

PRODUCT SPECIFICATION

GLXF-BL2396-10D(I) GLXF-BL3296-10D(I)



10Gb/s	Tx1270/Rx1330nm	XFP	10Km
10Gb/s	Rx1330/Tx1270nm	XFP	10Km

■ Features:

- Supports 9.95Gb/s to 11.3Gb/s bit rates
- Hot Pluggable XFP Footprint
- 1270/1330nm DFB Laser and PIN photo detector
- Up to 10km transmission on SMF
- Power dissipation < 2W
- Single Power Supply: 3.3V
- No Reference Clock Required
- Compatible with RoHS
- Built-in Digital Diagnostic Functions

■ Applications:

- 10GBASE-LR/LW 10G Ethernet
- SONET OC-192 SR-1
- SDH STM I-64.1
- 1200-SM-LL-L 10G Fibre Channel
- 10GBASE-LR/LW with FEC
- 1200-SM-LL-L 10G Fibre Channel with FEC

3. Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Storage Temperature	Tst	-40	+85	°C
Supply Voltage	Vcc	0	+3.6	V
Operating Relative Humidity	RH	0	85	%

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4. Operation Environment

Parameter	Symbol	Min	Typical	Max	Units
Supply Voltage	Vcc	3.14	3.3	3.47	V
Operating Case Temperature	Tc	0		+70	°C
Power Dissipation				2	W
Data Rate		9.95		11.3	Gbps

5. Optical Characteristics

(Ambient Operating Temperature 0°C to +70°C, Vcc =3.3 V)

Parameter	Symbol	Min.	Typ.	Max.	Units	
Transmitter Section						
Center Wavelength	Tx 1270	λ_o	1250	1270	1290	nm
	Tx 1330		1130	1330	1530	
Spectral Width(-20dB)	Tx 1270	$\Delta\lambda$			1	nm
	Tx 1330				1	
Average Output Power	Tx 1270	Po	-5		0	dBm
	Tx 1330		-5		0	
Extinction Ratio	Er	3.5			dB	
Side-Mode Suppression Ratio	SMSR	35			dB	
Total jitter	Tj	IEEE 802.3ae				
Receiver Section						
Center Wavelength	Rx 1330	λ_o	1130	1330	1530	nm
	Rx 1270		1250	1270	1290	
Receiver Sensitivity	Rsen			-14	dBm	
Receiver Overload	Rov	-3			dBm	
Return Loss		12			dB	
LOS Assert	LOS _A	-30			dBm	
LOS Dessert	LOS _D			-18	dBm	
LOS Hysteresis		0.5		4		

6. Electrical Characteristics

(Ambient Operating Temperature 0°C to +70°C, Vcc = 3.3 V)

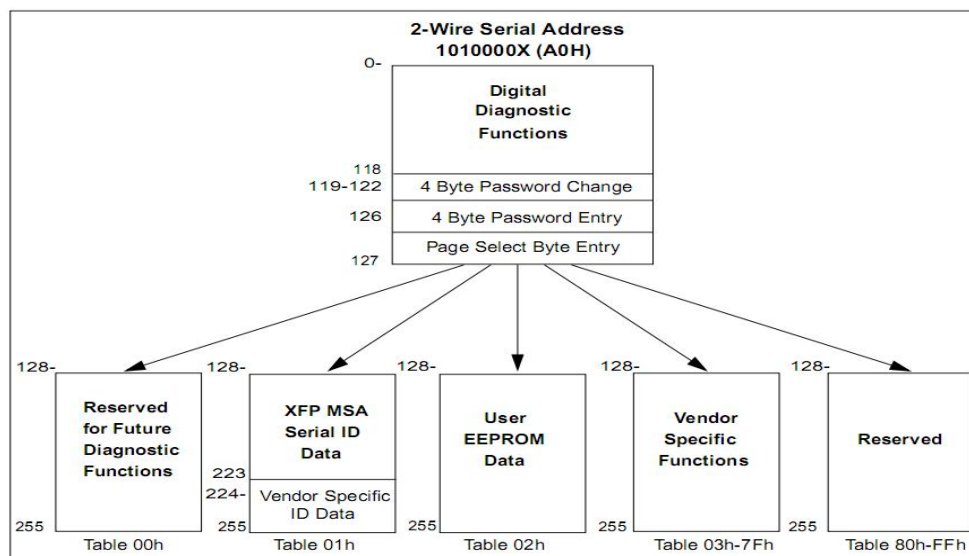
Parameter	Symbol	Min.	Typ.	Max.	unit
Transmitter Section					
Input Differential Impedence	Zin	90	100	110	Ohm
Data Input Swing Differential	Vin	120		850	mV
TX Disable	Disable	2.0		Vcc	V
	Enable	0		0.8	V
TX Fault	Assert	2.0		Vcc	V
	Deassert	0		0.8	V
Receiver Section					
Output differential impedence	Zout		100		Ohm
Data output Swing Differential	Vout	340	650	850	mV
Rx_LOS	Assert	2.0		Vcc	V
	Deassert	0		0.8	V

7. Diagnostics

Parameter	Range	Accuracy	Unit	Calibration
Temperature	-10 ~ 75	±5	°C	Internal
Bias Current	10 ~ 80	±1	mA	Internal
Tx Power	-6 ~ 1	±2	dBm	Internal
Rx Power	-16 ~ -3	±3	dBm	Internal

For more detailed information including memory map, please see XFP MSA Specification

8. EEPROM INFORMATION (A0) :



9.Pin Description:

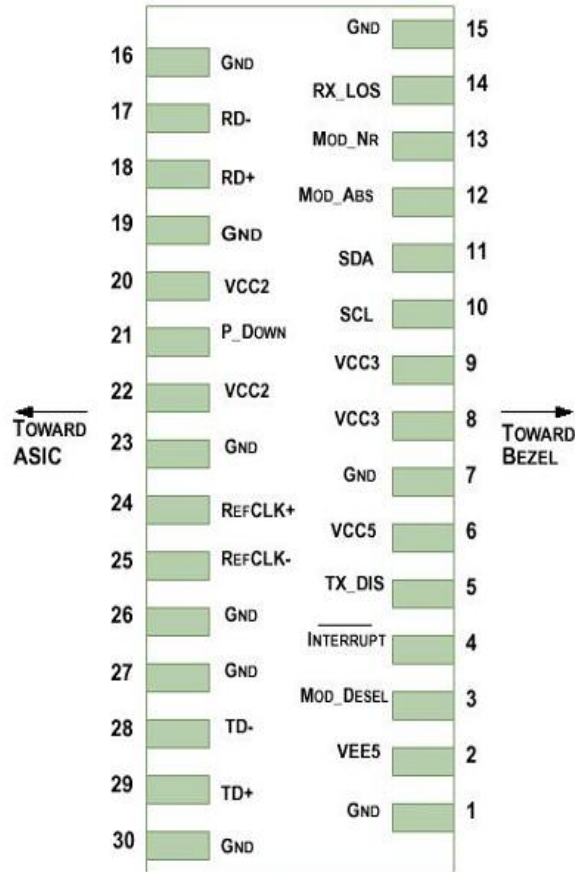


Diagram of Host Board Connector Block Pin Numbers and Name

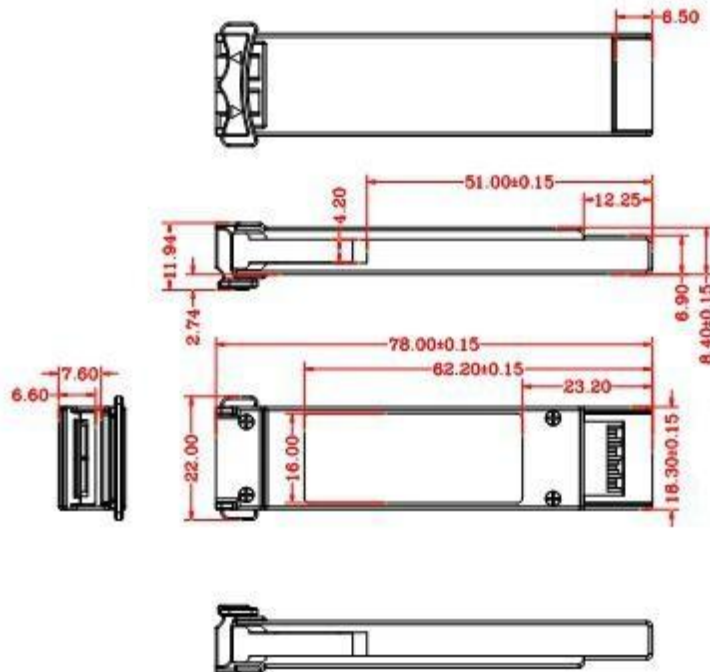
Pin	Logic	Symbol	Name/Description	Ref.
1		GND	Module Ground	1
2		VEE5	Optional -5.2 Power Supply – Not required	
3	LVTTL-I	Mod-Desel	Module De-select; When held low allows the module to respond to 2-wire serial interface commands	
4	LVTTL-O	Interrupt	Interrupt (bar); Indicates presence of an important condition which can be read over the serial 2-wire interface	2
5	LVTTL-I	TX_DIS	Transmitter Disable; Transmitter laser source turned off	
6		VCC5	+5 Power Supply– Not required	
7		GND	Module Ground	1
8		VCC3	+3.3V Power Supply	
9		VCC3	+3.3V Power Supply	
10	LVTTL-I	SCL	Serial 2-wire interface clock	2
11	LVTTL-I/O	SDA	Serial 2-wire interface data line	2
12	LVTTL-O	Mod_Abs	Module Absent; Indicates module is not present. Grounded in the module.	2
13	LVTTL-O	Mod_NR	Module Not Ready; Finisar defines it as a logical OR between RX_LOS and Loss of Lock in TX/RX.	2
14	LVTTL-O	RX_LOS	Receiver Loss of Signal indicator	2
15		GND	Module Ground	1
16		GND	Module Ground	1
17	CML-O	RD-	Receiver inverted data output	
18	CML-O	RD+	Receiver non-inverted data output	
19		GND	Module Ground	1
20		VCC2	+1.8V Power Supply – Not required	
21	LVTTL-I	P_Down/RST	Power Down; When high, places the module in the low power stand-by mode and on the falling edge of P_Down initiates a module reset Reset; The falling edge initiates a complete reset of the module including the 2-wire serial interface, equivalent to a power cycle.	
22		VCC2	+1.8V Power Supply – Not required	
23		GND	Module Ground	1
24	PECL-I	RefCLK+	Reference Clock non-inverted input, AC coupled on the host board – Not required	3
25	PECL-I	RefCLK-	Reference Clock inverted input, AC coupled on the host board – Not required	3
26		GND	Module Ground	1
27		GND	Module Ground	1
28	CML-I	TD-	Transmitter inverted data input	
29	CML-I	TD+	Transmitter non-inverted data input	
30		GND	Module Ground	1

Notes:

1. Module circuit ground is isolated from module chassis ground within the module.
2. Open collector; should be pulled up with 4.7k – 10kohms on host board to a voltage between 3.15V and 3.6V
3. A Reference Clock input is not required. If present, it will be ignored.

- Web: www.glight-tech.com
- Email: market@glight-tech.com

9. Outline Dimensions (mm)



Shenzhen GLight Communication Technology Co., Ltd.

Building 3, ChaoHuiLou Technology Industrial Park, No.119 Huating Road,
Dalang Sub-district, Longhua District, Shenzhen, China

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