



KEY FEATURES

- 100G-CWDM4-RT
- Typical power of < 3.5W
- 2km reach via single mode fiber
- CWDM wavelengths 1310nm range
- SMF LC duplex connector
- 15–55°C transceiver operating case temperature
- Hot pluggable

XQX5100 100G-CWDM4-RT QSFP28

2 km Reach Optimized for Data Center

The pluggable **100G-CWDM4-RT QSFP28** transceiver provides 100G connectivity over up to 2 km of duplex single-mode fiber in high-density datacenter switches, routers and the client-side of transport systems. The target applications for the pluggable **100G-CWDM4-RT QSFP28** transceiver are those where a reduced operating case temperature range of 15°C – 55°C is sufficient.

This product is built on the **LightScale™2** platform.

Leveraging its novel hybrid integration technology, **Kaiam** is able to design and produce high-speed optical modules for high bandwidth applications such as router and data center interconnect. All of **Kaiam's** products allow for superior performance at 40Gb/s and beyond with duplex single mode fiber.



OPTICAL TRANSMITTER PERFORMANCE

PARAMETER		SYMBOL	MIN	MAX	UNITS
Channel Wavelength	Ch0	λ_0	1264.5	1277.5	nm
	Ch1	λ_1	1284.5	1297.5	
	Ch2	λ_2	1304.5	1317.5	
	Ch3	λ_3	1324.5	1337.5	
Bit Rate per Channel		B	25.78125±100ppm		Gb/s
Side-Mode Suppression Ratio		SMSR	30		dB
Average launch power, each lane			-6.5	2.5	dBm
Optical Modulation Amplitude (each lane)		OMA	-4.0	2.5	dBm
Launch power in OMA minus TDP, each lane		OMA-TDP	-5.0		dBm
Transmission & dispersion penalty		TDP		3.0	dB
RIN _{20 OMA}				-130	dB/Hz
Transmitter Reflectance				-12	dB
Extinction Ratio		ER	3.5		dB
Transmitter Optical Mask		MM	Compliant with 100G-CWDM4		

OPTICAL RECEIVER PERFORMANCE

PARAMETER		SYMBOL	MIN	TYP	MAX	UNITS
Channel Wavelength	Ch0	λ_0	1264.5	1271	1277.5	nm
	Ch1	λ_1	1284.5	1291	1297.5	
	Ch2	λ_2	1304.5	1311	1317.5	
	Ch3	λ_3	1324.5	1331	1337.5	
Bit Rate per Channel		B	25.78		27.95	Gb/s
Unstressed Sensitivity (OMA)		OMA_{in}			-10	dBm
Stressed Sensitivity (OMA)		$OMA_{in, str}$			-7.3	dBm
Receiver Reflectance		ORL			-26	dB
Vertical eye closure penalty, each lane		VECP			1.95	dB
Stressed eye J2 Jitter, each lane		J2			0.3	UI
Stressed eye J9 Jitter, each lane		J9			0.5	UI

NOMINAL OPERATING CONDITIONS

PARAMETER	MIN	TYP	MAX	UNITS	NOTES
Operating Case Temperature	15		+55	°C	
Supply Voltage	3.135	3.3	3.465	V	+/- 5%
IIC Clock Frequency		100	400	kHz	
IIC Clock Stretching			500	μ s	
IIC Data Hold Time			900	ns	

