

**YSB632D8C-P**
**1310T/ 1490R/AnalogPD 1550R**
**Features:**

- ◆ High-stability 1310nm MQW-DFB laser
- ◆ Built-in InGaAsP monitor photodiode
- ◆ Low threshold
- ◆ High reliability
- ◆ 2.5G InGaAs APD+TIA
- ◆ SC/APC connector, coaxial-pigtailed package, single mode coupling

**Application:**

- Optical communication system

**Specification:**

Transmitter Characteristics	Symbol	Test	Min	Typ	Max	Unit
Power	Pout	lop = Ith + 20mA, T = 25°C	1.8	-	-	mW
		lop = Ith + 20mA, T = -20°C - 85°C	1.0	-	-	
Threshold Current	Ith	lop = Ith + 20mA, T = 25°C	-	-	15	mA
		lop = Ith + 20mA, T = -20 ~ 85°C	1	-	48	
Center Wavelength	$\lambda$	lop = Ith + 20mA, T = -20 ~ 85°C	1290	1310	1330	nm
Side-Mode Suppression Ratio	SMSR	lop = Ith + 20mA, T = 25°C	30	-	-	dB
Spectral Width	$\Delta \lambda$	lop = Ith + 20mA, T = -20 ~ 85°C	-	-	1	nm
Tracking Error	TE	lop = Ith + 20mA, T = -20 ~ 85°C	-1.5	-	1.5	dB
Rise and Fall times	Tr/Tf	CW, 10% ~ 90%	-	-	0.25	ns
Monitor PD Current	Im	CW, lop = Ith + 20mA	100	-	1500	uA
Monitor PD Dark Current	Id	CW	-	-	100	nA

PT Receiver Characteristics	Symbol	Test	Min	Typ	Max	Unit
Wavelength range	$\lambda$	CW	1480	1490	1500	nm
Sensitivity	Sens	BER = 10 <sup>-10</sup> @ 2.5G, ER = 10dB, PRBS2 <sup>23</sup> -1 Vop = Vbr - 3V, TIA on	-	-	-30.5	dBm
Overload	Pmax		-7	-	-	
Resistance	Rout	-	-	50	-	ohm
Breakdown Voltage	Vbr	Tc = 25°C	40	-	55	V
Operating Voltage	Vcc	-	3.0	3.3	3.6	V

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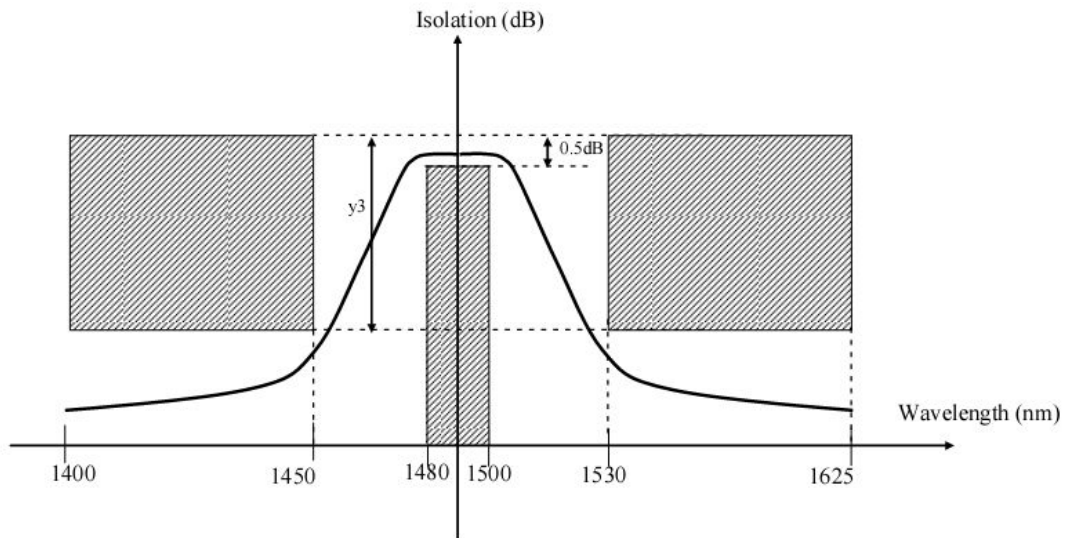
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Operating Current	Icc	-	-	25	-	mA
Optical Isolation From External Source	ISO	@1260~1360nm	26	-	-	dB
		WBF Isolation for ITU-T G.984.5 compliance, (Ref to WBF Isolation Characteristics)	36	-	-	dB
Optical Crosstalk of 1310nm	Xopt	-	-	-	-40	dB

WBF Isolation characteristics



WBF Isolation characteristics				
Wavelength (nm)	1400~1441	1450	1530	1539~1625
Isolation (dB)	y3	y3	y3	y3
	>36	>26	>26	>36

PD Receiver Characteristics	Symbol	Test	Min	Typ	Max	Unit
Wavelength range	$\lambda$	CW	1550	-	1560	nm
Responsivity	R	@1550nm, Tc=25°C	0.85	-	-	A/W
Bandwidth	BW	Vrd=5V	2.6	-	-	GHz
Dark current	Id	Tc=25°C	-	-	1	nA
Optical Return Loss	Rrel	$\lambda = 1550 \sim 1560$ nm	40	-	-	dB
Optical Isolation From External Source	Iso	$\lambda = 1480 \sim 1500$ nm	35	-	-	dB
		$\lambda = 1510 \sim 1530$ nm	20	-	-	dB
Optical Crosstalk	Xopt	-	-	-	-40	dB

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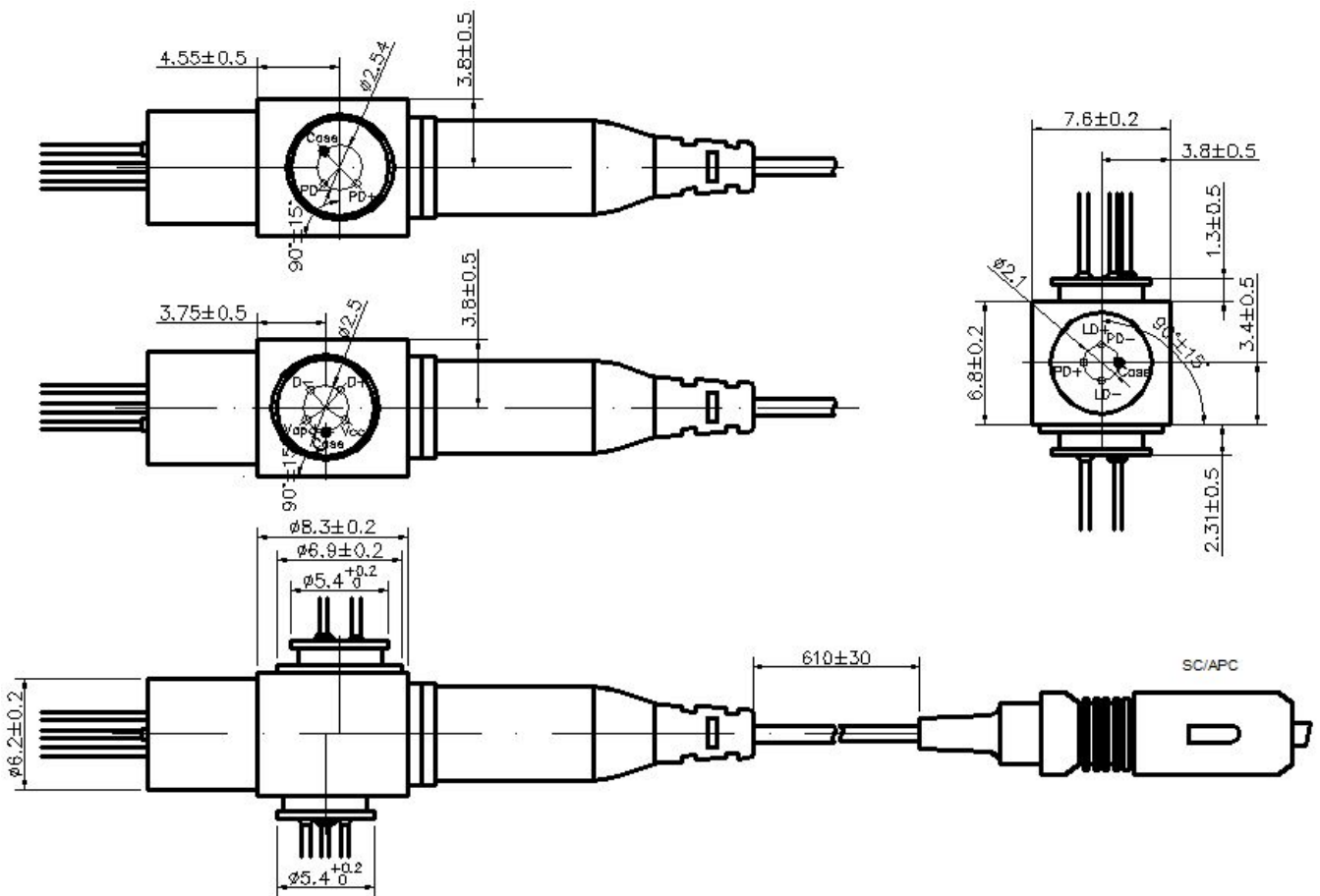
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**Absolute Maximum Ratings:**

Characteristics	Symbol	Value	Unit
Forward Current (LD)	IF(LD)	100	mA
Reverse Voltage (LD)	VR(LD)	2	V
Operating Current (MPD)	IF(PD)	2	mA
Reverse Voltage (MPD)	VR(PD)	20	V
Forward Current (PD)	VRD	10	V
Reverse Voltage (PD)	IFD	2	mA
Operating Temperature	TOP	-40 ~ +85	°C
Storage Temperature	TST	-40 ~ +85	°C
Lead solder temperature /duration	-	260/10	°C/S

**Dimensions:**



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