



Receptacle type
EPON BOSA
For Class B+ ONU Transceiver



Applications:

- For Data Communications
- For Telecommunications
- EPON

Features:

- Compliant to IEEE802.3ah
- 1310nm MQW-FP LD
- InGaAs PIN-TIA Receiver
- High Sensitivity
- Operation Temperature From -40°C to 85°C
- RoHS Compliant

Order Information:

Type	Model Number	Data Rate	TX / RX Source	Temp
BOSA	GER-F3P5-XX	TX: 1.25 Gbps RX: 1.25Gbps	1310nm FP LD 1490nm PIN-TIA	-40~+85 °C

GER	F3	P5	X	X		
PON	Tx LD	Rx PD	Pin assignment			
Gigabit EPON Receptacle	1310nm FP LD	1490nm 5pin PIN-TIA	Tx (D=degree):		Rx (D=degree):	
			1=0D	3=90D	5=180D	7=270D
			2=45D	4=135D	6=225D	8=315D

GER-F3P5-21: is EPON BOSA receptacle with TX is 45 degrees and RX is 0 degree with respect to the reference plane of TO

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Units
Storage / Operating Case Temperature	T _{STG} /T _{OPR}	-40	+85	°C
Reverse Voltage(LD)	V _{RL}	---	2	V
Forward Current (LD)	I _{FL}	---	150	mA
Reverse Voltage(MPD)	V _{RD}	---	15	V
Forward Current (MPD)	I _{FD}	---	10	mA
Power Supply Voltge(PD)	V _P	-0.5	6.0	V
Lead Soldering Temperature /Time	T _{SOLD} /t _{SOLD}	---	350/5	°C/ Sec



Transmitter Optical / Electrical Characteristics (@ T=25°C, unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units	Ref
Data Rate			1.250		Gbps	
Light Source			FP LD			
Center Wavelength	λ_c	1290 1260	1310	1330 1360	nm	CW, Pf=Ith+20mA, Tc=25°C CW, Pf=Ith+20mA, Tc=85°C
Spectrum Width (-20dB)	$\Delta\lambda$	---	1.0	3.0	nm	CW, Pf=Ith+20mA
Output Optical Power	Pf	1.2 0.8	---	2.5	mW	CW, Iop=Ith+20mA, Tc=25°C CW, Iop=Ith+20mA, Tc=85°C
Slope Efficiency	η	0.06 0.01	---	0.13 0.04	mW/mA	at Tc=25°C at Tc=85°C
Threshold Current	Ith	---	10	12 30	mA	at Tc=25°C at Tc=85°C
Rise/Fall Time	Tr/Tf	---	0.15	0.20	ns	20% to 80%
Operating Voltage	Vop	---	1.2	1.5	V	CW, Pf= Ith+20mA
Monitor Current	Imon	0.10	0.15	0.80	mA	CW, Iop=Ith+20mA
Monitor Dark Current	Id	---	---	100	nA	Vr=1.7V
Tracking Error	TE	-1.2	---	1.2	dB	Iop=Ith+20mA, -40°C~85°C

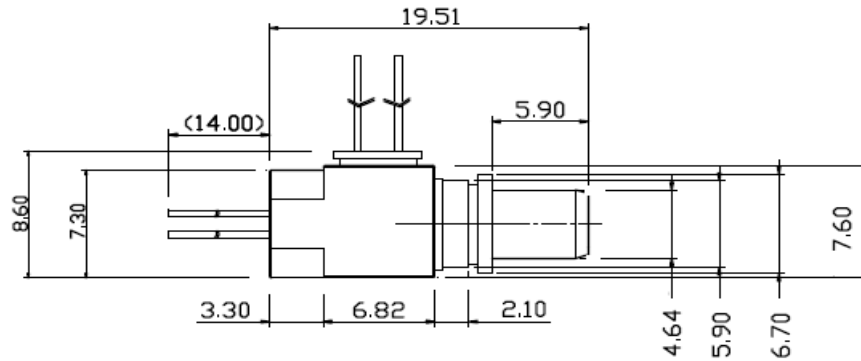
Receiver Optical / Electrical Characteristic (CW@ T=25°C, unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units	Ref
Data Rate			1.250		Gbps	
Photo Diode			PIN with TIA			
Receiving Wavelength	λ	1480	1490	1500	nm	CW
TIA Supply Voltage	Vcc	3.0	3.3	3.6	V	
Upper -3dB Bandwidth	BW	730	812	893	MHz	
Low Frequency Cut Off	LFC	50	70	115	KHz	
Sensitivity	Pmin	---	---	-28.0	dBm	PRBS2 ²³ -1, BER=10 ⁻¹⁰ , 1.25Gbps, ER=9dB
Saturated Power	Pmax	---	-3	---	dBm	
Supply Current	Icc	23	28	35	mA	P _{in} =0μW
Rise/Fall Time	Tr/Tf	200	300	400	ps	20%~80%
Optical Isolation	ISO	38/35	---	---	dB	λ =1550nm/1650nm
Optical Cross Talk	CT	---	---	-40	dB	

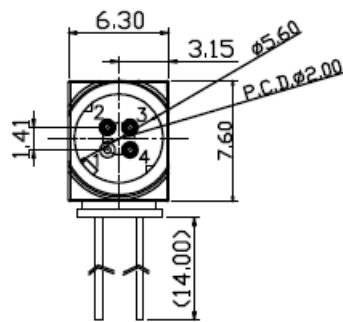


Outline Dimensions [mm±0.05mm] & Pin-out:

SC-BOSA- With DDM

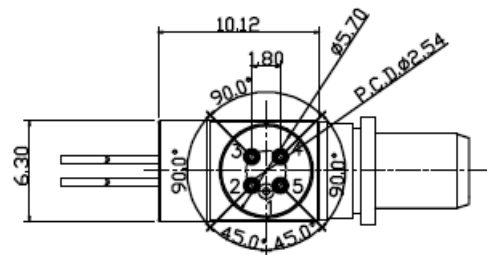


Transmitter



1	GND (Case)
2	Laser Cathode (LD-)
3	Monitor Anode (PD+)
4	Laser Anode (LD+), Monitor Cathode (PD-)

Receiver



1	GND (Case)
2	D-
3	Current Source
4	Vcc
5	D+

- ❖ For more information, please e-mail sales@wamin.com.tw
- ❖ The information and datasheets above are subject to change without prior notice.