



10G FC BOSA Tx1270nm DFB / Rx1330nm SMF 20KM, I-Temp

Part Number: FBML-H4-2733-20i-MS1



Applications

- Telecommunication
- Data communication
- 10 Gigabit Ethernet

Features

- Data Rate up to 10.3125Gb/s
- 1270nm DFB laser transmitter and PIN-TIA receiver
- Low threshold current, High bandwidth
- FC/UPC Receptacle
- For the transmission up to 20km
- Operating Temperature -40~+85°C
- RoHS Compliant

Laser Safety

- This is a Class 1 Laser Product complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
- Caution: Use of control or adjustments or performance of procedure other than those specified herein may result in hazardous radiation exposure.

Absolute Maximum Ratings

Parameters	Symbol	Min.	Max.	Unit
Forward Voltage (LD)	V _{FL}	-	2	V
Forward Current (LD)	I _{FL}		120	mA
Reverse Voltage (MPD)	V _{RM}	-	20	V
Forward Current (MPD)	I _{FM}	-	2	mA
Operating Temperature	T _{OP}	-40	+85	°C
Storage Temperature	T _{ST}	-40	+85	°C
Lead Soldering Temperature	T _{Sold}	-	260/10	°C/Sec



Transmitter Electro-optical Characteristics

TOP = -40 °C to +85 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I _{TH}		10	15	mA	CW, TOP=25°C
				35	mA	CW, TOP=-40~85°C
Fiber Output Power	P _f	0.3		1	mW	I _{OP} =I _{TH} +20mA, T _C =+25°C
Slope Efficiency	η	0.015		0.05	W/A	I _{OP} =I _{TH} +20mA, T _C =+25°C
Central Wavelength	λ _c	1260	1270	1280	nm	I _{OP} =I _{TH} +20mA, T _C =+25°C
Spectral Width (-20dB)	Δλ			1	nm	I _{OP} =I _{TH} +20mA, T _C =+25°C
Side Mode Suppression Ratio	SMSR	35			dB	I _{OP} =I _{TH} +20mA, T _C =+25°C
Extinction Ratio	ER	3.5			dB	10.3125Gbps
Tracking Error	TE	-1.5		1.5	dB	T _{OP} =-40~85°C
Forward Voltage	V _{FL}		1.2		V	I _{OP} =I _{TH} +20mA, T _C =+25°C
Rise / Fall Time	Tr/Tf		50		ps	Unfiltered, 20~80%, 10.3125Gbps, ER=4dB
Monitor Current	I _m	100		1000	μA	V _R =1V, T _C =+25°C

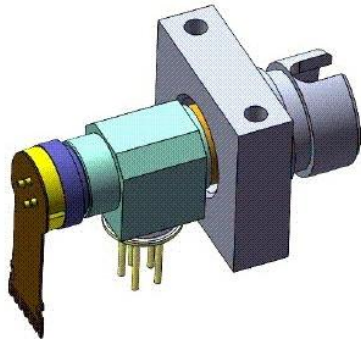
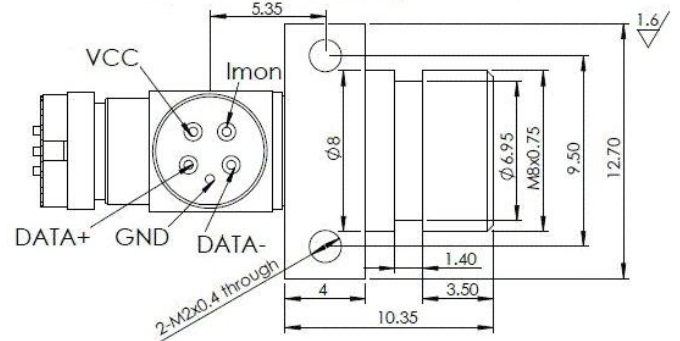
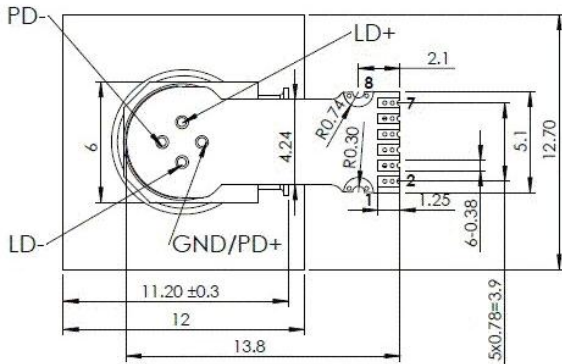
Receiver Electro-optical Characteristics

TOP = -40 °C to +85 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Receiver Sensitivity	SEN			-14.4	dBm	PRBS 2 ³¹ -1, NRZ
Maximum Receive Power	P _{RX-MAX}	-3			dBm	10.3125Gbps, BER<10 ⁻¹²
Operating Wavelength	λ _c	1320	1330	1340	nm	
Supply Voltage	V _{CC}	2.9	3.3	3.6	V	
Supply Current	I _{CC}		40	60	mA	
Bandwidth	BW		10G		GHz	
Low frequency cutoff				100	KHz	
Optical Return Loss	ORL	14			dB	
Differential Output Voltage	V _{OUT}			285	mV	
Rise / Fall time	Tr/Tf		50		ps	



Mechanical Dimensions



PIN Description:
 1.GROUND
 2.PD CATHODE
 3.GROUND
 4.LD CATHODE
 5.LD ANODE
 6.GROUND
 7.NO CONNECT
 8.GROUND

