

CWDM 2.5G DFB BOSA

The BOSA with CWDM Laser is for the application of less than 2.5Gbps analog transmission



Features

- ◆ Coaxial Package
- ◆ InGaAsP/InP MQW-DFB Laser Diode
- ◆ Low threshold, high slope efficiency and high output power
- ◆ Operating Case temperature: 0°C to +70°C
- ◆ Single-mode fiber pigtailed with SC FC ST or LC connector
- ◆ High channel isolation
- ◆ Low return loss

Applications

- ◆ Long distance digital transmission system
- ◆ Private optical networks
- ◆ Subscriber loops
- ◆ Fiber-optic transceiver
- ◆ Cable television system
- ◆ WDM systems

Nomenclature^{*Note1}

G B D R — □ □ □ □ □ □ □ □
 A B C D E F G H

Order	Parameter	Detailed Description					
		A	Launch Wavelength*Note1	27=1270	29=1290	31=1310	33=1330
		39=1390	41=1410	43=1430	45=1450	47=1470	49=1490
		51=1510	53=1530	55=1550	57=1570	59=1590	61=1610
B	Launch Data rate	6=1.25Gb/s			8=2.5Gb/s		
C	Receiver Wavelength*Note1	3=1310			5=1550		
D	Receiver BW	0=2GHz		1=2.5GHz		2=3.2GHz	
E	Connector	F=FC/PC		S=SC/PC		T=ST/PC	
		L=LC/PC		FA=FC/APC		SA=SC/APC	
F	LD Pin Type	1=LD-pin-1			2=LD-pin-2		
G	Isolator	N=None		G= Single Stage		G2=Dual Stage	

H	Fiber diameter	Blank=SM
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Note1: Other information, please contact EOPTOLINK.

Absolute maximum ratings

Parameter	Symbol	Ratings	Unit
Storage temperature	Tstg	0~+85	°C
Operating case temperature	Top	0~+70	°C
Forward current (LD)	IFD	150	mA
Reverse voltage (LD)	VrL	2	V
Reverse voltage (PD)	VrP	20	V
Reverse current (PD)	IrP	2	mA
Soldering temperature (<10s)	Stemp	260	°C

Electrical and optical characteristics - Transmitter^{Note2 Note3}

Parameter	Sym.	Condition	Min	Typ	Max	Unit
Threshold current	Ith	CW	—	10	15	mA
		CW, Tc=0~+70°C	—	—	50	
Output Power(After coupled)	Pf	CW, If=Ith+20mA	1	2.5	3.5	mW
Operating current	If	CW	—	25	40	mA
		CW, Tc=0~+70°C	—	60	80	
Operating voltage	Vf	CW, Tc=0~+70°C	—	—	1.6	V
Slope efficiency	Se	CW	0.05	—	0.17	mW/mA
Peak wavelength	λC	CW	λC-4	λC	λC+4	nm
Wavelength Temperature Coeff	—	CW, Tc=0~+70°C	—	0.1	—	nm/°C
Side-mode suppression ratio	SMSR	CW, Tc=0~+70°C	30	—	—	dB
Tracking error	ΔPf	Im hold(@Pf=3mW(25°C)), CW,TC=0~+70°C	-1	—	1	dB
Third order inter-modulation distortion ^{*Note2}	IMD3	OMI=20%	—	—	-55	dBc
Relative intensity noise ^{*Note3}	RIN	CW	—	-155	-145	dB/Hz
Monitor current	Im	CW, VrP=5V, Tc= 0~+70°C	80	500	—	uA
Monitor dark current	Id	CW, Vrp=5V	—	1	10	nA
Monitor capacitance	C	Vrp=5V ,f=1MHz	—	—	10	pF
Connector repeatability	—		-1	—	1	dB
Optical Isolation	—	Single Stage	—	20	—	dB
	—	Dual Stage	—	30	—	

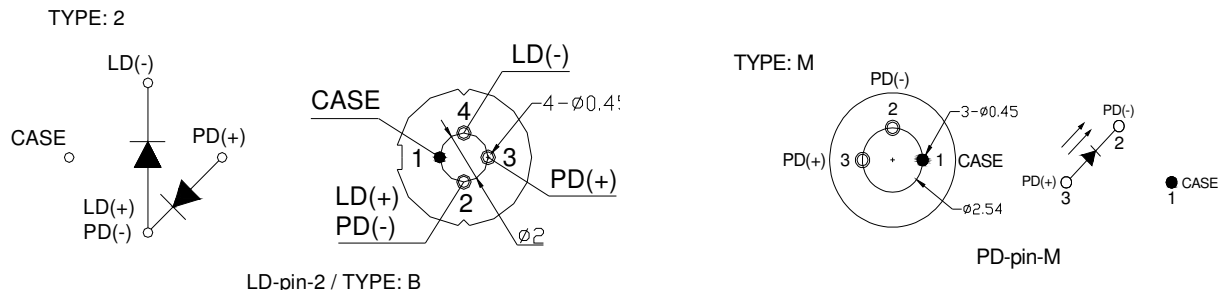
Note2: Zero link loss, 2tone (1770MHz, 1772.5MHz)

Note3: Zero link loss, f=1780MHz

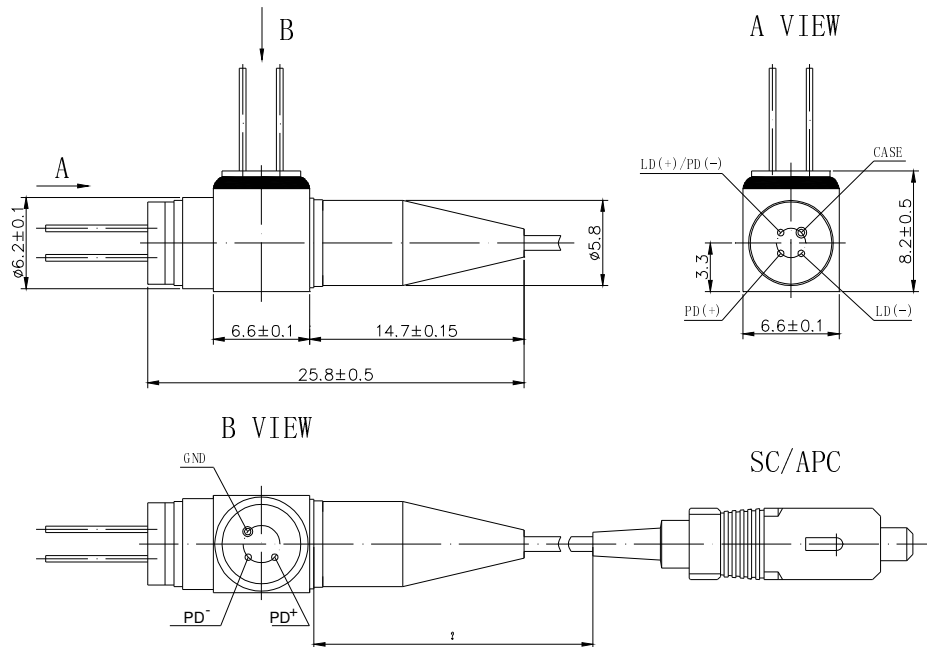
Electrical / Optical Specifications - Receiver

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Detection Wavelength Range	λ	GBDP-XX3XXXXX		1310		nm
		GBDP-XX5XXXXX		1550		
Active Diameter	DA	-	—	75	—	μm
Responsivity	R	VR=-5V@1310nm	—	0.80	—	A/W
		VR=-5V@1550nm	—	0.85	—	A/W
Return Loss	RL		—	-55	—	dB
Dark Current	Id	VR = 5V	—	0.1	1	nA
Capacitance	Cp	VR = 5V	—	0.6	0.7	pF
Bandwidth	BW	VR=5V	—	2	—	GHz

Pin Assignment



Pigtail Package series ^{*Note4}



Note4: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

Ordering information (Standard version)

Part No	Transmitter/Receiver
GBDP-43832F2G	1430T/1310R
GBDP-61852F2G	1610T/1550R

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



CWDM-DFB BOSA Series

Revision	Initiated	Reviewed	Approved	Release Date
V2	Zore.Zhao	Kelly.Cao		2009-12-23

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