

# 800G QSFP-DD 2DR4 500m

## CL800GQDD2DR4

### Product Features:

- Compliant with IEEE 802.3cu-2021:
  - 8x100GBASE-DR optical interface
- Compliant with IEEE P802.3ck D3.0
  - 8x100GAUI-4 C2M electrical interface
- Compliant with QSFP-DD MSA HW Rev 6.01 type 2A with MPO-16 connector
- Compliant with CMIS Rev 5.0
- Case operating temperature 0°C to 70°C
- Two wire serial Interface with digital diagnostic monitoring
- Complies with EU Directive 2011/65/EU (RoHS compliant)
- Class 1 Laser

### 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	Notes
Wavelength	$\lambda_C$	1304.5	1311	1317.5	nm	
Side Mode Suppression Ratio	SMSR	30	-	-	dB	
Average Launch Power, each lane	AOPL	-2.9	-	4.0	dBm	1
Outer Optical Modulation Amplitude (OMA <sub>outer</sub> ), each Lane	TOMA	-0.8	-	4.2	dBm	
Launch power in OMA <sub>outer</sub> minus TDECQ, each lane for extinction ratio $\geq 5$ dB	TOMA-TDECQ	-2.2	-	-	dBm	
extinction ratio $< 5$ dB		-1.9	-	-		
Transmitter and Dispersion Eye Closure for PAM4 (TDECQ), each lane	TDECQ	-	-	3.4	dB	
TDECQ – $10\log_{10}(C_{eq})$ , each lane	C <sub>eq</sub>	-	-	3.4	dB	
Average Launch Power of OFF Transmitter, each lane	TOFF	-	-	-15	dBm	
Extinction Ratio	ER	3.5	-	-	dB	
Transmitter transition time	T <sub>r</sub>			17	ps	
RIN <sub>15.5OMA</sub>	RIN	-	-	-136	dB/Hz	
Optical return loss tolerance	ORL	-	-	15.5	dB	
Transmitter Reflectance	TR	-	-	-26	dB	2

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

Note 2: Transmitter reflectance is defined looking into the transmitter

**Table 2 – Receiver Optical Specifications**



Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Wavelength	$\lambda_{C0}$	1304.5	1311	1317.5	nm	
Damage Threshold, each Lane	AOPD	5	-	-	dBm	
Average Receive Power, each Lane	AOPR	-5.9	-	4	dBm	
Receive Power (OMAouter), each Lane	OMAR	-	-	4.2	dBm	
Receiver Reflectance	RR	-	-	-26	dB	
Receiver Sensitivity (OMAouter), each Lane	SOMA	-	-	Max(-3.9, SECQ - 5.3)	dBm	1
Stressed Receiver Sensitivity (OMAouter), each Lane	SRS	-	-	-1.9	dBm	2
Conditions of stressed receiver sensitivity test						
Stressed eye closure for PAM4 (SECQ), lane under test	SECQ	-	3.4	-	dB	
SECQ - 10log10(Ceq), lane under test	Ceq	-	-	3.4	dB	
OMAouter of each aggressor lane	-	-	4.2	-	dBm	

Note 1: Measured with conformance test signal at TP3 for the BER= 2.4x10<sup>-4</sup>.

## Ordering Information

Table 3 - Ordering Information

Part No.	Application	Data Rate	Laser Source	Fiber Type
CL800QDD2DR4	2x400GBASE-DR4 8x100GBASE-DR	850Gb/s	EML	Single Mode Fiber

## CONTACT:

Email: [sales@c-light.com](mailto:sales@c-light.com) <https://www.c-light.com>