

Pigtail Triplexer
1490T/1550T/1310R-DFB(SC/APC)
HETP-45412SA

Absolute Maximum Ratings

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

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	Tstg	-40	85	$^\circ\text{C}$
Operating Case Temperature	Topr	-10	85	$^\circ\text{C}$
Reverse Voltage(LD)	V_{RL}	---	2	V
Reverse Voltage(PD)	V_{RD}	---	20	V
Photodiode Forward Current(PD)	I_{FD}	---	2	mA
Lead Soldering (Temperature)/(Time)	---	---	260/10	$^\circ\text{C}/\text{Sec}$

Electrical and Optical Characteristics

 (Unless specified else, the specifications below are defined at $T_C=25^\circ\text{C}$)

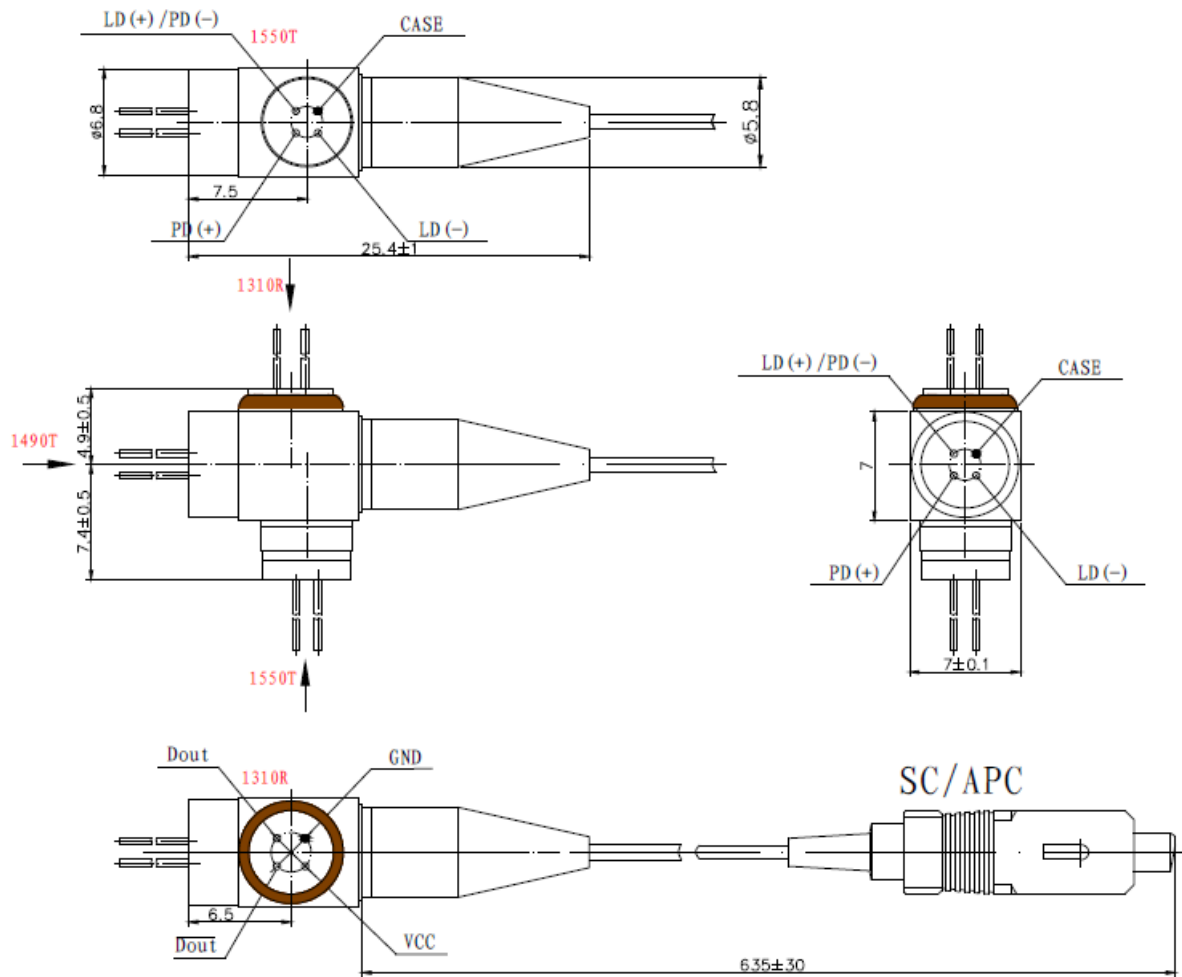
Transmitter1: LD Electro-Optical Characteristics						
Parameter	Symbol	Unit	Min.	Typ.	Max.	Note
Output Optical Power	Pf	mW	0.4	---	1.0	CW, $I_{op}=I_{th}+20\text{mA}$,
Threshold Current	I_{th}	mA	---	8.5	15	at $T_C=25\pm 3^\circ\text{C}$
Center Wavelength	λ_c	nm	1480	1490	1500	CW, $I_{op}=I_{th}+20\text{mA}$,
Operating Voltage	V_{op}	V	---	1.1	1.5	CW, $I_{op}=I_{th}+20\text{mA}$,
Spectral Width	$\Delta\lambda$	nm	---	0.32	---	CW, $I_{op}=I_{th}+20\text{mA}$,
Side Mode Suppression Ratio	SMSR	dB	30	---	---	---
Monitor Current	I_m	mA	0.1	---	---	CW, $I_{op}=I_{th}+20\text{mA}$,
Monitor Dark Current	I_d	μA	---	---	0.1	$V_{RD}=5\text{V}$
Rise / Fall Time	T_r / T_f	ns	---	---	0.2	20%~80%
PD Capacitance	C_{pd}	pF	---	---	20	$V_R = 5\text{V}$, freq.=1MHz
Tracking Error	TE	dB	-1.5	---	1.5	APC, $-10^\circ\text{C}/+25^\circ\text{C}, +25^\circ\text{C}/+85^\circ\text{C}$
Transmitter2: LD Electro-Optical Characteristics						
Parameter	Symbol	Unit	Min.	Typ.	Max.	Note

Output Optical Power	Pf	mW	0.4	---	1.0	CW, Iop=Ith+20mA,
Threshold Current	Ith	mA	---	7.5	15	at Tc=25±3°C
Center Wavelength	λc	nm	1530	1550	1570	CW, Iop=Ith+20mA,
Operating Voltage	Vop	V	---	1.1	1.5	CW, Iop=Ith+20mA,
Spectral Width	Δλ	nm	---	---	1	CW, Iop=Ith+20mA,
Side Mode Suppression Ratio	SMSR	dB	30	---	---	---
Monitor Current	Im	mA	0.05	---	---	CW, Iop=Ith+20mA,
Monitor Dark Current	Id	μA	---	---	0.1	VRD=5V
Rise / Fall Time	Tr /Tf	ns	---	---	0.2	20%~80%
PD Capacitance	Cpd	pF	---	---	20	VR = 5V, freq.=1MHz
Tracking Error	TE	dB	-1.5	---	1.5	APC, -10°C/+25°C,+25°C/+85°C

Receiver: PIN-TIA Electro-Optical Characteristics

Parameter	Symbol	Unit	Min.	Typ.	Max.	Note
Wavelength	λ	nm	1290	1310	1330	---
Power Supply	Vcc	V	3.0	3.3	3.6	---
Supply Current	Icc	mA	---	48	55	no loads
Bandwidth	BW	MHz	1500	---	---	---
Saturation Power	Psat	dBm	-3	---	---	---
Sensitivity	Sens	dBm	---	---	-19	PRBS7, ER=10 ⁻¹⁰ ,@2.5Gbps

Package Dimension/ Pin Package Drawing: (unit: mm)



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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