

BOSA FOR GEAPON OLT

PLDM585-168

Features

- *Single fiber bi-directional data link with symmetric 1.25Gbps upstream and downstream*
- *Integrated WDM filter for dual wavelength Tx/Rx operation at 1310/1490nm*
- *Continuous-Mode transmitter with 1490nm DFB laser 1310nm Burst-Mode Receiver with TIA*
- *Single mode fiber pigtailed with SC/PC connector*
- *3.3V power supply*
- *0°C ~ +70°C operating temperature range*

Application

- *GE-PON optical transceiver at OLT side*

Standard

- *IEEE802.3ah*

Description

The BOSA is used for optical line terminal (OLT) module. It is a single unit comprised of a transmitter, a receiver, WDM filter, and a single mode fiber pigtail. The transmitter section uses a continuous-mode 1490nm DFB laser, The receiver section uses an integrated 1310nm Burst-Mode Receiver with TIA. This BOSA operates at 1.25Gbit/s from a single power supply (+3.3V). It uses 9/125um diameter single fiber with SC/PC connector.

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	-	95
Power Supply Voltage	Vcc		3.05	3.55
Lead solder temperature	-	°C	-	260
Lead solder duration	-	S	-	10
Fiber yield strength	-	kgf	-	1
Fiber bend radius	-	mm	30	
Laser Diode Reverse Voltage	VRL	V	-	2
Laser Diode Forward Current	IFL	mA	-	100
MPD Reverse Voltage	VRM	V	-	15
MPD Forward Current	IFM	mA	-	2
PIN Reverse Voltage	VRP	V	-	10
PIN Forward Current	IFP	mA	-	2

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	Tc	°C	0	-	70
Power Supply Voltage	Vcc		3.05	3.3	3.55
Relative Humidity	RH	%	-	50	95

Specifications (T=25°C, unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Transmitter: LD & MPD Electro-Optical Characteristics						
Central Wavelength	λ_p	nm	1480	1490	1500	CW
Threshold Current	Ith	mA	-	10	20	CW
			-	-	50	CW, 70 °C
Optical Output Power	Po	mW	1.6	2.0	-	Ith+20mA
Side Mode Suppression Ratio	SMSR	dB	30	35	-	
Spectral Width	$\Delta\lambda$	nm	-	-	1	-20dB

Operating Voltage	Vop	V	-	1.3	1.6	Ith+20mA
Monitor Current	Im	μA	80	-	800	Ith+20mA
Monitor Dark Current	Id	nA	-	-	10	-5V
Transmitter Reflectance	-	dB	-	-	-10	@1490nm
Rise/Fall Time	Tr/f	ns	-	-	0.3	20%~80%
Tracking Error	TE	dB	-1.5	-	1.5	0~70℃

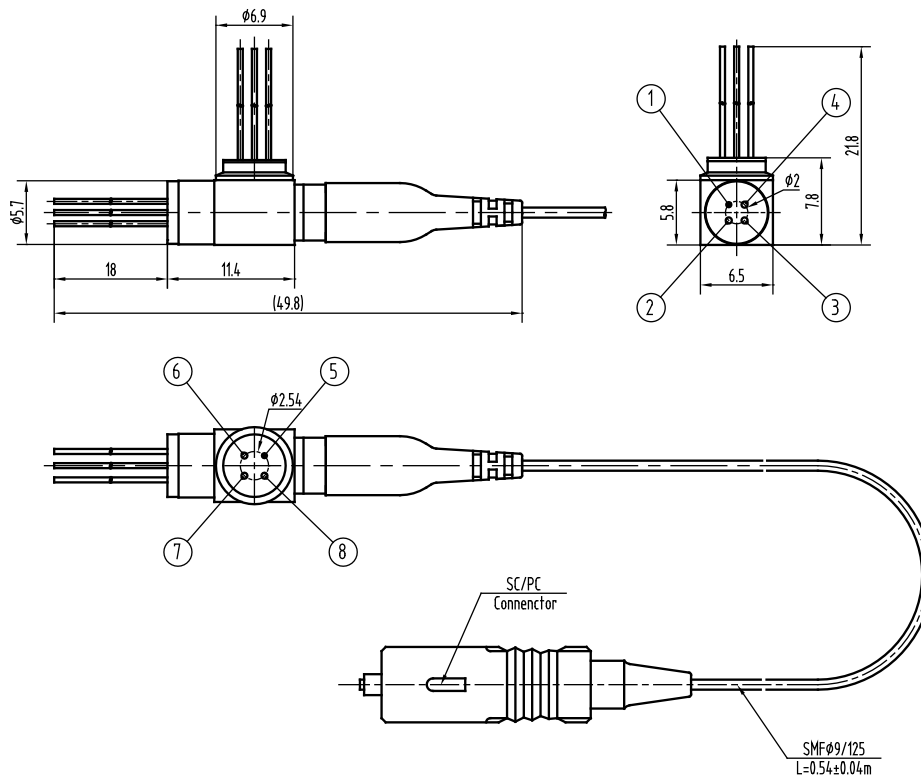
Receiver: PIN-TIA Electro-Optical Characteristics

Wavelength range	λp	nm	1260	1310	1360	CW
Optical Sensitivity	S	dBm	-	-	-26	1.25Gb/s, BER≤10 ⁻¹² , CW
Optical Saturation	OL	dBm	-5	-	-	
Receiver Reflectance	-	dB	-	-	-20	@1310nm
Isolation	ISO	dB	30	-	-	1310nm/1550nm
Operating Voltage	Vcc	V	3.05	3.3	3.55	

Pin Description

Pin	Description	Pin	Description
1	CASE	5	GND
2	LD+ /MPD-	6	Vcc
3	MPD+	7	Dout-
4	LD-	8	Dout+

Package Outline



Ordering Information

Part No.	Specification							
	Package	Datarate	Laser	Optical Power	Detector	Sensitivity	Temp	Others
PLDM585-168	BOSA	1.25Gb/s	1490nm DFB	1.6mW	1310nm BMTIA	-26dBm(max)	0~70 °C	

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