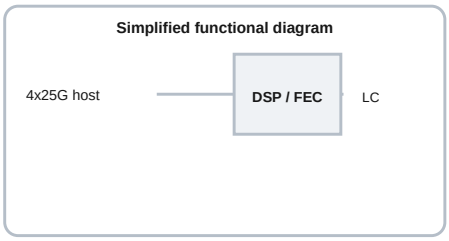
QSFP28-LR-100G

QSFP28, 100GbE-LR, Single Lambda, 10km

1310nm, 6dB, SM, LC

1. Product overview

Single-lambda PAM4 QSFP28 transceiver. The source headline states 10 km and 6 dB, while its feature and general-description text describe a 2 km 100G-FR-class application; both statements are preserved as source-derived information.



2. Key features

- QSFP28 MSA compliant
- 53.125 Gbaud optical signaling
- 100G Lambda MSA FR-class text in source
- 4x25G OIF CEI-28G-VSR electrical interface
- Duplex LC connector
- Maximum power stated as 4.5 W in feature list

3. Applications

- Data Center Interconnect
- 100G Ethernet
- Enterprise networking

4. Technical data

Parameter	Value	Parameter	Value
Technology	100G single-lambda PAM4	Media	SMF, duplex LC
Headline reach	10 km	Detailed source reach	10 km with FEC
Wavelength	1310 nm	Host	4x25G NRZ
Headline budget	6 dB	Power	4.5 W max feature text

5. Recommended operating conditions

Parameter	Value
Operating case temperature	0 to +70 °C
Supply	3.3 V class
Optical data rate	53.125 GBd
Electrical lanes	4x25.78125 Gb/s

QSFP28-LR-100G

6. Optical characteristics

Parameter	Specification
OPTICAL CHARACTERISTICS	
Transmitter	
Center Wavelength λt	1304.5 1317.5 nm
Side Mode Suppression Ratio SMSR	30 dB
Average Launch Power PAVG	-1.4 4.5 dBm 1
Outer Optical Modulation Amplitude	
(OMAouter) POMA	0.7 4.7 dBm 2
Launch Power in OMAouter	
minus Transmitter and Dispersion Eye Closure	
(TDECQ)	-0.7 dBm for ER≥4.5dB
minus Transmitter and Dispersion Eye Closure	-0.6 dBm for ER<4.5dB
(TDECQ)	
Transmitter and Dispersion Eye Closure	
for PAM4 (TDECQ) TDECQ	3.4 dB
Extinction Ratio ER	3.5 dB
RIN1	5.6OMA RIN -136 dB/Hz

Parameter	Specification
Optical Return Loss Tolerance	
Center Wavelength λr	1304.5 1317.5 nm
Damage Threshold THd	5.5 dBm 3
Average Receive Power	-7.7 4.5 dBm
Receive Power (OMAouter)	-6.1 dBm for BER= 2.4x10-4
Receiver Sensitivity (OMAouter) SEN	-4.5 dBm for BER= 2.4x10-4
"Stressed Receiver Sensitivity	
(OMAouter)" SRS	-4.1 dBm
Receiver Reflectance RR	-26 dB
LOS Assert LOSA	-30 dBm
LOS Deassert LOSD	-15 dBm
LOS Hysteresis LOSH	0.5 dB
Conditions of Stress Receiver Sensitivity Test (Note	4)
Stressed Eye Closure for PAM4 (SECQ)	3.4 dB
(min) must exceed the minimum value specified here.	
the receiver.	

7. Digital diagnostics and management

Parameter	Specification
Management interface	2-wire serial / I2C through QSFP28 management interface
Digital diagnostics	Temperature, supply voltage, TX bias/power and RX power where implemented
Module controls	ModSelL, ResetL, LPMode, ModPrsL and IntL as applicable
Form factor	Hot-pluggable QSFP28, 38-pin host interface

8. Safety and regulatory

RoHS compliance and normal ESD handling precautions apply. Where stated in the source specification, the optical module is a Class 1 laser product and must be handled in accordance with applicable laser-safety requirements.

9. Ordering information

Ordering number	Product description
Q100G-LR	QSFP28, 100GbE-LR, Single Lambda, 10km; 1310nm, 6dB, SM

10. General notes

Specifications in this two-page summary are condensed from the supplied GLOBALfiber source data sheet. Values and terminology are retained from the source; no external specifications have been substituted.

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