



## KEY FEATURES

- 100G-CWDM4
- Typical power of < 3.5W
- 2km reach via single mode fiber
- CWDM wavelengths 1310nm range
- SMF LC duplex connector
- 0-70°C transceiver operating case temperature
- Hot pluggable

## XQX5000 100G-CWDM4 QSFP28

*2 km Reach Optimized for Data Center*

The pluggable **100G-CWDM4 QSFP28** transceiver is the latest addition to **KaiaM**'s product portfolio supporting diverse data rates with reach up to 10km. The target applications for this transceiver are 100G-CWDM4, high-port-count 100G systems, and client-side 100G interfaces.

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	$\lambda_0$	1264.5	1277.5	nm
	Ch1	$\lambda_1$	1284.5	1297.5	
	Ch2	$\lambda_2$	1304.5	1317.5	
	Ch3	$\lambda_3$	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 <sub>20 OMA</sub>				-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	$\lambda_0$	1264.5	1271	1277.5	nm
	Ch1	$\lambda_1$	1284.5	1291	1297.5	
	Ch2	$\lambda_2$	1304.5	1311	1317.5	
	Ch3	$\lambda_3$	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	0		+70	°C	
Supply Voltage	3.135	3.3	3.465	V	+/- 5%
IIC Clock Frequency		100	400	kHz	
IIC Clock Stretching			500	$\mu$ s	
IIC Data Hold Time			900	ns	

