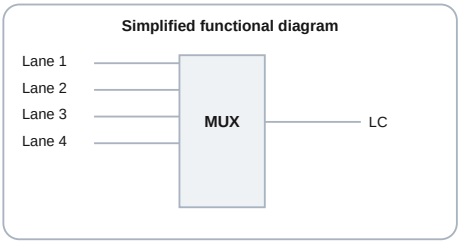
QSFP-SWDM4-40G

QSFP+, 40GbE-SWDM4, 4x10.3Gbps, 150m, LC

QSFP-SWDM4-40G

1. Product overview

The GLOBALfiber QSFP-SWDM4-40G is designed for 40GbE over duplex multimode fiber. Four 10.3125 Gb/s optical lanes in the 850-940 nm region are wavelength multiplexed onto a duplex LC interface. Digital diagnostics are available through the QSFP+ management interface.



2. Key features

- Compliant with QSFP+ MSA, SWDM MSA and SFF-8636
- 4 x 10 Gb/s VCSEL-based SWDM transmitter
- 41.2 Gb/s aggregate bit rate
- Duplex LC receptacle over MMF
- Link table supports OM3 240 m, OM4 350 m and OM5 440 m
- Power dissipation <3.5 W; 0°C to +70°C

3. Applications

- 40G Ethernet over duplex MMF
- Switch and router uplinks

4. Technical data

Parameter	Value	Parameter	Value
Technology	40G QSFP+ SWDM4	Transmission media	MMF, duplex LC
Typical reach	240 m OM3 / 350 m OM4 / 440 m OM5	Nominal wavelength	850/880/910/940 nm
Host interface	4 x 10.3125 Gb/s NRZ	Protocol support	40GbE
Optical budget	3 dB (headline specification)	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		70	°C
Supply voltage	Vcc	3.14		3.46	V
Data rate, each lane			10.3125		Gb/s
Link distance - OM3	D	2		240	m
Link distance - OM4	D	2		350	m
Link distance - OM5	D	2		440	m

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6. Optical characteristics

Parameter	Symbol	Min	Typical	Max	Units
Lane 0 wavelength		844		858	nm
Lane 1 wavelength		874		888	nm
Lane 2 wavelength		904		918	nm
Lane 3 wavelength		934		948	nm
Average launch power, each lane		-7.5		+3	dBm
Receiver input power, each lane		-12.9 to -11.9		+2.4	dBm
Receiver sensitivity, OMA		-9.1			dB
LOS de-assert		-13			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
Temperature monitor accuracy	±3 °C
Voltage monitor accuracy	±5 %
Bias current monitor accuracy	±10 %
Tx/Rx optical power accuracy	±3 dB

8. Safety, regulatory and ESD

RoHS compliant. Normal ESD precautions are recommended when handling optical transceivers and host equipment.

9. Ordering information

Ordering number	Product description
Q40G-SWDM4	QSFP+, 40GbE-SWDM4, 4x10.3Gbps, 150m; 850/880/910/940nm, 3dB, MM, 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.