

400G-SR4 100m QSFP 112 Transceiver CL400GQ112SR4

Product Features:

- QSFP112 Serial Optical Interface
 - 4x100G PAM4 retimed 400GAUI-4 electrical interface
 - MPO-12 APC connector
 - 4 channel VCSEL arrays and 4 channels PIN photo detector arrays
 - Maximum link length of 60m on OM3 or 100m on OM4
- QSFP112 MSA Compliant
 - Hot Pluggable QSFP112 form factor
 - Compliant to QSFP112_MSA_Specification_Rev2.1.1
 - Compliant with CMIS 5.2
- Support Protocol
 - Compliant with IEEE 802.3db
 - Compliant to IEEE 802.3ck
- Low Power Consumption
 - Less than 9W in temperature range of 0 to 70°C

Functional Characteristics (Optical)

The following tables list the performance specifications for the various functional blocks of the integrated optical transceiver module.

Table 1 – Transmitter Optical Specifications

Parameter		Symbol	Min	Typical	Max	Unit
Data rate per lane		DR		53.125		GBd
Modulation format			PAM4			
Center Wavelength ¹		λ	844	850	863	nm
RMS spectral width		σ			0.6	nm
Average Launch power, each lane		Pavg	-1.0		4.0	dBm
Optical Power OMA, each Lane , max			3.5			dBm
OMA _{outer} , each lane min	max (TECQ, TDECQ) <1.8 dB	POMA	max [-2.6 , max(TECQ,TECQ) - 4.4]			dBm
	1.8 < max (TECQ, TDECQ) < 4.4 dB					
Transmitter and dispersion eye closure (TDECQ), each lane		TDECQ			4.4	dB
Transmitter eye closure for PAM4 (TECQ), each lane		TECQ			4.4	dB
Extinction ratio		ER	2.5			dB
Transmitter power excursion, each lane					2.3	dBm
Optical Return Loss Tolerance		ORLT			14	dB
Optical Power for TX DISABLE					-30	dBm



Encircled flux _{b2}		≥86% at 19 um ≤30% at 4.5 um	
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Note 1: Average launch power, each lane (min) is informative and not the principal indicator of signal strength

Note 2: Even if TDECQ < 1.4dB, OMA_{outer} (min) must exceed this value

Note 3: Transmitter reflectance is defined looking into the transmitter

Table 2 – Receiver Optical Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Data rate per lane	BR		53.125		GBd
Modulation format			PAM4		
Center Wavelength	λ	842	850	863	nm
Damage threshold		5			dBm
Average receive power, each lane		-6.4		4	dBm
Receive power, each lane (OMA _{outer})				3.5	dBm
Receiver reflectance	R _r			-15	dB
Receiver sensitivity, each lane ¹			RS = max (-4.6 , TECQ - 6.4)		dBm

Stressed receiver sensitivity, each lane				-2.0	dBm
Rx LOS	Assert		-15		dBm
	De-assert			-7.5	dBm
	Hysteresis		0.5	5	dB

Note 1: Average receive power, (min) is informative and not the principal indicator of signal strength

Note 2: Receiver sensitivity (OMA_{outer}), each lane (max) is informative and is defined for a transmitter with a value of SECQ up to 3.4 dB.

Note 3: Measured with conformance test signal at TP3 for the BER = 2.4x10⁻⁴

Ordering Information

Table 3 - Ordering Information

Part Number	Temperature Range	Distance	Fiber Type	E/O	O/E
CL400GQ112SR4	0 to 70°C	100m	MMF	VCSEL850nm	PIN

CONTACT:

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