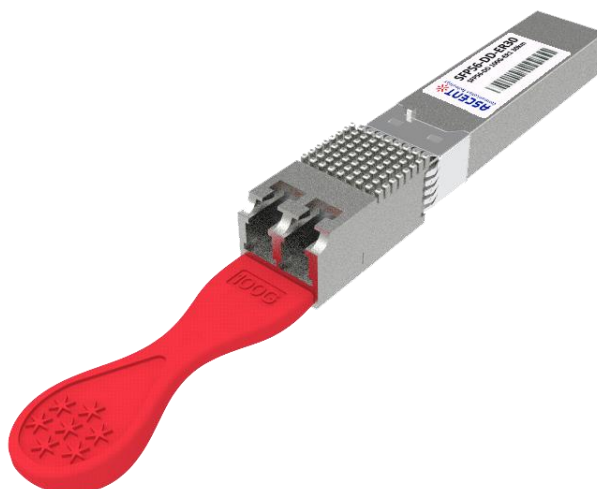


SFP56-DD 100G-ER1 Optical Transceiver 30km

SFP56-DD Series



Ascent's 100G ER1-30km SFP56-DD optical transceiver, SFP56-DD-ER30 is designed for using in 100-Gigabit Ethernet links up to 30km over Single-Mode Fiber (SMF). It is compliant with the SFP56-DD MSA, 100G Lambda 100G ER1-30 and CAUI-4 (no FEC). Digital diagnostics functions are available via the I2C interface, as specified by the SFP56-DD MSA.

The module incorporates 1 channel optical signal, on 1311nm center wavelength, operating at 100Gbps data rate. This module can convert 2 channels of 53Gbps (PAM4) electrical input data to 1 channel of 100Gbps (PAM4) optical signal, and also can convert 1 channel of 100Gbps (PAM4) optical signal to 2 channels of 53Gbps (PAM) electrical output data.

The optical interface uses a Duplex LC connector. The high performance cooled EML transmitter and high sensitivity PIN receiver provide superior performance for 100Gigabit Ethernet applications up to 30km links.

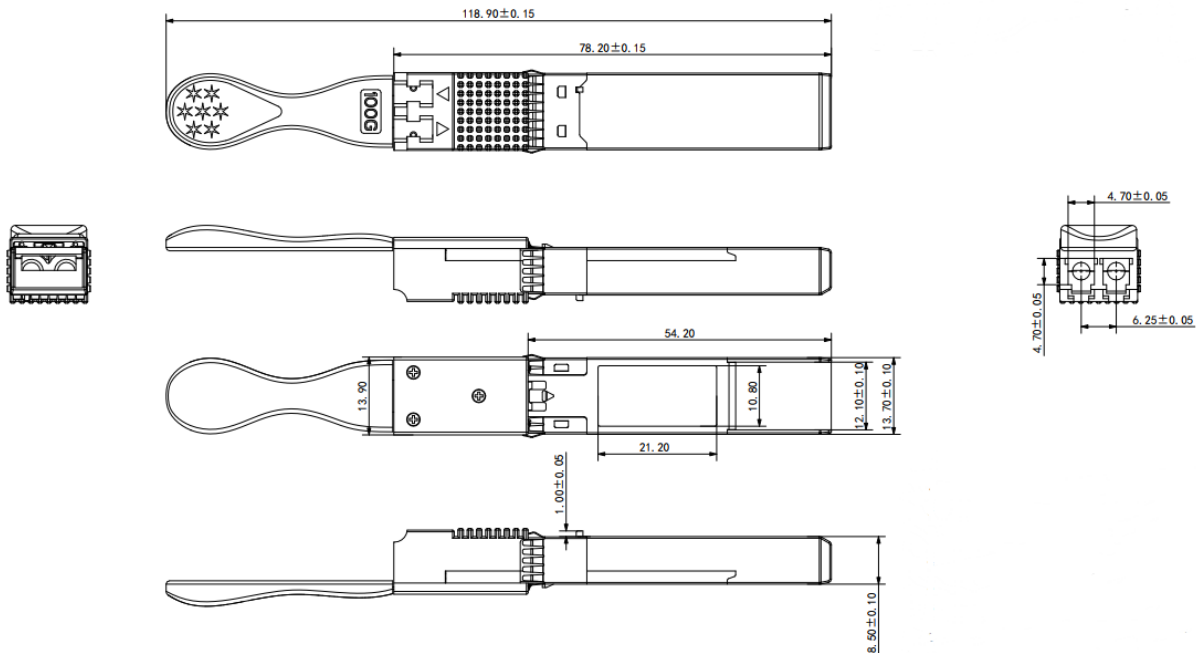
Key Features

- Compliant to 100G Lambda MSA 100G ER1-30
- Full-duplex transceiver module
- 1x106.25Gb/s(PAM4) optical interface and 2x53.125Gb/s(PAM4) electrical interface
- 106.25Gbps PAM4 based on a cooled EML TOSA transmitter and PAM4 APD Receiver
- Maximum link length of 30km on G.652 SMF with KP-FEC
- Built-in Digital Diagnostic functions
- SFP56-DD MSA compliant, duplex LC receptacles
- Low power consumption < 3.5W
- Wide operating temperature: 0°C~70°C
- RoHS compliant (lead free)

Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Operating Case Temperature	T_c	0	-	70	°C	
Power Supply Voltage	V_{cc}	3.13	3.3	3.47	V	
Data Rate Per Lane	f_d	-	106.25	-	Gb/s	
Power Consumption	P_m	-	3	3.5	W	
Link Distance with G.652	D	-	-	30	km	
Centre Wavelength	λ_c	1304.5	-	1317.5	nm	
Average Launch Power	P_{out}	0	-	5.6	dBm	
Average Launch Power of OFF Transmitter		-	-	-30	dB	
Centre Wavelength	λ_c	1304.5	-	1317.5	nm	
Average Receive Power	P_{in}	-14.7	-	-3.4	dBm	
Receiver Sensitivity in OMA_{outer}	RX_{sen}	-	-	-12.5	dBm	
Damage Threshold				-3	dBm	
Differential Input Voltage Amplitude	ΔV_{in}	-	-	1600	mVp-p	
Differential Output Voltage Amplitude	ΔV_{out}	-	-	900	mVp-p	

Outline Diagram



Ordering Information

Product Name	Product Description
SFP56-DD-ER30	SFP56-DD ER1, 106.25Gb/s, Single Channel 1310 nm, 30km, EML+PIN, SMF, Dual LC,DOM



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