

## Features:

- Compliant with IEEE802.3ae 10GBASE-ZR/ZW
- Compliant with CPRI Option 7, 8
- Compliant with SFF-8431 SFP+ MSA
- Support 8.5Gb/s to 11.32Gb/s Multi-Rate
- Hot Pluggable
- 1550nm EML laser transmitter
- APD receiver
- Duplex LC connector
- 2-wire interface for management and diagnostic monitor compliant with SFF-8472
- Single +3.3V power supply
- Link distance 100km over SM fiber
- RoHS Compliant



## Applications:

- 10GBASE-ZR/ZW Ethernet @10.3125G

- Fiber Channel 800-SM-LC-L 8GFC @8.5G, 1200-SM-LL-L 10GFC @10.51875G
- SONET OC-192 & SDH STM-64 @9.953G
- CPRI Option #7 @9.83G, #8 @10.1376G
- OTN OTU2 @10.7G, OTU2e @11.09G, OTU2f @11.32G

## 1. Absolute Maximum Ratings

Parameters	Symbol	Min.	Max.	Unit
Storage Temperature	TST	-40	+85	°C
Storage Relative Humidity	RH	5	95	%
Supply Voltage	VCC	-0.5	+4.0	V

## 2. Recommended Operating Conditions

Parameters	Symbol	Min.	Typ.	Max.	Unit
Case Operating Temperature	TOP	-40	-	+85	°C
Supply Voltage	VCC	+3.13	+3.3	+3.47	V
Supply Current	ICC			680	mA

### 3. Transmitter Electro-Optical Characteristics

VCC= 3.13V to 3.47V, TOP = -40 °C to 85 °C

Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Data Rate	DR	8.5	10.3125	11.32	Gb/s	
Optical Launch Power	Po	+1		+4	dBm	1
Optical Center Wavelength	$\lambda_c$	1530	1550	1565	nm	
Spectral Width (-20dB)	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Optical Extinction Ratio	ER	8.2			dB	
Dispersion Penalty	DP			3	dB	
Optical Eye Mask		IEEE802.3ae				
Relative Intensity Noise	RIN			-128	dB/Hz	
Differential Data Input Swing	VIN	180		850	mV	
TX Disable Input Voltage-Low (TX ON)	TDISVL	GND		0.8	V	
TX Disable Input Voltage-High (TX OFF)	TDISVH	2.0		Vcc	V	
TX Fault Output Voltage-Low (TX Normal)	TFLTTL	GND		0.8	V	
TX Fault Output Voltage-High (TX Fault)	TFLTTH	2.0		Vcc	V	

#### Notes:

1. The optical power is launched into a 9/125 $\mu$ m single mode fiber.

### 4. Receiver Electro-Optical Characteristics

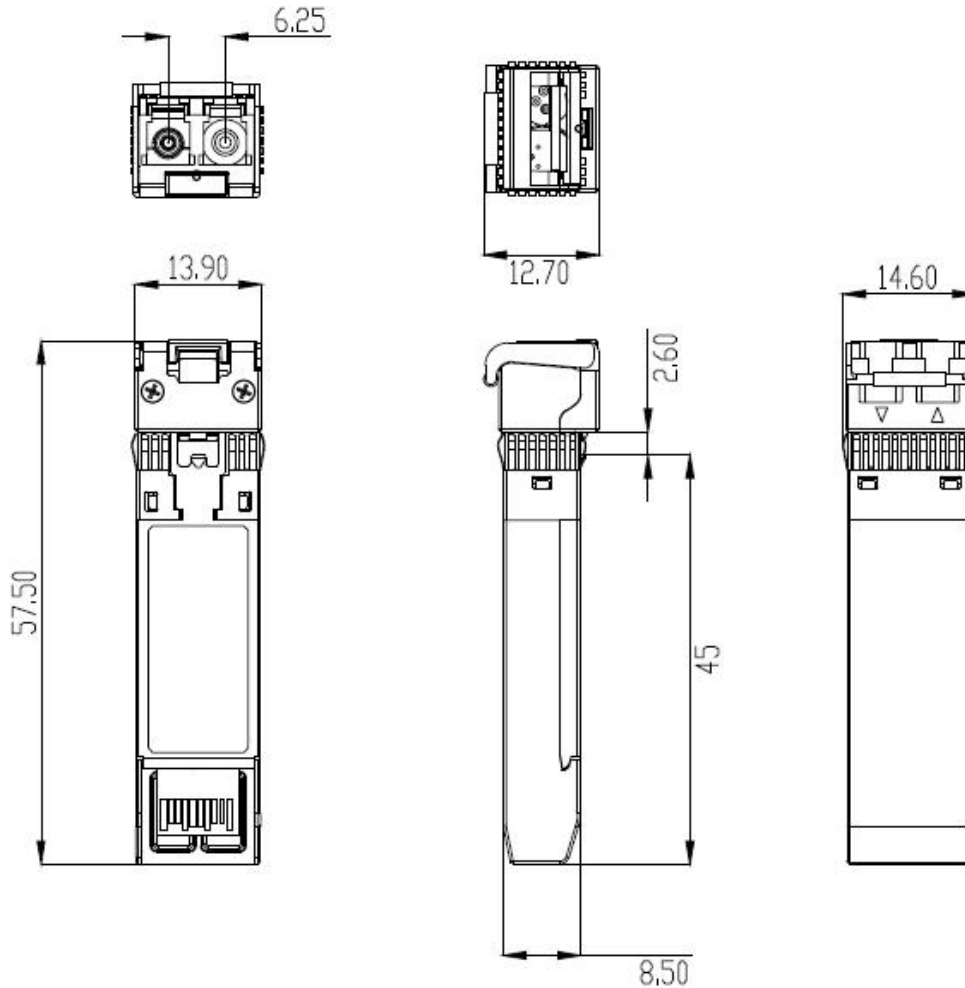
VCC= 3.13V to 3.47V, TOP = -40 °C to 85 °C

Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Data Rate	DR	8.5	10.3125	11.32	Gb/s	
Receiver Sensitivity	PIN_min			-25	dBm	1
Maximum Input Power	PIN_max	-7			dBm	1
Optical Center Wavelength	$\lambda_c$	1260		1620	nm	
LOS De-Assert	LOSD			-26	dBm	
LOS Assert	LOSA	-35			dBm	
LOS Hysteresis	LOSHY	0.5			dB	
Differential Data Output Swing	VOUT	300		900	mV	
Receiver LOS Signal Output Voltage-Low	LOSVL	GND		0.8	V	
Receiver LOS Signal Output Voltage-High	LOSVH	2.0		Vcc	V	

## Notes:

1. Measured with a PRBS 231-1 test pattern @10.3125Gbps BER<10<sup>-12</sup>.

## 5. Mechanical Diagram



**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
Alcatel-Lucent	3HE14649AA-C1	MSA Champion ONE	10GSFP+E-ZR100
Ciena	XCVR-S80V55-100KM-C1	MSA Champion ONE	10GSFP+E-ZR100-H
Cisco	10GESFPP-ZR100-CSC	MSA Champion ONE	SFP10-ZR-100
Juniper	10GESFPP-ZR100I-JUN		

## 7. Contact Information

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