

50G QSFP28 AOC

GQQ-MDO500-xxxC

Features

- ✓ Four-channel full-duplex active optical cable
- ✓ Up to 28.05Gb/s per channel with integrated CDR
- ✓ Hot-pluggable QSFP28 MSA-compliant high-density connectors
- ✓ 1.5W maximum power dissipation per end
- ✓ Built-in digital diagnostic functions
- ✓ Commercial operating case temperature range: 0 to 70°C
- ✓ RoHS-6 compliant (lead free)



Applications

- ✓ High performance computing interconnect
- ✓ InfiniBand FDR/EDR interconnect
- ✓ 25G Ethernet interconnect
- ✓ 32G Fibre Channel interconnect

Description

The Gigalight 50G QSFP28 AOC is designed for use in optical interconnection links up to 100m on Multi-Mode Fiber (MMF). Based on vertically integrated VCSEL array technology and designed with QSFP28 MSA-compliant high-density connectors, the Gigalight 50G QSFP28 AOC assemblies are compact, lightweight, and low power.

Ordering Information

Product Description	Part Number
1-Meter 50G QSFP28 AOC	GQQ-MDO500-001C
2-Meter 50G QSFP28 AOC	GQQ-MDO500-002C
3-Meter 50G QSFP28 AOC	GQQ-MDO500-003C
...	...
50G QSFP28 AOC	GQQ-MDO500-xxxC ¹
100-Meter 50G QSFP28 AOC	GQQ-MDO500-100C

Notes:

1. The fiber type and cable length can be customized. For details, please contact Gigalight.

General Product Characteristics

Parameter	Value
Module Form Factor ¹	QSFP28
Number of Lanes	2 Tx and 2 Rx
Maximum Aggregate Data Rate	56.1Gb/s
Maximum Data Rate per Lane	28.05Gb/s
Cable Lengths ²	Up to 70m using OM3 MMF and 100m using OM4 MMF
Protocols Supported	25G Ethernet, 32G Fibre Channel
Electrical Interface and Pin-out ¹	38-pin edge connector
Cable Type ³	Multimode round fiber cable, plenum-rated
Maximum Power Consumption per End	1.5W
Management Interface ⁴	Serial, I ² C-based

Notes:

1. As defined by QSFP28 MSA, "SFF-8661 Rev 2.4", "SFF-8679 Rev 1.7".
2. Customized lengths available upon request.
3. OFNP, Low Smoke Zero Halogen (LSZH), round fiber cable also available.
4. As defined by "SFF-8636 Rev 2.6".

Absolute Maximum Ratings

Parameter	Symbol	Min	Max
Supply Voltage	V _{cc}	-0.3V	3.6V
Storage Temperature	T _s	-20°C	85°C
Case Operating Temperature	T _c	0°C	70°C
Relative Humidity ¹	RH	5%	95%

Notes:

1. Non-condensing.

Electrical Specifications ($T_c= 0$ to 70°C , $V_{cc}=3.3\pm 5\%V$)

Parameter	Symbol	Min	Typical	Max
Differential Input Impedance	Z_{in}	90Ω	100Ω	110Ω
Differential Output Impedance	Z_{out}	90Ω	100Ω	110Ω
Differential Input Voltage Amplitude ¹	ΔV_{in}	300mV		1100mV
Differential Output Voltage Amplitude ²	ΔV_{out}	500mV		800mV
Skew	Sw			300ps
Bit Error Rate	BER			10^{-12}
Input Logic Level High	V_{IH}	2.0V		V_{cc}
Input Logic Level Low	V_{IL}	0V		0.8V
Output Logic Level High	V_{OH}	$V_{cc}-0.5$		V_{cc}
Output Logic Level Low	V_{OL}	0V		0.4V

Notes:

1. Measured between TxnP and TxnN.
2. Measured between RxnP and RxnN.

Mechanical Dimensions

