

# PRE-QSFP56DD-ZRHT

QSFP-DD, OIF ZR, 0dBm, Tunable, DWDM, 400G, Coherent

## Product Features:

- Digital Coherent
- C-Band Tunable
- 0dBm High Output Power
- Supports Legacy Line Systems
- >120km at 400G
- 80km Single Wave P-P
- Duplex LC-UPC Connector
- C-Temp
- <18.5W Power Consumption



## Product Applications:

- Data Center Interconnect
- Metro / Edge Networks
- DWDM 400GBase Ethernet

## Standards:

- OIF 400ZR 1.0
- QSFP-DD MSA 6.01
- CMIS 5.1 and C-CMIS 1.2
- RoHS Compliance

## General Specifications:

Parameter	Min	Typical	Max	Unit
Case Operating Temperature	0	-	70	°C
Power Consumption	-	-	18.5	W
Power Supply Voltage	3.135	3.3	3.465	V
Operating Humidity	5	-	85	%
Storage Temperature	-40	-	85	°C
Transmission Distance	-	-	120 <sup>1</sup>	km
Channel Range	191.375	-	196.100	THz
Channel Spacing	75	-	100	GHz
Frequency Accuracy	-1.5	-	1.5	GHz
Symbol Rate	-	59.84	-	Gbd
Data Rate (Total)	-	-	400	Gbps

<sup>1</sup> 1 Line System, DWDM dispersion limited links, G.652 fiber. Max reach will depend on network design.

## Line Interface Modes:

Mode	Modulation	FEC	Standard
400G	16QAM	C-FEC	OIF ZR

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## Optical Characteristics: Transmitter

Parameter	Min	Typical	Max	Unit
Tx Output Power Range	-6.0	0	1.0	dBm
Tx Output Power Resolution	-	-	0.1	dB
Tx Output Power Tolerance	-1.0	-	1.0	dB
Tx Output Power Monitor Range	-8.0	-	2.0	dBm
Tx Disable Power	-	-	-35.0	dBm
Tx Reflectance	-	-	-27.0	dBm
TX OSNR In-Band (<150GHz)	40.0	-	-	dB/0.1nm

## Optical Characteristics: Receiver

Parameter		Min	Typical	Max	Unit
Rx Input Power (Amplified)	Full OSNR Tolerance	-12.0	-	0.0	dBm
	Extended Range	-15.0	-	3.0	dBm
Rx Input Power (Unamplified)	OSNR > 35dB/0.1nm	-22	-	0	dBm
Rx OSNR Tolerance		26	-	-	dB/0.1nm
CD Tolerance	OSNR penalty < 0.5dB	-2.4	-	2.4	ns/nm
PMD Tolerance	OSNR penalty < 0.5dB	-	-	10	ps
Polarization Dependent Loss OSNR Penalty	1dB PDL	-	-	0.5	
	2dB PDL	-	-	1.0	dB
	4dB PDL	-	-	2.0	
Rx Reflectance		-	-	-27.0	dB

## Product Ordering Information:

Part Number	Description
PRE-QSFP56DD-ZRHT	QSFP-DD, OIF ZR, 0dBm, Tunable, DWDM, 400G, Coherent, C-Temp