

Features:

- Up to 11.1Gbps Data Links
- Up to 20km transmission on SMF
- DFB Laser and PIN receiver
- Metal enclosure, for lower EMI
- 2-wire interface with integrated Digital Diagnostic monitoring
- Specifications compliant with SFF 8472
- Compliant with SFP+ MSA with LC connector
- Single 3.3V power supply
- Power dissipation < 1.2 W
- Case operating temperature range:
 - Commercial: 0°C to +70°C
 - Industrial: -40°C to +85°C



Applications:

- 10GBASE-LR/LW & 10G Ethernet

Standard:

- Compliant to SFF-8431
- Compliant to SFF 8472
- RoHS Compliant

1. Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Storage Temperature	Ts	-40	-	85	°C	
Relative Humidity	RH	5	-	95	%	
Power Supply Voltage	VCC	-0.3	-	4	V	

2. Recommended Operating Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Case Operating Temperature	Tcase	0	-	70	°C	Commercial
		-40	-	85	°C	Industrial

Power Supply Voltage	VCC	3.14	3.3	3.47	V	
Power Supply Current	ICC	-		360	mA	
Data Rate	BR		10.3125		Gbps	
Transmission Distance	TD		-	20	km	
Coupled fiber	Single mode fiber					9/125um SMF

3. Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Note
Transmitter						
Output Opt. Power	POUT	-5.0		0	dBm	1
Optical Wavelength	λ	1260	1310	1355	nm	
Spectral Width (-20dB)	σ			1	nm	
Optical Extinction Ratio	ER	3.5			dB	
Output Eye Mask	Compliant with IEEE 802.3ae					
Receiver						
Rx Sensitivity	RSENS			-15	dBm	2
Input Saturation Power (Overload)	Psat	0.5			dBm	
Wavelength Range	λ					
C	1270		1610	nm		
LOS De -Assert	LOSD			-17	dBm	
LOS Assert	LOSA	-30			dBm	
LOS Hysteresis		0.5	1.0		dB	

Notes:

1. Class 1 Laser Safety per FDA/CDRH and IEC-825-1 regulations.
2. Measured with a PRBS 2³¹ -1 test pattern, @10.3125Gb/s, BER<10⁻¹²

4. Electrical Characteristics

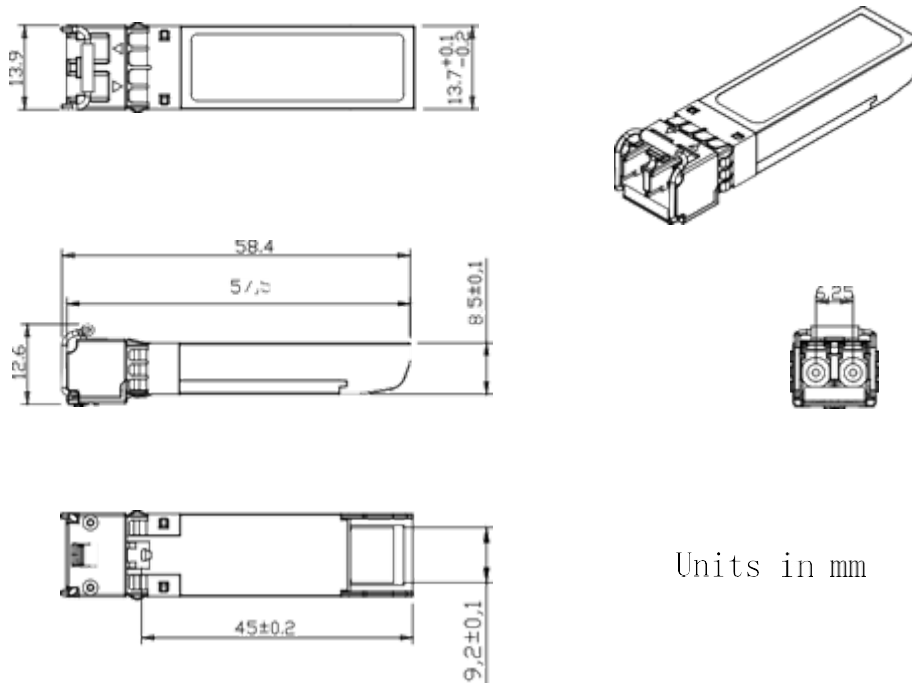
Parameter	Symbol	Min	Typ	Max	Unit	Note
Supply Voltage	Vcc	3.14	3.3	3.46	V	
Supply Current	Icc			360	mA	
Transmitter						
Input differential impedance	Rin		100		Ω	1
Single ended data input swing	Vin,pp	180		700	mV	
Transmit Disable Voltage	VD	Vcc-1.3		Vcc	V	

Transmit Enable Voltage	VEN	Vee		Vee+ 0.8	V	2
Receiver						
Differential data output swing	Vout,pp	300		850	mV	3
LOS Fault	VLOS fault	Vcc-1.3		VccHOST	V	4
LOS Normal	VLOS norm	Vee		Vee+0.8	V	4

Notes:

1. Connected directly to TX data input pins. AC coupled thereafter.
2. Or open circuit.
3. Into 100 ohms differential termination.
4. Loss Of Signal is LVTTTL. Logic 0 indicates normal operation; logic 1 indicates no signal detected.

5. Mechanical Diagram



Units in mm

Note: External physical characteristics are subject to variation. This may include, but is not limited to, external case designs, pull tab colors and/or shapes, removal latch styles or colors, and label sizes and placement. These variations do not affect the function or characteristics of the transceivers.

6. Ordering Information

OEM	Part Number	OEM	Part Number
Adtran	1442420G1-A	Juniper	EX-SFP-10GE-LR20-A
Alcatel	3HE09327AA-20KM-A	Juniper	EX-SFP-10GE-LR20-C1
Arista	SFP-10G-LR20-ARISTA-A	Juniper	SFP-10GE-LR-20-A
Brocade	10G-SFPP-LR20-A	MSA	AN-SFP10G-LR20-I
Calix	100-01903-A	MSA	AN-SFP10G-LR20
Ciena	XCVR-S10V20-C1	OnePort	OP-SFP10G-LR20
Cisco	SFP-10G-LR20-I-A	Samsung	SLS-BB1150EHEX-A
Cisco	SFP-10G-LR20-A	Zhone	MXK-10GE-SFP+-20KM-1310-A
JSDSU	JSH-62L1DD1-15-A		

7. Contact Information

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