



## EPON OLT BOSA ( F.L=7.5mm Aspheric lens )

### 产品描述

- 该产品为上行1490nm波长/工作速率1.25Gb/s, 上行 1577nm 波长/工作速率 10.3125G/s 下行 1310nm/工作速率1.25Gb/s的10G EPON OLT BOSA 组件
- 发端采用 1490nm DFB 激光器+1577nm EML DFB 激光器, 收端采用突发模式 APD-TIA 二极管
- 芯片信息:  
DFB: 1490nm 1.25Gpbs DFB 4PIN  
EML : 1577nm 10G 7PIN  
PT: 10G/1.25Gpbs APD-TIA
- 产品结构备注 : SC/PC 绝缘套芯套组件, 机加工/粉末件结构, 接收端耦合结构, 带隔离器

### 产品应用

- FTTx
- 10GEPON 光网络

### 产品特点

- 采用激光焊接方案
- 10GEPON BI-Directional
- 高光学隔离
- 高灵敏度 APD-TIA
- 工作温度 : 0°C~75°C
- 插拔式 SC BOSA

### 产品标准

- 符合 Telcordia GR - 468 可靠性测试标准
- 符合 RoHS 6 项 标准
- 符合 ROHS(对有害物质的限制)标准
- 符合 GR - 326 连接器合格标准

## 1. Absolute Maximum Ratings

Item	Symbol	Unit	Min	Max	Note
Operating Case Temperature (case)	$T_{OPR}$	°C	0	75	
Storage Temperature	$T_{STG}$	°C	-40	85	
Storage and Operating Humidity		%		85	
Lead Soldering Temperature	$T_s$	°C		260	10s
Optical Output Power		dBm		5	
Forward Current (LD)	$I_{FLD}$	mA		150	
Reverse Voltage (LD)	$V_{RLD}$	V		2	
MPD Forward Current	$I_{FMPD}$	mA		2	
MPD Reverse Voltage	$V_{RMPD}$	V		20	

## 2. Transmitter ( 1577nm ) Electro-Optical Characteristics (Unless otherwise noted, $T_{LD}=+45^{\circ}\text{C}$ , $T_C=+25^{\circ}\text{C}$ )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold Current	$I_{TH}$	CW, $V_m=0V$	---	--	30	mA
Forward Voltage	$V_F$	CW, $I_f=I_{op}$ , $V_m=0V$	---	---	2	V
Center wavelength	$CW$	CW, $I_f=I_{op}$ , $V_m=0V$	1574	1577	1580	Nm
Side mode suppression ratio	SMSR	CW, $I_f=I_{op}$ , $V_m=0V$	35	---	---	dB
Optical Output power	$P_f$	$T_C=45^{\circ}\text{C}$ , CW, $I_{op}=75\text{mA}$ @ $E_A=0v$	3.5	4	---	mW
Operating current of LD	$I_{op}$		---	75	110	mA
EA Center-point Bias Voltage	$V_{ea}$		-2			V
P-P Modulation Voltage (EA Section)	$V_{pp}$				2.5	V
EA Modulator Current	$I_{EAM}$	$I_{OP}=75\text{mA}$ , $V_{EA}=-0.5V$ , $T_{OP}=45^{\circ}\text{C}$	6		45	mA
Monitor Current	$I_M$	CW, $P_f=I_{op}$	100	---	1000	uA
Tracking Error	$\Delta P_f/P_f$	$0\sim+75^{\circ}\text{C}$ , CW, $P_f@I_M$ hold	-1.5	---	+1.5	dB

### 3. Transmitter ( 1490nm ) Electro-Optical Characteristics ( Tc=+25°C Unless otherwise noted )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Threshold current	I <sub>th</sub>	CW , T <sub>c</sub> =25°C	--	8	15	mA
		CW , T <sub>c</sub> =0~+75°C	--	--	40	mA
Operating output power	P <sub>f</sub>	CW, I <sub>f</sub> =I <sub>th</sub> +20mA	2.5	--	5	mW
Operating voltage	V <sub>f</sub>	CW	--	--	2	V
Peak wavelength	λ <sub>p</sub>	CW, T <sub>c</sub> =0~+75°C	1480	1490	1500	nm
Side mode suppression ratio	SMSR	CW, T <sub>c</sub> =0~+75°C	30	--	--	dB
Tracking Error	TE	0~+75°C, CW, P <sub>f</sub> @I <sub>M</sub> hold	-1.5	--	1.5	dB
Monitor current	I <sub>m</sub>	V <sub>r</sub> MP=5V	--	2	10	nA
Monitor dark current	I <sub>d</sub>	V <sub>r</sub> MP=5V , f=1MHz	--	--	10	pF

### 4. Receiver Electro-Optical Characteristics (TC=25°C, V<sub>cc</sub>=3.3V)

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Receiver wavelength	λ <sub>c</sub>		1260	--	1360	nm
Break-down Voltage	V <sub>BR</sub>	I <sub>d</sub> =10uA, V <sub>cc</sub> =0	27	35	45	V
Dark current	I <sub>d</sub>	V <sub>apd</sub> =0.9*V <sub>BR</sub> , V <sub>cc</sub> =0		30	150	nA
Supply Current	I <sub>cc</sub>	T <sub>c</sub> =0~75°C			65	mA
Responsivity	Res	M=1, 1270nm, 1310nm	0.6	0.8	--	AW
Power Supply	V <sub>cc</sub>		3.14	3.3	3.45	V
Optical Return Loss	ORL	T <sub>c</sub> =0~75°C	12			dB
Sensitivity OMA (1G)	Sen@1G	1.25Gbps, PRBS23, BER=10 <sup>-12</sup> , ER=6dB, V <sub>cc</sub> =3.3V, M=M <sub>opt</sub> , λ <sub>c</sub> =1310nm			-32	dBm
Sensitivity OMA (10G)	Sen@10G	10.3Gbps, PRBS31, BER=10 <sup>-3</sup> , ER=6dB, V <sub>cc</sub> =3.3V, M=M <sub>opt</sub> , λ <sub>c</sub> =1270nm,			-29	dBm
Overload	POL	10.3Gbps, PRBS31, BER=10 <sup>-3</sup> , ER=6dB, V <sub>cc</sub> =3.3V, M=3dB, λ <sub>c</sub> =1270nm	-6			dBm

## 5. Dimension Outline

