100G QSFP28 to 4 Duplex LC Breakout Active Optical Cable

QSFP-100G-4LCAOxx



Application

- 100GbE and 25GbE break-out applications for Datacom switch and router connections
- 100G to 4×25G density applications for Datacom and Proprietary protocol applications
- Data centers/InfiniBand EDR systems

Features

- Electrical interface compliant to SFF-8436 and SFF-8431
- 850nm VCSEL laser and PIN photo-detector
- Built-in digital diagnostic functions
- Max. Power Consumption 2.5W
- Hot Pluggable
- RoHS compliant

Product Specifications

I. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage Temperature	TS	-20	85	°C
Relative Humidity	RH	0	85	%
Case Operating Temperature	TCase	0	70	°C
Supply Voltage	VCC	-0.3	3.6	V

II.Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Case Operating Temperature	TCase	0	-	70	°C
Supply Voltage	VCC	3.13	3.3	3.47	V
Supply Current (QSFP28)	ICC	-	-	1000	mA
Data Rate Per Lane	DR	-	25.78125	-	Gbit/s

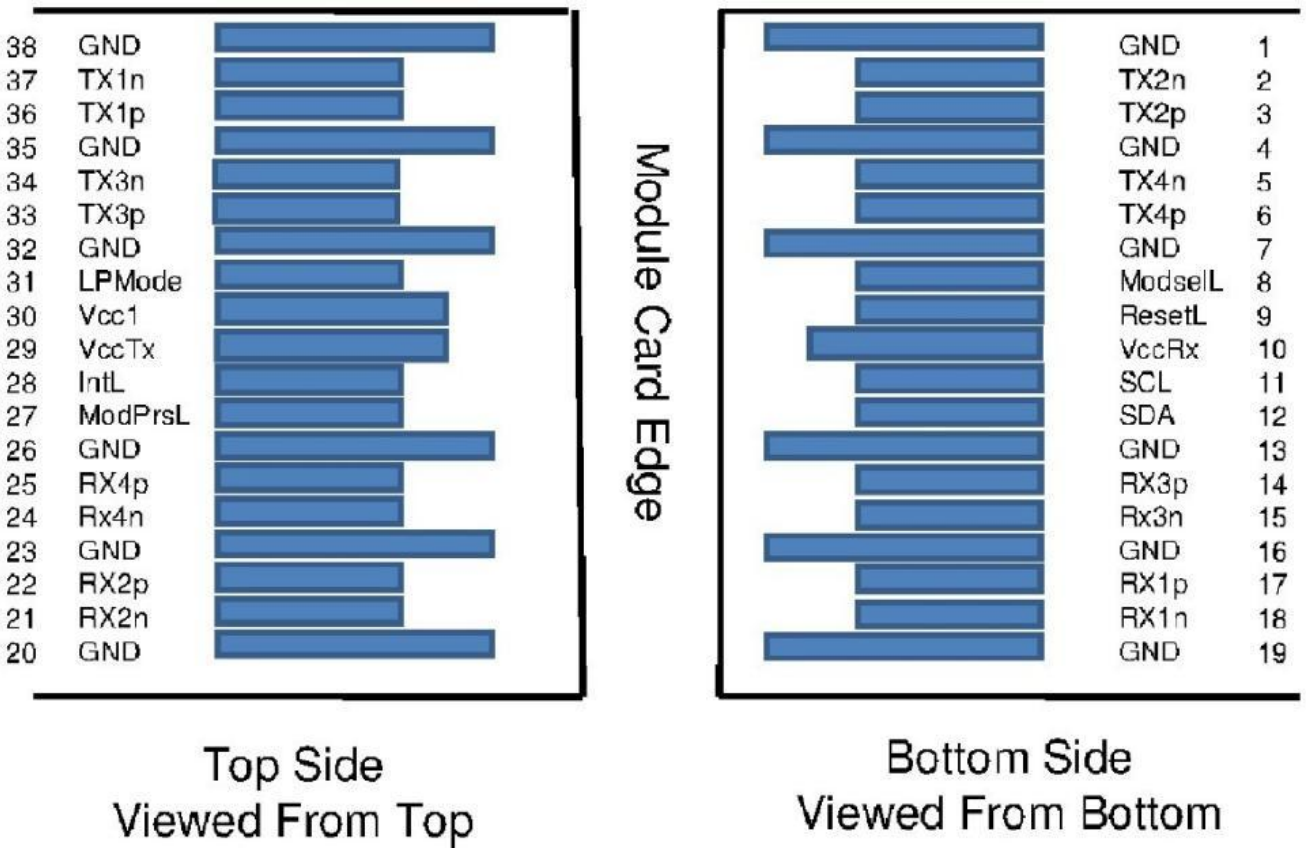
III.Transmitter Specifications

Parameter	Symbol	Min	Typical	Max	Unit
QSFP28					
Center wavelength	λc	840	850	860	nm
Differential Input Impedance	Zin	90	100	110	Ohm
Differential Input Voltage	Vin	300	-	1100	mVp-p

IV.Receiver Specifications

Parameter	Symbol	Min	Max	Unit
QSFP28				
Center wavelength	λc	840	850	860
Differential Input Impedance	Zout	90	100	110
Differential Input Voltage	Vout	500	-	800

V.QSFP28 Pin Descriptions



Top Side
Viewed From Top

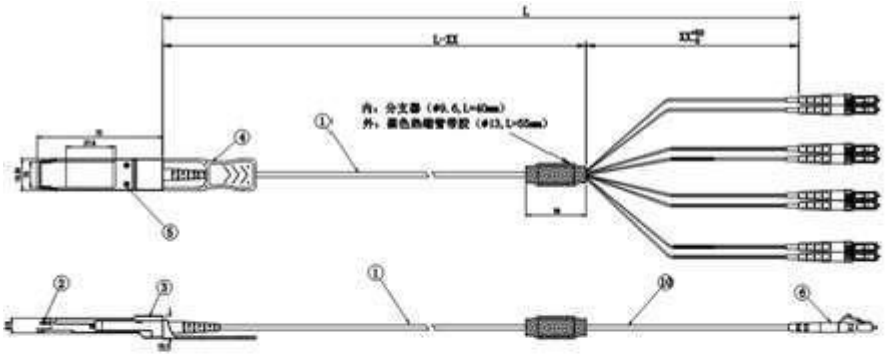
Bottom Side
Viewed From Bottom

VI.Pin Definitions

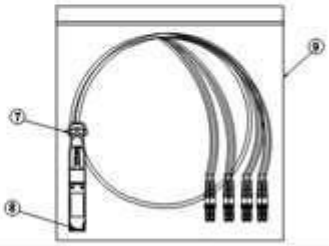
Pin	Symbol	Name/Description
1	GND	Ground
2	Tx2n	Transmitter Inverted Data Input
3	Tx2p	Transmitter Non-Inverted Data Input
4	GND	Ground
5	Tx4n	Transmitter Inverted Data Input
6	Tx4p	Transmitter Non-Inverted Data Input
7	GND	Ground
8	ModSelL	Module Select
9	ResetL	Module Reset
10	Vcc Rx	+3.3 V Power supply receiver
11	SCL	2-wire serial interface clock
12	SDA	2-wire serial interface data
13	GND	Ground
14	Rx3p	Receiver Non-Inverted Data Output
15	Rx3n	Receiver Inverted Data Output
16	GND	Ground
17	Rx1p	Receiver Non-Inverted Data Output
18	Rx1n	Receiver Inverted Data Output
19	GND	Ground
20	GND	Ground
21	Rx2n	Receiver Inverted Data Output
22	Rx2p	Receiver Non-Inverted Data Output
23	GND	Ground
24	Rx4n	Receiver Inverted Data Output
25	Rx4p	Receiver Non-Inverted Data Output

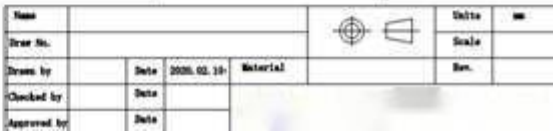
Pin	Symbol	Name/Description
26	GND	Ground
27	ModPrsL	Module Present
28	IntL	Interrupt
29	Vcc Tx	+3.3 V Power supply transmitter
30	Vcc1	+3.3 V Power Supply
31	LPMode	Low Power Mode
32	GND	Ground
26	GND	Ground
27	ModPrsL	Module Present
28	IntL	Interrupt
29	Vcc Tx	+3.3 V Power supply transmitter
30	Vcc1	+3.3 V Power Supply
31	LPMode	Low Power Mode
32	GND	Ground
33	Tx3p	Transmitter Non-Inverted Data Input
34	Tx3n	Transmitter Inverted Data Input
35	GND	Ground
36	Tx1p	Transmitter Non-Inverted Data Input
37	Tx1n	Transmitter Inverted Data Input
38	GND	Ground

VII.Mechanical Specifications



ITEM	DESCRIPTION	QTY	UNIT
10	Loose tube, Duplex, OD2.0mm, LSZH/OFNP, Aqua	XX	M
9	Anti-Static Bag, 250x260mm t=0.08mm	1	PCS
8	Dustcover ,color: White	1	PCS
7	Velcro Cable Tie	3	PCS
6	Duplex LC with clip	4	PCS
5	RIVETS, Aluminum Alloy	2	PCS
4	PULL LATCH, TPE(Black)	1	PCS
3	BACK SHELL, Zinc Alloy	1	SET
2	CONN.1&2, QSFP+ Connector with PCBA	1	PCS
1	Mini Cable, OD3.0mm, MF, Corning Clearcurve OM2 Fiber, LSZH/OFNP, Aqua	L	M





VIII.Ordering information

Part Number	Product Description
QSFP28 to 8xLC AOC	100G QSFP28 to 4 Duplex LC AOC 0 C ~ +70 C

xxx = denotes the AOC length with unit meter. For example, 001 denote 1m, 002 denote 2m … 099 denote 99m.

Test Center

I. Compatibility Testing

Each fiber optical transceiver has been tested in host device on site in FS Assured Program to ensure full compatibility with over 200 vendors.



Cisco Catalyst C9500-24Y



Cisco MS425-1



Brocade VDX 6940-14



Dell EMC Networking Z910



Force⑩tm S60-44

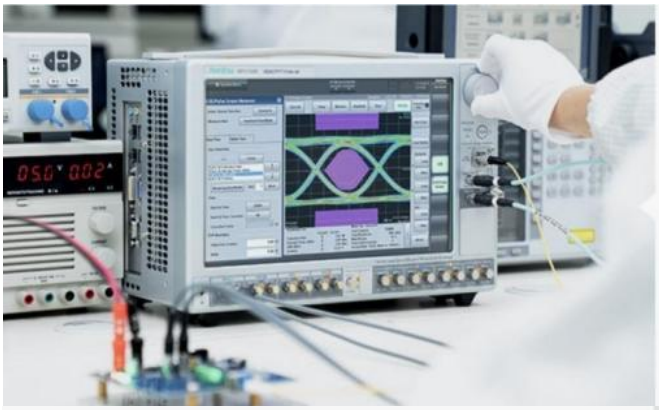


HUAWEI S6720-30L-HI-24S

ve is part of our test bed network equipment. For more information, please click the Test Bed PDF. It will be updated in real time as we expand our portfolio.

II. Performance Testing

Each fiber optical transceiver has been fully tested in FS Assured Program equipped with world's most advanced analytical equipment to ensure that our transceivers work perfectly on you



1. TX/RX Signal Quality Testing

Equipped with the all-in-one tester integrated 4ch BERT & sampling oscilloscope, and variable optical attenuator to ensure the input and output signal quality.

- Eye Pattern Measurements: Jitter, Mask Margin, etc
- Average Output Power
- OMA
- Extinction Ratio
- Receiver Sensitivity
- BER Curve

2. Reliability and Stability Testing

Subject the transceivers to dramatic changes in temperature on the thermal shock chamber to ensure reliability and stability of the transceivers.

- Commercial: 0 °C to 70 °C
- Extended: -5 °C to 85 °C
- Industrial: -40 °C to 85 °C





3. Transfer Rate and Protocol Testing

Test the actual transfer data rate and the transmission ability under different protocols with Network Master Pro.

- Ethernet
- Fibre Channel
- SDH/SONET
- CPRI

4. Optical Spectrum Evaluation

Evaluate various important parameters with the Optical Spectrum Analyzer to meet the industry standards.

- Center Wavelength, Level
- OSNR
- SMSR
- Spectrum Width

