

Cooled BOSA with pigtail



Key Features

- High power
- Stable single longitudinal mode emission
- TEC and thermistor inside
- High linearity PIN
- Built-in Optical Isolator and WDM filter
- Compact BOSA package
- Compliant with GR-468

Applications

- RFOG
- CATV

Absolute Maximum Ratings (T=25°C, unless otherwise noted)

Parameter	Symbol	Min	Max	Unit
BOSA				
Storage Temperature	T _s	-40	85	°C
Operating Case Temperature (with heatersink)	T _{op}	-40	85	°C
Laser Diode				
LD Forward Voltage	V _f	--	2	V
LD Forward Current	I _f	--	120	mA
Monitor PD Forward Current	I _{mf}	--	2	mA
Monitor PD Reverse Voltage	V _{mf}	--	10	V
Analog PIN				
Reverse Voltage	V _r	20	--	V
Reverse Current	I _r	10	--	mA
Forward Voltage	V _f	--	0.8	V(I=3mA)
Forward Current	I _f	10	--	mA

Transmitter Specifications (Tc=25°C, unless otherwise noted)

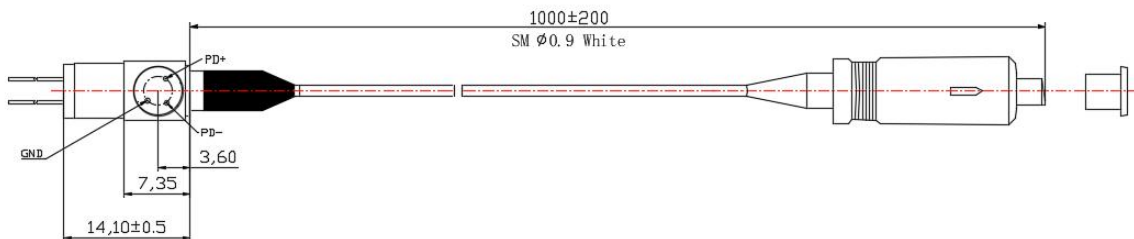
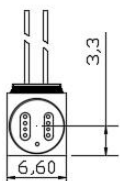
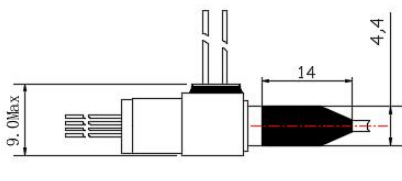
Parameters	Min.	Typ.	Max.	Unit
Threshold Current (I _{th})		8	15	mA
Output Power(30mA)	1.8	2	-	mW
Slope Efficiency	-	0.14	-	W/A
Center Wavelength	$\lambda-5$	λ	$\lambda+5$	nm
Side Mode Suppression Ratio	30	35	-	dB
Linewidth		2	3	MHz
Optical Isolation	25	-	-	dB
Power Monitor Current	100	300	1000	μA
Power Monitor Dark Current	-	-	10	nA
TEC Current	-	0.5	0.9	A
TEC Voltage	-	-	1.2	V
Thermistor Resistance @25°C	9.5	10	10.5	kΩ
Relative Intensity Noise	-	-	-145	dB/Hz
CSO(I _{th} +20mA)	-	-	-55	dBc
CTB(I _{th} +20mA)	-	-	-60	dBc
Tx Bandwidth (-3dB)	1.2	-	-	Ghz

* Product specifications are subject to change without notice.

Receiver Specifications (Tc=25°C, unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Responsivity	R	0.8	--	--	A/W	T=-40~+85°C
Capacitance	C _{pd}	--	0.5	0.6	pF	V _r =5V,f=1MHZ,Popt=0uW
Bandwidth	BW	1.5	--	--	GHZ	
Dark Current	I _d	--	--	5	nA	V _r =10V,Popt=0uW
IMD2	IMD2	-	-	-70	dBc	λ=1550 nm
IMD3	IMD3	-	-	-80	dBc	λ=1550 nm
Reverse Voltage	V _R	-	-	30	V	
Return Loss	RL	40	-	-	dB	
Cross Talk	CT	-	-	30	dB	

Dimensions (in millimeters)



Pin Assignments

TX Assignments	Pin	Symbol	Description	RX Assignments	Pin	Symbo I	Description
	1	TEC+	TEC anode		1	PD+	PIN anode
	2	Rth	thermistor		2	PD-	PIN cathode
	3	PD-	PD cathode		3	GND	GND
	4	PD+	PD anode				
	5	LD-	LD cathode				
	6	LD+	LD anode				
	7	Rth	Thermistor				
	8	TEC-	TEC cathode				

Order information

Family Name	BOSA	Cooled	Tx wavelength (nm)	Rx wavelength (nm)	Fiber	Connector
LT	B	C	1270: T27 1290: T29 1310: T31 1450: T25 1470: T47 1490: T49 1550: T55 1610: T61	1310: R31 1550: R55	SM	1: SC/PC 2: SC/APC 3: SC/UPC 4: FC/PC 5: FC/APC 6: FC/UPC 7: LC/PC 8: LC/APC
LT	B	C	Txx	Rxx	SM	5