100-32WDMA-LR20 - 1G SFP Optical WDM Module SM LC 1310/1550nm, 20km, DDM

The 100-32WDMA-LR20 is the high performance and cost-effective module for optical data communication applications specified for multi modes of 1Gb/s. It operates with +3.3V power supply. The module is intended for single-mode fiber, operates at a nominal wavelength of Tx1310nm/Rx1550nm and complies with Multi-Source Agreement (MSA) Small Form Factor Pluggable (SFP). Each module consists of a transmitter optical subassembly, a receiver optical subassembly and an electrical subassembly. All of them are housed in a metal package and the combination produces a reliable component.
The module is a simplex LC connector transceiver (WDM) designed for use in Gigabit Ethernet applications.

Product Features

- Up to 1. 25Gb/s Data Links
- Hot-pluggable SFP footprint
- 1310nm Fabry-Perot laser transmitter, 1550nm PIN detector
- Simplex LC connector
- Low power dissipation
- Metal enclosure, for lower EMI
- Up to 20km on 9/125µm SMF
- Single 3.3V power supply
- Operating temperature range: 0°C to 70°C
- Digital Diagnostic Monitoring Optional

Applications

- 1.25Gb/s Gigabit Ethernet

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Note
Supply Voltage	Vcc	-0.5	4.0	V	
Storage Temperature		-40	85	°C	
Relative Humidity		5	95	%	

General Operation Characteristics

Parameter	Symbol	Min.	Typ	Max.	Unit	Note
Data Rate			1250		Mb/s	
Supply Voltage	Vcc	3.13	3.3	3.47	V	
Supply Current	Icc_s			250	mA	
Operating Case Temp.	Tc	0		70	°C	

Electrical I/O Characteristics – Tx

Parameter		Symbol	Min.	Typ	Max.	Unit	Note
Diff. input voltage swing			120		820	mVpp	1
Tx Disable input	H	VIH	2.0		Vcc+0.3	V	
	L	VIL	0		0.8		
Tx Fault output	H	VOH	2.0		Vcc+0.3	V	2
	L	VOL	0		0.8		
Input Diff. Impedance		Zin		100		Ω	

Electrical I/O Characteristics – Rx

Parameter		Symbol	Min.	Typ	Max.	Unit	Note
Diff. output voltage swing			340	650	800	mVpp	3
Rx LOS Output	H	VOH	2.0		Vcc+0.3	V	2
	L	VOL	0		0.8		

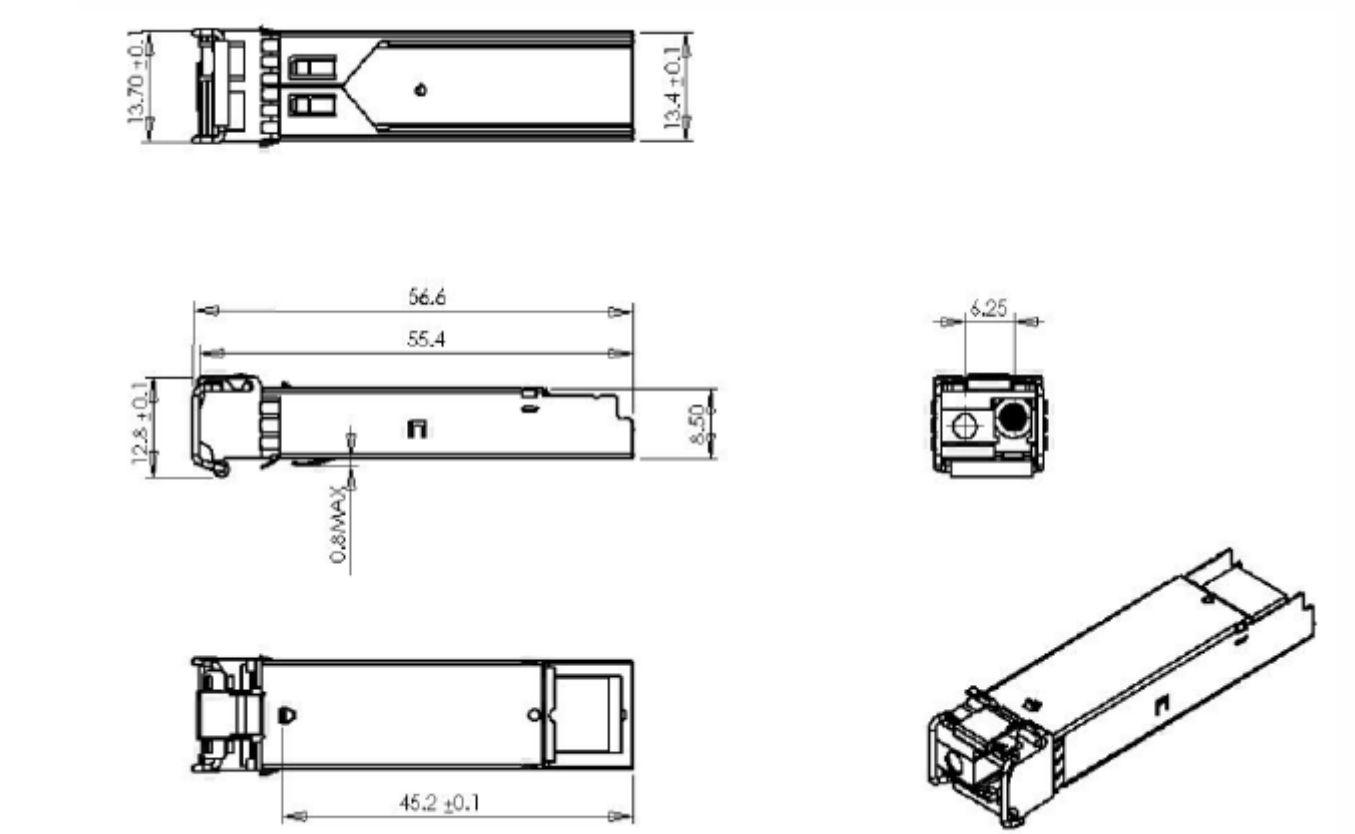
Optical Characteristics - Tx

arameter	Symbol	Min.	Typ	Max.	Unit	Note
Operating Wavelength	λC	1290	1310	1330	nm	
Ave. output power (Enabled)	Po	-9		-3	dBm	1
Extinction Ratio	ER	9.2			dB	1
RMS spectral width	Δλ			4	nm	
Rise/Fall time (20%~80%)	Tr/Tf			0.26	ps	2
Output Eye Mask	Telcordia GR-253-CORE and ITU-T G.957 compatible					

Optical Characteristics - Rx

Parameter	Symbol	Min.	Typ	Max.	Unit	Note
Operating Wavelength			1550		nm	
Sensitivity	Psen			-22	dBm	3
Min. overload	Pimax	-3			dBm	
LOS Assert	Pa	-30			dBm	
LOS De-assert	Pd			-26	dBm	
LOS Hysteresis	Pd-Pa	0.5		6	dB	

Mechanical Specification



Regulatory Compliance

Feature	Reference	Performance
Electrostatic discharge（ESD）	IEC/EN 61000-4-2	Compatible with standards
Electromagnetic Interference (EMI)	FCC Part 15 Class B EN 55022 Class B (CISPR 22A)	Compatible with standards
Laser Eye Safety	FDA 21CFR 1040.10, 1040.11 IEC/EN 60825-1, 2	Class 1 laser product
Component Recognition	IEC/EN 60950, UL	Compatible with standards
ROHS	2002/95/EC	Compatible with standards
EMC	EN61000-3	Compatible with standards