LD							
B	Launch Wavelength	A=1270nm				D=1330nm			
C	Launch Data rate	W=25Gbps							
D	Output Power*Note6	08=0.80-1.30mW				08=0.65-1.05mW			
		17=1.80-2.70mW				17=1.50-2.30mW			
		xx=Customization							
E	TX Pin Type	F=LD-pin-4							
F	TX Chip Type	K=EO							
G	Receiver Wavelength	D=1330nm				A=1270nm			
H	Receiver Data rate	W=25Gbps							
I	Receiver Voltage	3=3.3V							
J	RX Pin Type	Y= pin-Y							
K	RX Chip Type	K=EO							
L	Connector	X=LC							
M	TX Pin Package Direction	A	B	C	D	E	F	G	H
N	RX Pin Package Direction	A	B	C	D	E	F	G	H
O	Isolator	Blank=None				G=with G			
P	Insulation	Blank=None				I=with I			
Q	TIA Type	EI=EOC1028				MR=M03013B			
R	Solution	Blank=None				X=1~9			

Note6:TX1270nm power options 08=0.80-1.30mW，17=1.80-2.70mW；
TX1330nm power options 08=0.65-1.05mW，17=1.50-2.30mW；

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.

Revision History

Revision	Initiated	Reviewed	Approved	Revision History	Release Date
Va-1	James.liu	Zore.Zhao	Vincent.yu	Initial	2020.9.28
Va-2	James.liu	Zore.Zhao	Vincent.yu	Change pin type diagram	2021.2.22
Va-3	James.liu	Zore.Zhao	Vincent.yu	Modify the range of power section and update the outline dimension of device	2022.8.29

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