

S25G-AOC

SFP28 25G Active Optical Cable AOC 25Gbase

1. Product overview

GLOBALfiber S25G-AOC is an active optical cable assembly for optical interconnection between compatible host ports.

2. Key features

SFP28; 850 nm VCSEL / PIN; up to 70 m OM3 or 100 m OM4. Power: 0.8 W max per terminal.

3. Applications

25G Ethernet; SFP28 I/O; data center and in-rack links.

4. Technical data

Parameter	Specification	Parameter	Specification
Supply Current	Max: 300; Unit: mA	Common Mode Noise, RMS	Max: 17.5; Unit: mV; Ref.: At 1MHz
Overload Differential Voltage pk- pk	Min: 900; Unit: mV	Differential Termination Resistance	Max: 10; Unit: %
Common Mode Voltage (Vcm)	Min: -350; Max: 2850; Unit: mV	Differential Return Loss (SDD22)	Max: See CEI-28G VSR Equation 13-; Unit: dB
Differential Termination Resistance Mismatch	Max: 10; Unit: %; Ref.: At 1MHz	Common Mode to Differential conversion and Differential to Common Mode conversion (SDC22, SCD22)	Max: See CEI-28G VSR Equation 13- 19; Unit: dB
Differential Return Loss (SDD11)	Max: See CEI- 28G VSR Equation 13- 19; Unit: dB	Common Mode Return Loss (SCC22)	Max: -2; Unit: dB
Common Mode to Differential conversion and Differential to Common Mode conversion (SDC11, SCD11)	Max: See CEI-28G VSR Equation 13- 20; Unit: dB	Transition Time, 20 to 80%	Min: 9.5; Unit: Ps
Stressed Input Test	Max: See CEI-28G- VSR Section 13.3.11.2.1	Vertical Eye Closure (VEC)	Max: 5.5; Unit: dB
Differential Voltage, pk-pk	Max: 900; Unit: mV	Eye Width at 10-15 probability (EW15)	Min: 0.57; Unit: UI
Common Mode Voltage (Vcm)	Min: -350; Max: 2850; Unit: mV	Eye Height at 10-15 probability (EH15)	Min: 228; Unit: mV

5. Recommended operating conditions

Absolute limits are labelled separately and are not normal operating conditions.

Parameter	Specification	Parameter	Specification
Power consumption	0.8 W max per terminal	Operating Case Temperature	Min: 0; Typ.: 25; Max: 70; Unit: °C
Power Supply Voltage (absolute limit)	Min: 0; Max: 3.6; Unit: V	Data Rate, each Lane	Typ.: 25.78125; Unit: Gb/s
Storage Temperature	Min: 40; Max: 85; Unit: °C	Data Rate Accuracy	Min: -100; Max: 100; Unit: ppm
Operating Case Temperature	Min: 0; Max: 70; Unit: °C	Control Input Voltage High	Min: 2; Max: Vcc; Unit: V
Relative Humidity	Min: 5; Max: 95; Unit: %	Control Input Voltage Low (absolute limit)	Min: 0; Max: 0.8; Unit: V
Power Supply Voltage	Min: 3.135; Typ.: 3.3; Max: 3.465; Unit: V	Fiber Bend Radius	Min: 3; Unit: cm
		Power Consumption	Max: 0.8; Unit: W



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6. Optical characteristics

Parameter	Specification
Nominal wavelength	850 nm
Optical technology	VCSEL transmitter / PIN receiver

No additional numerical optical power, sensitivity or extinction-ratio limits are specified in the supplied source.

7. Digital diagnostics and management

Two-wire SFF-8472 digital diagnostic management.

8. Safety and regulatory

SFF-8432; SFF-8472; OIF CEI-28G-VSR; RoHS. Use ESD-safe handling and observe the stated cable bend limits.

9. Ordering information

Parameter	Specification
GLOBALfiber product number	S25G-AOC
Product description	SFP28 25G Active Optical Cable AOC 25Gbase
Selectable lengths	1 m, 2 m, 3 m, 5 m, 7 m, 10 m, 15 m
Available coding	Arista, Cisco, Custom, Extreme, Generic, Huawei, Juniper, NVIDIA-Mellanox(ETH)

Confirm equipment model, port mode and software version when ordering. Coding availability does not guarantee support for every platform or mode.

Cable variants documented in the technical source:

Parameter	Specification
1m, 3m, 5m, 7m, 10m, 15m, 20m, 25m, 30m	Data Rate: Up to 25G; Wire Gauge: SFP28 to SFP28; Connector Type: AOC Cable; Temp.Range: 0-70°C; Cable Jacket: OFNP