400G QSFP-DD ZR+ (TX -10~ -6 dBm) Coherent Transceiver

CL400GQDDZR+-120

Product Features:

- Compliant with QSFP-DD MSA, Type 2B package
- Compliant with Open ZR+ MSA and OIF 400ZR MSA, support OFEC and CFEC FEC
- Line rate 100G/200G/300G/400G
- Client rate 1/2/3/4x100GbE or 1x400GbE
- C-band tunable, supports 100/75/50GHz grid spacing, support 0.1GHz fine turning
- TX VOA inside, with 4dB attenuation window
- Support ingress LF hold-off time configure
- Support hitless firmware upgrade
- Compact size (18.35 mm x 93.26 mm x 8.50 mm)
- Duplex LC connector
- Operating case temperature: 0°C to 75°C
- Single 3.3 V power supply
- Typical power consumption 21W (400GbE), maximum power consumption 22.5W(400GbE)
- RoHS 2 compliant

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

Parameters		Unit	Min.	Typ.	Max.	Note
Modulation format	400G		ZR400-CFEC-16QAM			CFEC FEC, NCG 10.8dB
			ZR400-OFEC-16QAM			OFEC FEC, NCG 11.6dB
	300G		ZR300-OFEC-8QAM			
	200G		ZR200-OFEC-QPSK			
	100G		ZR100-OFEC-QPSK			
Baud Rate	400G	GBd	59.843750000±20ppm			400ZR, SFF-8024 Media ID3Eh/3Fh
			60.138546798±20ppm			400ZR+, SFF-8024 Media ID46h
	300G		60.138546798±20ppm			300ZR+, SFF-8024 Media ID47h
	200G		60.138546798±20ppm			200ZR+, SFF-8024 Media ID48h
	100G		30.069273399±20ppm			100ZR+, SFF-8024 Media ID49h
Transmitter frequency range		THz	191.3		196.1	For OIF 400ZR app code 0x02 the frequency is fixed at193.7THz and notconfigurable.
Flexible DWDM Grid		GHz	3.125			
Frequency Fine Tuning range		GHz	-5		5	bright tuning

Table 2 – Receiver Optical Specifications

Parameters		Unit	Min.	Typ.	Max.	Note	
Modulation format	400G		ZR400-CFEC-16QAM			CFEC FEC, Net Coding Gain(NCG) 10.8dB,Theoretical Max Pre-FECBER 1.25E-2	
			ZR400-OFEC-16QAM			OFEC FEC, Net Coding Gain(NCG) 11.6dB，Theoretical Max Pre-FECBER 2.0E-2	
	300G		ZR300-OFEC-8QAM				
	200G		ZR200-OFEC-QPSK				
	100G		ZR100-OFEC-QPSK				
Baud Rate	400G	GBd	59.843750000±20ppm			400ZR, SFF-8024 Media ID3Eh/3Fh	
			60.138546798±20ppm			400ZR+, SFF-8024 MediaID 46h	
	300G		60.138546798±20ppm			300ZR+, SFF-8024 MediaID 47h	
	200G		60.138546798±20ppm			200ZR+, SFF-8024 MediaID 48h	
	100G		30.069273399±20ppm			100ZR+, SFF-8024 MediaID 49h	
Frequency offset between receivedcarrier and LO		GHz	-3.6		+3.6		
Input power range	400G	dBm	-12		0	Signal power,OSNR>26dB,400ZR	
			-12		0	Signal power, OSNR>24dB,400ZR+	
	300G		-15		0	Signal power, OSNR>21dB,300ZR+	
	200G		-18		0	Signal power, OSNR>16dB,200ZR+	
	100G		-18		0	Signal power,OSNR>12.5dB,100ZR+	
OSNR Tolerance	400G	dB/0.1nm			26	400ZR	Measured

Ordering Information

Table 3 - Ordering Information

Part No.	Application	Data Rate	Laser Source	Fiber Type
CL400GQDDZR+-120	400G QSFP-DD ZR+ (-10dBm)	400G/300G/200G/100G	191.3-196.1 THz	Single Mode Fiber

CONTACT:

Email: sales@c-light.com https://www.c-light.com