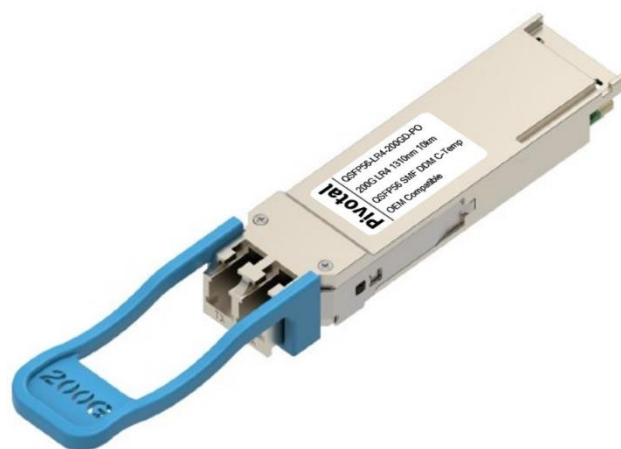


QSFP56-LR4-200GD

200GBASE, QSFP56, LR4, SMF TRANSCEIVER 1310nm, 10km REACH, DUPLEX LC CONNECTOR

Product Features

- Up to 50Gbps data rate per channel by PAM4 modulation
- 4 duplex channels transmitters and receivers
- Integrated CWDM LD and PD array
- LC/UPC connecting interface compliant.
- Single +3.3V power supply
- DDM function implemented.
- Hot-pluggable QSFP56 form factor
- Transmission length up to 10km
- Low power dissipation: <6.5w
- Compliant with ROHS10
- International class 1 laser safety certified
- Standards:
 - IEEE 802.3cd and IEEE 802.3bs Annex120E
 - CMIS Rev 4.0
 - OIF-CEI-04.0 56G-VSR-PAM4
 - SFF-8024 Rev. 4.6, SFF-8679 Rev1.8 and SFF-8665 Rev1.9
- Case operating temperature:
 - Commercial: 0 ~ 70°C



Product Applications

- 200GBASE-LR4 Ethernet
- Switch & Router Connections
- Data Centers
- Other 200G Interconnect Requirements.

I. Maximum Ratings

Exceeding the limits below may damage the transceiver module permanently.

Parameter	Symbol	Min.	Typ.	Max.	Units
Storage Temperature Range	Ts	-40		+85	°C
Power Supply Voltage	Vcc	-0.3		4	V
Relative Humidity (non-condensation)	RH	5		95	%

II. Operating Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Notes
Case Operating Temperature	TC	0		+70	°C	Commercial
Power Supply Voltage	Vcc	3.135	3.3	3.465	V	
Baud Rate (per channel)	BR		26.5625		GBd	
Link Distance (SMF)	D			10	km	

III. Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Notes
Center Wavelength (range)	L0	1264.5	1271	1277.5	nm	
	L1	1284.5	1291	1297.5	nm	
	L2	1304.5	1311	1317.5	nm	
	L3	1324.5	1331	1337.5	nm	
Signaling Speed (each lane)			26.5625		GBd	
Transmitter (per lane)						
Modulation Format			PAM4			
Side-Mode suppression ratio	SMSR	30				
Average Launch Power (each lane)	Pavg	-3.4		5.3	dBm	
Tx OMA (per lane)	TxOMA	-0.4		5.1	dBm	
Extinction Ratio	ER	3.5			dB	
Transmitter and Dispersion eye closure for PAM4 (per lane)	TDECQ			3.4	dB	
Optical Return Loss Tolerance	ORL			15.1	dB	
Relative Intensity Noise	RIN			-132	dB/Hz	
Receiver (per lane)						
Damage Threshold	DT	5.7			dBm	
Average Receive Power (per lane)	RXP	-8.2		4.7	dBm	
Receiver reflectance	Rfl			-26	dB	
Difference in receive power between any two lanes				4.1	dB	
Receiver Sensitivity (OMAouter)				-7.7	dBm	@2.4e-4
Stressed Receiver Sensitivity (OMAouter)				-5.2	dBm	@2.4e-4

IV. Electrical Characteristics

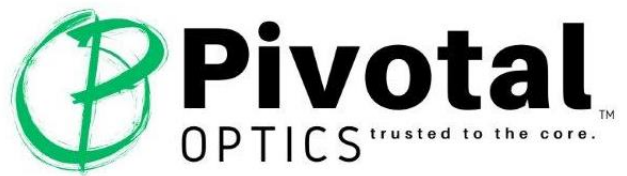
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Power Consumption	P			6.5	W	
Supply Voltage	VCC VCC3.3-Tx VCC3.3-Rx	3.135	3.3	3.465	V	
Transceiver Power-on Initialize Time				2000	ms	
Transmitter						
Differential peak-to-peak input voltage tolerance		900			mV	
Differential termination mismatch				10	%	
Differential input return loss (SDD11)				Note 1	dB	
Common-mode to differential conversion and differential to common-mode conversion (SCD11, SDC11)				Note 1	dB	
Receiver						
Differential peak-to-peak output voltage				900	mV	
DC Common Mode Voltage	Vcm	-0.35		2.85	mV	
AC Common Mode Noise, RMS				17.5	mV	
Differential termination mismatch				10	%	
Differential output return loss(SDD22)				Note 1	dB	
Common-mode to differential conversion and differential to common-mode conversion (SCD11, SDC11)				Note 1	dB	
IIC communication						
IIC Clock frequency		/	400	1000	KHZ	
clock stretching		/	/	500	us	
Data hold time		/	/	/	ns	

Notes:

1. See CEI-56G-VSR

QSFP56-LR4-200GD

200GBASE, QSFP56, LR4, SMF TRANSCEIVER
1310nm, 10km REACH, DUPLEX LC CONNECTOR



V. Ordering Information

Pivotal Part Number	Description
QSFP56-LR4-200GD	QSFP56, 1310nm, LR4 SMF 10km Duplex LC, 200G DDM, C-Temp

Notes:

1. Please contact sales for specific OEM Platform part numbers to fit your network.

Warranty

<https://pivotaloptics.com/warranty/>

Disclaimer

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.