

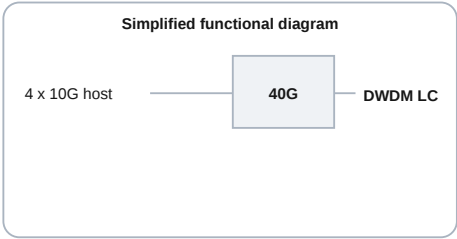
QSFP-DWDM-40G-CHxx

QSFP+, 40GbE DWDM C-Band 100GHz, 80km

QSFP-DWDM-40G-CHxx

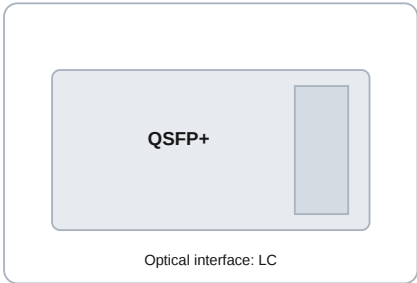
1. Product overview

The GLOBALfiber 40G DWDM QSFP+ module carries a 40GbE signal on a single fixed ITU-T 100 GHz DWDM wavelength. It is designed for links up to 80 km over G.652 single-mode fiber; longer spans may require EDFA amplification and dispersion compensation as specified in the source data sheet.



2. Key features

- Single-wavelength 40 Gb/s optical transmission
- Fixed ITU-T 100 GHz DWDM grid, channels 21-60
- Up to 80 km over SMF with DCM and EDFA as required
- Duplex LC connector; wideband PIN receiver
- 4 x 10G electrical host interface; SFF-8636 / SFF-8679
- Power dissipation 3.5 W max; digital monitoring



3. Applications

- 40GbE signal DWDM transmission
- Metro and regional WDM systems
- Multi-channel C-band transport

4. Technical data

Parameter	Value	Parameter	Value
Technology	40G QSFP+ fixed DWDM	Transmission media	G.652 SMF, duplex LC
Typical reach	Up to 80 km	Nominal wavelength	ITU-T 100 GHz channels 21-60
Host interface	4 x 10.3125 Gb/s NRZ	Protocol support	40GbE
Optical budget	28 dB headline	Operating temperature	0°C to +70°C
Power consumption	3.5 W max	Digital diagnostics	Yes, SFF-8636

5. Recommended operating conditions

Parameter	Symbol	Min	Typical	Max	Units
Operating case temperature	Tcase	0	25	70	°C
Supply voltage	Vcc	3.15	3.3	3.45	V
Data rate, each lane			10.3125		Gb/s
Data rate variation		-100		+100	ppm
Link distance	D			80	km

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6. Optical characteristics

Parameter	Symbol	Min	Typical	Max	Units
Central wavelength	λ_c	See ITU table		± 0.1 nm	
Average output power	P _{out}	0		+4	dBm
Optical output power, TX off	P _{off}			-30	dBm
Receiver operating wavelength		1300		1570	nm
Receiver sensitivity	P _{sen}			-11	dBm
Receiver overload	P _{sat}			+4	dBm
Rx power at OSNR 37 dB		-8		+4	dBm
LOS assert / de-assert		-15		-11	dBm

7. Digital diagnostics and management

Figure 3. QSFP+ mechanical form factor

Parameter	Value
Digital diagnostic monitoring	Supported
Management interface	2-wire serial / I2C via QSFP+ MSA
Monitored parameters	Temperature, supply voltage, TX bias/power and RX power
Module controls	Module select, reset, interrupt and low-power mode
Management interface	SFF-8636, I2C
Grid	ITU-T 100 GHz C-band
Available channels	21-60 (192.1-196.0 THz)
Wavelength range	1560.61-1529.55 nm

QSFP+ MSA

8. Safety, regulatory and ESD

RoHS compliant. Normal ESD precautions are recommended when handling optical transceivers and host equipment. The source data sheet also identifies Class 1 laser safety requirements.

9. Ordering information

Ordering number	Product description
Q40G-DWDM-CHxx	QSFP+, 40GbE DWDM C-Band 100GHz, 80km; 100GHz, 28dB, SM, LC

10. General definitions

Parameter	Description
Technology	Optical transceiver type and optical application, e.g. SR, LR, CWDM, DWDM or parallel optics.
Transmission media	Fiber type and connector type, e.g. single-mode or multimode fiber with LC or MPO connector.
Typical reach	Nominal distance stated in the product specification and dependent on link loss and operating conditions.
Power consumption	Maximum or worst-case operating power stated in the source specification.
DDM / DMI	Digital Diagnostic Monitoring via the module management interface.