

PRE-QSFP56DD-LR4

QSFP-DD, LR4, CWDM, 400G, 10km, SMF/LC

Product Features:

- Single Wave PAM4
- CWDM Wavelengths
- SMF Transmission Medium
- LC/UPC Connector
- Digital Diagnostic Monitoring
- C-Temp Rated
- 400Gbps Maximum Data Rate
- <12W Power Consumption



Product Applications:

- Data Center
- 400GBASE-LR4 Ethernet

Standards:

- QSFP-DD CMIS 4.0
- QSFP-DD MSA compliant
- RoHS

General Specifications

Parameter	Min	Typical	Max	Unit
Case Operating Temperature	0	-	70	°C
Power Consumption	-	-	12	W
Power Supply Voltage	3.14	3.3	3.46	V
Operating Humidity	15	-	85	%
Storage Temperature	-40	-	85	°C
Transmission Distance	-	-	10	km
Channel Data Rate	-	106.25	-	Gbps
Signaling Rate per Lane	-	53.125	-	GBd

PRE-QSFP56DD-LR4

QSFP-DD, LR4, CWDM, 400G, 10km, SMF/LC

Optical Characteristics: Transmitter

Parameter	Min	Typical	Max	Unit
Wavelength 1	1264.5	-	1277.5	nm
Wavelength 2	1284.5	-	1297.5	nm
Wavelength 3	1304.5	-	1317.5	nm
Wavelength 4	1324.5	-	1337.5	nm
Transmit Power per Lane (Avg) ¹	-2.7	-	5.1	dBm
Total Average Launch Power	-	-	11.1	dBm
Outer Optical Modulation Amplitude (OMA _{outer}), per Lane	0.3	-	4.4	dBm
Extinction Ratio	3.5	-	-	dB
Difference in Launch Power between any two Lanes (OMA _{outer})	-	-	4	dBm
Side Mode Suppression Ratio	30	-	-	dB
Transmitter and Dispersion Eye Closure for PAM4, per Lane	-	-	3.9	dB
Relative Intensity Noise (OMA)	-	-	-136	dB/Hz
Optical Return Loss Tolerance	-	-	15.6	dB
Transmitter OFF Output Power per Lane	-	-	-16	dBm

Note 1: This value is informative and not the principal indicator of signal strength

Optical Characteristics: Receiver

Parameter	Min	Typical	Max	Unit
Damage Threshold per Lane	6.1	-	-	dBm
Receive Power per Lane (Avg)	-9	-	5.1	dBm
Receive Power (OMA _{outer}) per Lane	-	-	4.4	dBm
Difference in Receive Power between any two Lanes (OMA _{outer})	-	-	4.3	dB
Receiver Reflectance	-	-	-26	dB
Receiver Sensitivity (OMA _{outer}), per Lane ¹	-	-	-6.8	dBm
Stressed Receiver Sensitivity (OMA _{outer}), per Lane	-	-	-4.3	dBm

Note 1: When Pre-FEC BER is 2.4×10^{-4}

Product Ordering Information

Part Number	Description
PRE-QSFP56DD-LR4	QSFP-DD, LR4, CWDM, 400G, 10km, SMF/LC, C-Temp