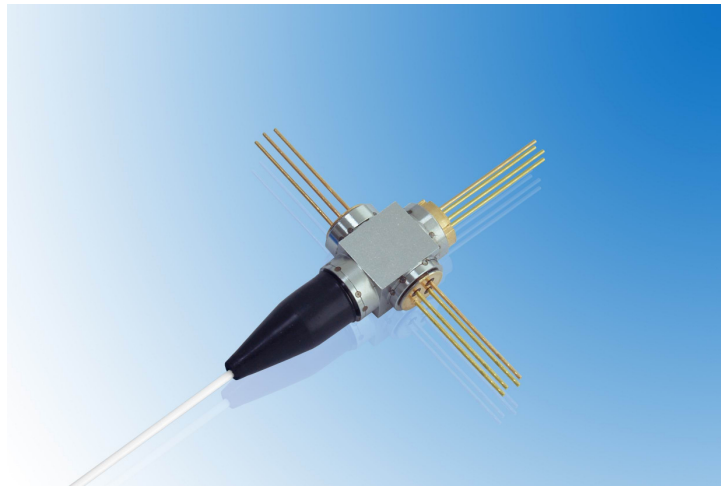


Triplexer 1250Mb

OSA Specification

With 1310nm FP laser,
1490nm PIN receiver,
1550nm analog receiver



Features

- ◆ Build-in 1310nm/1490nm/1550nm WDM filter
- ◆ Compact figure and small size
- ◆ Case Operation temperature: -40~+85C
- ◆ High quality and reliability
- ◆ RoHS compliant

Applications

- ◆ FTTx transmission system
- ◆ Cable television system
- ◆ Monitor system

1250M Transmitter Specifications

All parameters are applicable for a case temperature range of -40°C to 85°C and include any detrimental effects due to End of Life(EOL) characteristics.

Description	Symbol	Min	Typ	Max	Unit	Note
Threshold current	Ith		8	15	mA	T=25°C
Average launch power	Po	1.1			mW	T=25°C (Ith+20mA)
Slope Efficiency		0.055			mW/mA	T=25°C (Ith+20mA)
Operating Wavelength	λ	1290	1310	1330	nm	FP T=25°C
RMS Spectrum width	$\Delta \lambda$			2.0	nm	T=25°C
RIN				-115	dB/Hz	
Optical return loss tolerance(max)		15			dB	
Tracking error	TE	-1.5		1.5	dB	
Optical return loss		20			dB	
Monitor Current	Imon	0.1			mA	Vr=5V

Monitor PD Capacitance				20	pF	
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Operating Conditions

Parameter	Min	Typ	Max	Unit
Operating Temperature	-40	-	+85	°C
Storage Temperature Range	-40	-	+85	°C
DC Power Supply Voltage	3.0	3.3	3.6	V
Data Rate	-	1250	-	Mb/sec

1250M Digital Receiver Specifications

All parameters are applicable for a case temperature range of -40°C to 85°C and include any detrimental effects due to End of Life(EOL) characteristics.

Parameter	Conditions	Min	Typ	Max	Unit
Operating Wavelength		1480		1500	nm
Sensitivity	BER= 1E^{-10} , ER=6dB 2^{23} -1PRBS 1250Mb/s		-27	-26.5	dBm
Optical Isolation from external source	1260~1360nm	40			dB
Optical Isolation from external source	1550~1560nm	40			dB
Optical Crosstalk from internal laser	1260~1360nm	47			dB
Optical return loss	1480~1500nm	20			dB
PIN-TIA output	Rise Time (20%~80%)			200	ps
	Output Impedance	40	50	60	Ω
Power supply (Vcc)	Digital receiver PIN-TIA	3.0	3.3	3.6	V
Power supply (Icc)	Digital receiver PIN-TIA		30	50	mA
Polarization Dependent Loss	1480~1500nm			0.5	dB
Optical Overload	Average Optical power	0			dBm

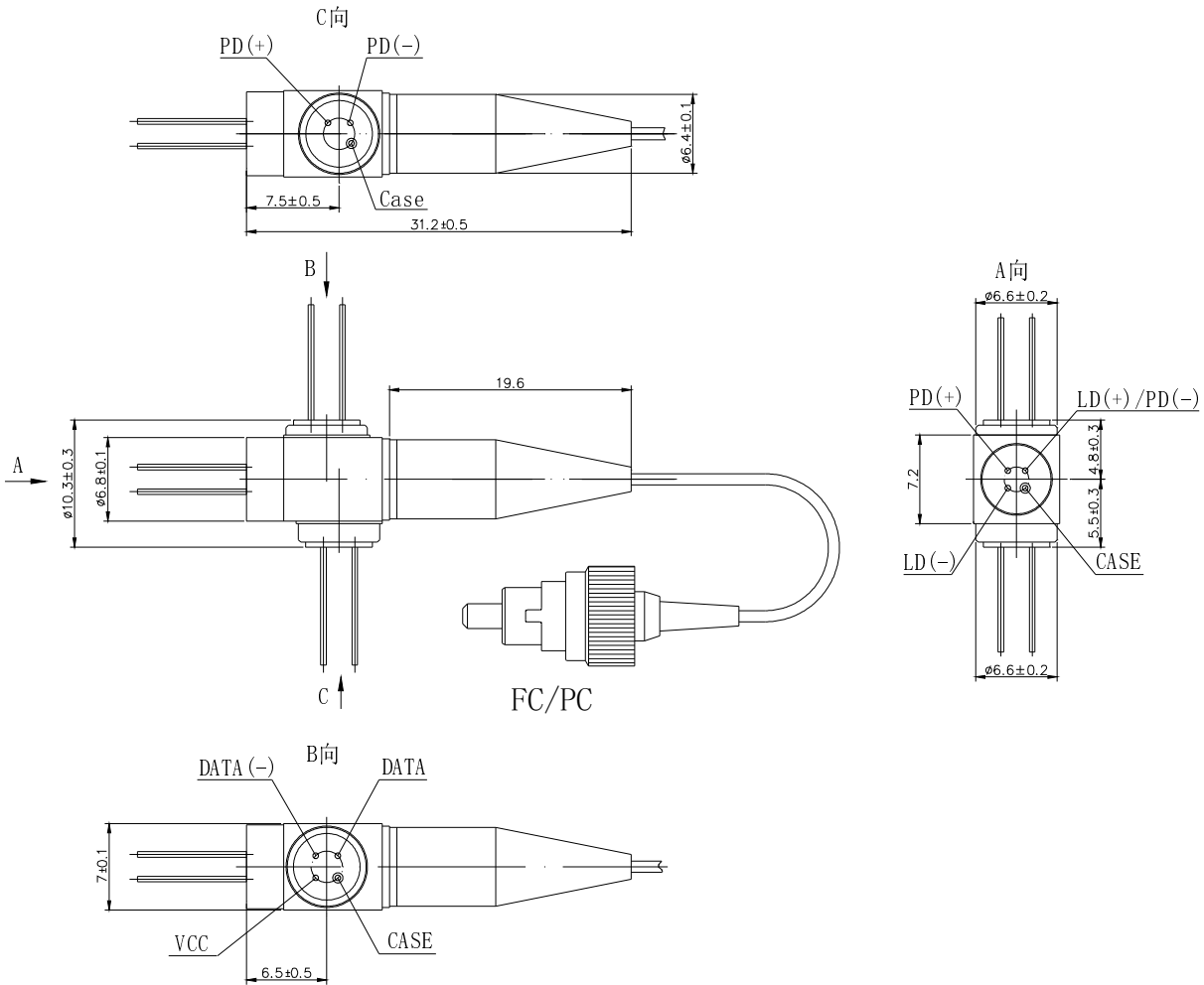
Optical input without incurring physical damage	Average Optical power	4			dBm
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Analog PIN Specifications

All parameters are applicable for a case temperature range of -40°C to 85°C and include any detrimental effects due to End of Life(EOL) characteristics.

Parameter	Conditions	Min	Typical	Max	Units
Operating Wavelength		1550		1560	nm
PIN Responsivity	$V_{\text{REVERSE}} = 12 \text{ V}$, $\lambda = 1550 - 1560 \text{ nm}$	0.85	0.9		A/W
Polarization Dependent Loss	1550 – 1560 nm			0.5	dB
Optical Isolation from external source	1260 – 1360 nm	40			dB
Optical Isolation from external source	1480 – 1500 nm	40			dB
Optical Crosstalk from internal laser	1260 – 1360 nm	58			dB
Optical Return Loss	1550 – 1560nm	40			dB
Optical input without incurring physical damage	Average optical power	3			dBm
Dark Current	$V_{\text{REVERSE}} = 12 \text{ V}$			150	nA
Capacitance	$V_{\text{REVERSE}} = 12 \text{ V}$, $f = 1 \text{ MHz}$			0.7	pF
Cut-off Frequency	-3 dB, $V_{\text{REVERSE}} = 12 \text{ V}$, $R_{\text{LOAD}} = 50 \Omega$	1.5			GHz
Discrete Second Order (DSO) Distortion Products	$P_{\text{O}} = 2 \text{ dBm}$, $V_{\text{REVERSE}} = 12 \text{ V}$, $R_{\text{LOAD}} = 50 \Omega$, $f_1 = 400 \text{ MHz}$, $f_2 = 450 \text{ MHz}$, Modulation index = 0.7			-69	dBc

1250M Triplex OSA Pin Configurations



Optical Termination

Connector: FC/PC

Pigtail: tight buffer 0.9mm, 9/125/250 unshifted single mode fiber. Length 0.65 ± 0.03 m

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.

Obtaining Document

You can visit our website:

<http://www.eoptolink.com>

Or contact Eoptolink Technology Inc., Ltd. listed at the end of the documentation to get the latest documentation.

Revision History

Revision	Initiated	Reviewed	Approved	Release Date
V2	Zore.Zhao	Mary.Wang Kelly.Cao		2009-12-27

Notice:

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