GigaLight

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GIGALIGHT PRODUCT CATALOGUE 2021

GLOBAL OPTICAL INTERCONNECTION DESIGN INNOVATOR

5G Network
Transceivers

5G Fronthaul Transceivers
(25G Grey & 10G/25G Color)
5G Backhaul Transceivers
(100G/200G OTN & 200GE/400GE)

Data Center
(Transceivers & AOCs)

100G PAM4 Silicon Transceivers
(100G/400G/800G)
50G PAM4 Transceivers
(50G/200G/400G)
NRZ Ethernet Transceivers
(40G/100G/200G)
NRZ Fibre Channel Transceivers
(8G/16G/32G/128G)
Active Optical Cables (AOCs)
(10G/25G/40G/50G/100G/200G/400G)

Coherent Optical Modules
(for Data Center & 5G)

100G CFP-DCO
100G/200G CFP2-DCO
400G CFP2-DCO

Metro/xWDM Transceivers
(OTN/SDH/Ethernet)

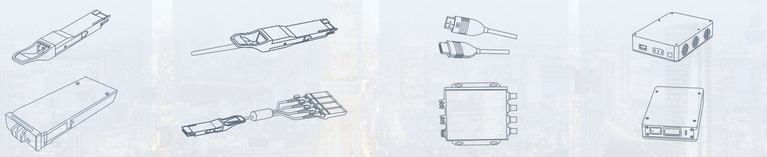
OTN & CWDM/DWDM Transceivers
(100G/40G/10G)
SDH & CWDM/DWDM Transceivers
(10G/2.5G/622M/155M)
Ethernet & CWDM/DWDM Transceivers
(25G/10G/1G/100M)
Ethernet Copper Transceivers
(10G/1G/100M)

SDI/HDMI/USB Optics

3G/12G-SDI Optical Modules & Extenders
USB 3.0 AOCs
HDMI 2.0 AOCs & Optical Extenders

Optical Transceiver Tools

Optical Transceiver Checkers
(10G/25G/40G/100G/200G/400G)
Tunable Box
(10G Tunable SFP+/XFP)
Cloud Programmer/Encoder
(SFP/SFP+/SFP28/XFP/QSFP+/QSFP28)



ABOUT US

GIGALIGHT was established in 2006. It is an outstanding brand enterprise in the field of global optical communications, as well as a technology leader and design innovator in the global data center field. Our main products include optical transceiver modules (including high-definition video optics), active optical cables (including consumer USB&HDMI cables) and coherent optical modules. The company's technology platforms include free space optical design and packaging, silicon optical chip design and packaging, COB hybrid packaging technology platform, sub-micron multi-channel optical assembly platform, and coherent optical communication technology platform. Major customers include global Internet companies, telecom operators, communication equipment vendors, and network system integrators.

OUR MISSION

We use multiple technology platforms including VCSEL/DML/EML technology, PAM4 technology, coherent optical communication technology, silicon-based integrated chip technology, passive micro-optics assembly technology, and high-speed COB packaging technology, to develop and deliver super cost-effective plug-and-play optical network middleware. Relying on various advantages such as rich categories, quality assurance, brand health, and "active + passive" integrated product line layout, GIGALIGHT's core goal is to become the master of optical communication device technology and the value of optical network devices for global delivery integrators. GIGALIGHT's core technical capabilities are multi-dimensional integration technology platform and design innovation. The essence of design is to ensure simplicity, aesthetics, reliability and consistency. The company also outputs some cutting-edge technological innovation ideas for industry development.

5G Network

For 5G fronthaul and backhaul, GIGALIGHT provides a series of high-quality optical transceivers with low power consumption, high reliability, and high cost-effectiveness to help global telecom operators quickly deploy 5G commercial networks.

5G Fronthaul (I-Temp)

25G Grey Optical Transceivers
25G SFP28 100m~40km
25G BiDi SFP28 10km~40km

Suitable for 5G fronthaul scenarios with very rich optical fiber resources, can meet the demand for transmission distances of up to 100m~40km. 25G bidirectional transmission can be realized through a pair or a single optical fiber.

10G Color Optical Transceivers
10G CWDM SFP+ 10km~40km
10G DWDM SFP+ 40km~80km

Suitable for 4G and 5G hybrid networking scenarios where optical fiber resources are relatively scarce, and can meet the transmission distance requirements of up to 10km~80km. Using wavelength division multiplexing technology to achieve multi-channel single-fiber bidirectional transmission can save a lot of fiber resources.

25G Color Optical Transceivers
25G CWDM SFP28 10km~15km
25G MWDM SFP28 10km~15km
25G LWDM SFP28 10km~40km
25G DWDM SFP28 10km

Suitable for 5G independent networking scenarios where optical fiber resources are relatively scarce, and can meet the transmission distance requirements of up to 10km~40km. The use of wavelength division multiplexing technology to achieve multi-channel single-fiber bidirectional transmission can save a lot of fiber resources.

5G Backhaul

200GE/400GE Optical Transceivers
200G QSFP56 LR4 10km~20km
400G QSFP-DD LR8 10km

Support 200G or 400G Ethernet rates, meet the transmission distance requirements of up to 10km~20km, and can be compatible with mainstream 5G backhaul network interfaces.

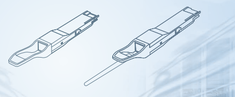
200GE/OTN Optical Transceivers
200G QSFP-DD 10km~20km

Support 200G Ethernet and OTN dual rates, meet the transmission distance requirements of up to 10km to 20km, and can be compatible with mainstream 5G backhaul network architectures. Highlight No need to turn on FEC to achieve zero error transmission within 20km, which can minimize the delay of 5G networks.

100GE/OTN Optical Transceivers
100G QSFP28 10km~80km

Support 100G Ethernet and OTN dual rate, meet the transmission distance requirements of up to 10km~80km, and can be compatible with mainstream 5G backhaul 100G network interfaces.

Data Center



For the optical interconnection within and between data centers, GIGALIGHT provides complete optical transceiver and Active Optical Cable (AOC) solutions, covering up to 800G Ethernet.

Nx100GE PAM4Silicon Photonics

8x100GE Optical Transceivers
800G QSFP-DD 800 PSM8 500m

4x100GE Optical Transceivers
400G QSFP-DD DR4 500m
400G QSFP-DD DR4+ 2km

1x100GE Optical Transceivers
100G QSFP28 DR 500m

Adopt 100G PAM4 modulation technology and Silicon Photonics integration technology, and provide cost-effective ultra-high-speed optical interconnection options for next-generation data center networks.

Nx50GE PAM4

8x50GE Optical Transceivers and AOCs
400G QSFP-DD 100m~10km
400G QSFP-DD AOC
400G QSFP-DD to 2x 200G QSFP56 AOC
400G QSFP-DD to 4x 100G QSFP56 AOC
400G QSFP-DD to 8x 50G SFP56 AOC

Adopt 50G PAM4 modulation technology and 8 transmission channels to meet the transmission distance requirements of up to 100m~10km, providing a cost-effective 400G Ethernet interconnection solution for the next-generation data center network.

4x50GE Optical Transceivers and AOCs
200G QSFP56 100m~80km
200G QSFP56 AOC
200G QSFP56 to 2x 100G QSFP56 AOC
200G QSFP56 to 4x 50G SFP56 AOC

Adopt 50G PAM4 modulation technology and 4 transmission channels to meet the transmission distance requirements of up to 100m~80km, providing a cost-effective 200G Ethernet interconnection solution for the next-generation data center network.

1x50GE Optical Transceivers and AOCs
50G SFP56 SR 100m
50G SFP56 AOC

Adopt 50G PAM4 modulation technology and single transmission channel to meet the transmission distance requirements of up to 100m, providing a cost-effective 50G Ethernet interconnection solution for the next-generation data center network.

Nx10G/25G NRZ

8x25GE Optical Transceivers and AOCs
200G QSFP-DD 100m~20km
200G QSFP-DD AOC
200G QSFP-DD to 2x 100G QSFP28 AOC
200G QSFP-DD to 4x 50G QSFP28 AOC

Eight 25Gbps transmission channels, meet the transmission distance requirements of up to 100m~20km, and provide a cost-effective 200G Ethernet interconnection solution for the next-generation data center network.

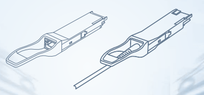
4x25GE Optical Transceivers and AOCs
100G QSFP28 100m~80km
100G QSFP28 AOC
100G QSFP28 AOC (enhanced)
100G QSFP28 to 2x 50G QSFP28 AOC
100G QSFP28 to 4x 25G SFP28 AOC

Four 25Gbps transmission channels, meet the transmission distance requirements of up to 100m~80km, and provide a cost-effective 100G Ethernet interconnection solution for the next-generation data center network.

4x10GE Optical Transceivers and AOCs
40G QSFP+ 100m~40km
40G QSFP+ AOC
40G QSFP+ to 4x 10G SFP+ AOC

Four 10Gbps transmission channels, meet the transmission distance requirements of up to 100m~40km, and provide a cost-effective 40G Ethernet interconnection solution for the next-generation data center network.

Data Center



For the optical interconnection within and between data centers, GIGALIGHT provides complete optical transceiver and Active Optical Cable (AOC) solutions, covering up to 128G Fibre Channel.

Storage Area Network (SAN)and Deep Packet Inspection (DPI)

4x32GFC Optical Transceivers and AOCs
128GFC QSFP28 100m~300m
128GFC QSFP28 AOC
128GFC QSFP28 AOC (enhanced)

Four 28Gbps transmission channels, meet thetransmission distance requirements of up to 100m~300m, and provide a super cost-effective 4x32GFC interconnection solution for data center storage area networks.

8GFC/16GFC Optical Transceivers
8GFC SFP+ 300m~80km
8GFC CWDM SFP+ 40km~80km
8GFC XFP 300m~10km
16GFC SFP+ 125m~40km
16GFC DWDM SFP+ 40km

Meet the transmission distance requirement of 125m~80km,and provide a super cost-effective 8GFC/16GFC interconnection solution for data center SAN applications.

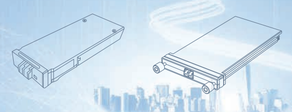
32GFC Optical Transceivers and AOCs
32GFC SFP28 100m~40km
32GFC DWDM SFP28 10km
32GFC SFP28 AOC
32GFC SFP28 AOC (enhanced)

Single 28Gbps transmission channel, meet the transmission distance requirements of up to 100m~40km, and provide a super cost-effective 32GFC interconnection solution for data center storage area networks.

DPI Receiver-only Optical Modules
40G QSFP+ LR4 Rx 10km
100G QSFP28 LR4 Rx 10km
100G CFP2 LR4 Rx 10km

Meet the demand for unidirectional transmission of up to 10km and provides ultra-high cost-effective 40G/100G solutions for DPI applications.

Coherent Optical Communication



For 5G backhaul, metro DCI, inter-provincial backbone optical networks and other long-distance high-speed optical transmission networks, GIGALIGHT has launched 100G/200G coherent optical modules with both Ethernet and OTN data rates, and the transmission distance is up to 2000km. GIGALIGHT has joined the OpenZR+ MSA group, and will launch 400G coherent optical modules that strictly follow the standard in the future.

400GE/OTN (16QAM)
400G CFP2-DCO 120km

Support 100G/200G/400G Ethernet and OTN, meet the transmission distance of up to 120km, support data center interconnection and mainstream 5G backhaul network interface.

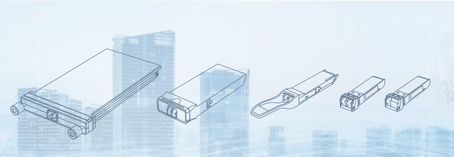
200GE/OTN (QPSK)
200G CFP2-DCO 80km~2000km

Support 100G/200G Ethernet and OTN, meet the transmission distance of up to 2000km, support data center interconnection and mainstream 5G backhaul network interface.

100GE/OTN (QPSK)
100G CFP-DCO 80km~2000km
100G CFP2-DCO 80km~2000km

Support 100G Ethernet and OTN, meet the transmission distance of up to 2000km, support data center interconnection and mainstream 5G backhaul network interface.

Metro/xWDM Transceivers



For metro optical transmission applications, GIGALIGHT provides 100M~100G full-rate optical transceiver solutions, covering Optical Transport Network (OTN), Synchronous Optical Network (SONET/SDH), Ethernet and Fibre Channel (FC) application; and provides a full range of CWDM/DWDM transceivers which can save a lot of fiber resources.

OTN/CWDM/DWDM Optical Transceivers

100G
100G CFP SR10/ LR4
100G CFP2 SR10/LR4/ER4/ZR4
100G CFP4 SR4/LR4
100G QSFP28 SR4/LR4/ER4 LITE /ER4/ZR4

Support 100G Ethernet and OTN, and meets the transmission distance requirements of up to 100m~80km.

40G
40G QSFP+ SR4 100m/400m
40G QSFP+ LR4 10km
40G QSFP+ ER4 40km

Support 40G Ethernet and OTN, and meets the transmission distance requirements of up to 100m~40km.

10G
10G SFP+ 80km
10G CWDM SFP+ 80km
10G DWDM SFP+ 80km
10G XFP 80km
10G CWDM XFP 80km
10G DWDM XFP 80km

Support 10G Ethernet and OTN, and meets the transmission distance requirements of up to 80km.

SDH/Ethernet/CWDM/DWDM Optical Transceivers

10G~28G
10G SFP+ 300m~80km
10G BiDi SFP+ 10km~80km
10G CWDM SFP+ 10km~80km
10G DWDM SFP+ 40km~80km
10G XFP 300m~120km
10G BiDi XFP 10km~80km
10G CWDM XFP 10km~80km
10G DWDM XFP 40km~120km
25G SFP28 100m~40km
4GFC CWDM SFP 40km~80km
8GFC CWDM SFP+ 40km~80km
16GFC DWDM SFP+ 40km
32GFC DWDM SFP28 10km

622M~2.5G
622M SFP 20km~120km
622M CWDM SFP 40km~120km
1.25G SFP 550m~120km
1.25G BiDi SFP 40km~80km
1.25G CWDM BiDi SFP 20km~120km
1.25G CSFP 20km~40km
1.25G CWDM SFP 40km~120km
1.25G DWDM SFP 40km~120km
2.5G SFP 300m~80km
2.5G BiDi SFP 20km~80km
2.5G CSFP 20km
2.5G CWDM SFP 40km~120km
2.5G DWDM SFP 80km

100M/155M
100M SGMII SFP 2km/10km
100M/155M SFP 2km~160km
100M/155M BiDi SFP 20km~120km
100M/155M CSFP 20km~40km
100M/155M CWDM SFP 80km~120km

Generally support commercial-grade, extended-grade and industrial-grade operating temperature ranges, and meets the transmission distance requirements of up to 100m~160km. Among them, the low-speed optical transceivers of 10G and below 10G are manufactured based on very mature technology. With the support of the automatic manufacturing equipment independently developed by GIGALIGHT, not only can they guarantee excellent quality, but they can also be supplied on a large scale and delivered quickly. Customers provide super cost-effective choices.

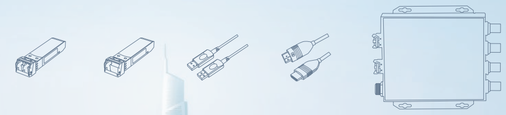
Ethernet Copper Transceivers

10G Ethernet
10GBASE-T SFP+ 30m

Gigabit Ethernet
1000BASE-T SFP 100m
10/100/1000BASE-T SFP 100m

Fast Ethernet
100BASE-T SFP 100m
10/100BASE-T SFP 100m

SDI/HDMI/ USB Optics



5G commercialization has brought a surge in Ultra-High-Definition (UHD) video services. In order to meet these business needs, GIGALIGHT has launched a series of 3G/12G-SDI video optical modules and extenders, as well as USB/HDMI AOC and HDMI optical extenders, and can greatly increase the transmission distance by converting the electrical signal carrying video or data into an optical signal for transmission.

12G-SDI
12G-SDI SFP+ 20km
12G-SDI SFP+ Tx 20km
12G-SDI SFP+ Rx 20km
12G-SDI SFP+ 2Tx 20km
12G-SDI SFP+ 2Rx 20km
12G-SDI CWDM SFP+ 10km
12G-SDI CWDM SFP+ Tx 10km
12G-SDI CWDM SFP+ 2Tx 10km
12G-SDI Optical Extender (2TR)

Among them, the optical module includes transceiver, single-transmitter, single-receiver, dual-transmitter and dual-receiver series, which can meet the transmission distance requirements of up to 10km~20km; the optical extender cooperates with two 12G-SDI optical transceiver modules to support two 12Gbps bidirectional transmission channel.

3G-SDI
3G-SDI SFP 2km~80km
3G-SDI SFP Tx 2km~80km
3G-SDI SFP Rx 2km~80km
3G-SDI SFP 2Tx 2km~40km
3G-SDI SFP 2Rx 2km~40km
3G-SDI CWDM SFP 20km~80km
3G-SDI CWDM SFP Tx 40km~80km
3G-SDI CWDM SFP 2Tx 20km~40km
3G-SDI Optical Extender (4Tx or 4Rx)

Among them, the optical modules include transceiver, single-transmitter, single-receiver, dual-transmitter and dual-receiver series, which can meet the transmission distance requirements of up to 2km~80km; the optical extender works with four 3G-SDI single-transmitter or single-receiver optical modules to support four 3Gbps unidirectional transmission channels.

USB/HDMI
USB 3.0 AOC 100m
HDMI 2.0 AOC100m
HDMI 1.4 Optical Extender (Tx or Rx)

Among them, the USB 3.0 AOC can support data transmission of up to 5Gbps, meeting the transmission distance of up to 100m; HDMI 2.0 AOC can support data transmission of up to 18Gbps, meeting the demand for transmission distance of up to 100m; HDMI 1.4 optical extender with a 10G single-transmitter or single-receiver optical module can support single 10Gbps unidirectional transmission channel.

Optical Transceiver Tools

GIGALIGHT provides a series of portable testing, wavelength tunable and coding tools the performance of optical modules can be tested on-site through the tester Parameters; the wavelength of the tunable optical modules can be modified through the tunable box; the compatibility code can be modified through the cloud programmer to make the product compatible with equipment of different vendors.

Optical Transceiver Checkers
400G QSFP-DD Checker
200G QSFP56 Checker
200G QSFP-DD Checker
40G/100G QSFP Checker
25G SFP28 Checker
10G SFP+ Checker

Tunable Box
10G SFP+/XFP Tunable Box

Cloud Programmer
SFP/XFP/QSFP Cloud Programmer

5G Network Optical Transceivers

5G Fronthaul 25GE/eCPRI SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-MPO250-SRT	100m	850nm	VCSEL	PIN	Dual LC	< 1W	I-Temp
GSS-MPO250-CSRT	300m						I-Temp
GSS-SPO250-LST	300m	1310nm	DML	PIN	Dual LC	< 1W	I-Temp
GSS-SPO250-LRT	10km	1310nm	DML	PIN	Dual LC	< 1.2W	I-Temp
GSSR-SPO250-LRT	10km	1310nm	N/A	PIN	Single LC	< 1W	I-Temp
GSS-SPO250-L2T	20km	1310nm	EML	PIN	Dual LC	< 1.8W	I-Temp
GSS-SPO250-ERT	40km	1310nm	EML	APD	Dual LC	< 2W	I-Temp

5G Fronthaul 25GE/eCPRI BiDi SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GBP-2733250-LRT	10km	1270nm/1330nm	DML	PIN	Single LC	< 1.2W	I-Temp
GBP-3327250-LRT		1330nm/1270nm					I-Temp
GBP-2733250-LST	15km	1270nm/1330nm	DML	APD	Single LC	< 1.5W	I-Temp
GBP-3327250-LST		1330nm/1270nm					I-Temp
GBP-2733250-ERT	40km	1270nm/1330nm	EML	APD	Single LC	< 1.8W	I-Temp
GBP-3327250-ERT		1330nm/1270nm					I-Temp

5G Fronthaul 25GE/eCPRI CWDM SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-Cxx250-LRT	10km	1271nm ~ 1371nm	DML	PIN	Dual LC	< 1.2W	I-Temp
		1471nm ~ 1571nm	EML	APD		< 1.8W	
GSS-Cxx250-LST	15km	1271nm ~ 1371nm	DML	APD	Dual LC	< 1.8W	I-Temp

5G Fronthaul 25GE/eCPRI MWDM SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-Mxx250-LRT	10km	1267.5nm ~ 1374.5nm	DML	PIN	Dual LC	< 1.2W	I-Temp
GSS-Mxx250-LST	15km	1267.5nm ~ 1374.5nm	DML	APD	Dual LC	< 1.8W	I-Temp

5G Fronthaul 25GE/eCPRI LWDM SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-Sxx250-LRT	10km	L1 ~ L12	DML	PIN	Dual LC	< 1.2W	I-Temp
GSS-Sxx250-EST	20km	L1 ~ L12	DML	APD	Dual LC	< 1.5W	I-Temp
GSS-Sxx250-ERT	40km	L2 ~ L10	EML	APD	Dual LC	< 1.8W	I-Temp

5G Fronthaul 25GE/eCPRI DWDM SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-Dxx250-LRT	10km	C18 ~ C61	EML	APD	Dual LC	< 1.8W	I-Temp

5G Fronthaul 10GE/CPRI CWDM SFP+

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GCP-xx192-01T	10km	1271nm ~ 1571nm	DML	APD	Dual LC	< 1.5W	I-Temp
		1471nm ~ 1571nm					
GCP-xx192-04T	40km	1471nm ~ 1611nm	EML	APD	Dual LC	< 1.8W	I-Temp
		1471nm ~ 1571nm					

5G Fronthaul 10GE/CPRI DWDM SFP+

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GDP-xx192-04T	40km	C18 ~ C61	EML	APD	Dual LC	< 2W	I-Temp
GDP-xx192-08T	80km	C18 ~ C61	EML	APD	Dual LC	< 2W	I-Temp

Data Center AOC

Ethernet 50GE/200GE/400GE AOC (1/4/8x50G PAM4)

P/N	Product Name	length	Power Consumption	Temperature
GSS-MDO560-(D)(x)xxC	50G SFP56 AOC	1.00m ~ 100m	< 2W perend	C-Temp
GQS-MDO201-(D)(x)xxC	200G QSFP56 AOC	1.00m ~ 100m	< 5W perend	C-Temp
GQQ2-MDO201-(D)(x)xxC	200G QSFP56 to 2x 100G QSFP56 AOC	1.00m ~ 100m	<5W (200G end),<4.5W (100G end)	C-Temp
GQS4-MDO201-(D)(x)xxC	200G QSFP56 to 4x 50G SFP56 AOC	1.00m ~ 100m	<5W (200G end),<4.5W (100G end)	C-Temp
GQD-MDO401-(D)(x)xxC	400G QSFP-DD AOC	1.00m ~ 100m	<10W perend	C-Temp
GDA2-MDO401-(D)(x)xxC	400G QSFP-DD to 2x 200G QSFP56 AOC	1.00m ~ 100m	<9W (400G end), <5W (200G end)	C-Temp
GDA4-MDO401-(D)(x)xxC	400G QSFP-DD to 4x 100G QSFP56 AOC	1.00m ~ 100m	<9W (400G end),<4.5W (100G end)	C-Temp
GDS8-MDO401-(D)(x)xxC	400G QSFP-DD to 8x 50G SFP56 AOC	1.00m ~ 100m	<10W (400G end), <2W (50G end)	C-Temp

Ethernet 25GE/50GE/100GE/200GE AOC (1/2/4/8x25G NRZ)

P/N	Product Name	length	Power Consumption	Temperature
GSS-MDO250-(D)(x)xxC	25G SFP28 AOC	1.00m ~ 100m	<1W perend	C-Temp
GSS-MDO250-(D)(x)xxT		1.00m ~ 100m	<1W perend	I-Temp
GSS-MDO250-E(D)(x)xxC	25G SFP28 AOC (enhanced)	1.00m ~ 300m	<1W perend	C-Temp
GSS-MDO250-E(D)(x)xxT		1.00m ~ 300m	<1W perend	I-Temp
GQQ-MDO500-(D)(x)xxC	50G QSFP28 AOC	1.00m ~ 100m	<1.5W perend	C-Temp
GQS-MDO101-(D)(x)xxC	100G QSFP28 AOC	1.00m ~ 100m	<2.5W perend	C-Temp
GQS-MDO101-(D)(x)xxT		1.00m ~ 100m	<2W perend	I-Temp
GQS-MDO101-E(D)(x)xxC	100G QSFP28 AOC (enhanced)	1.00m ~ 300m	<2W perend	C-Temp
GQS-MDO101-E(D)(x)xxT		1.00m ~ 300m	<2W perend	I-Temp
GQS2-MDO101-(D)(x)xxC	100G QSFP28 to 2x 50G QSFP28 AOC	1.00m ~ 100m	<2.5W (100G end),<1.6W (50G end)	C-Temp
GQP-MDO101-(D)(x)xxC	100G QSFP28 to 4x 25G SFP28 AOC	1.00m ~ 100m	<2.5W (100G end), <1W (25G end)	C-Temp
GQD-MDO201-(D)(x)xxC	200G QSFP-DD AOC	1.00m ~ 100m	<4W perend	C-Temp
GDA2-MDO201-(D)(x)xxC	200G QSFP-DD to 2x 100G QSFP28 AOC	1.00m ~ 100m	<4W (200G end), <2.5W (100G end)	C-Temp
GDA4-MDO201-(D)(x)xxC	200G QSFP-DD to 4x 50G QSFP28 AOC	1.00m ~ 100m	<4W (200G end),<2W (50G end)	C-Temp

Ethernet 10GE/40GE AOC (1/4x10G NRZ)

P/N	Product Name	length	Power Consumption	Temperature
GSS-MDO100-(D)(x)xxC	10G SFP+ AOC	1.00m ~ 300m	<0.8W per end	C-Temp
GQS-MDO400-(D)(x)xxC	40G QSFP+ AOC	1.00m ~ 400m	<1.5W per end	C-Temp
GQP-MDO400-(D)(x)xxC	40G QSFP+ to 4x 10G SFP+ AOC	1.00m ~ 150m	<1.5W (40G end)； <0.8W (10G end)	C-Temp

Fibre Channel 32GFC/128GFC AOC (1/4x28G NRZ)

P/N	Product Name	length	Power Consumption	Temperature
GSS-MDO280-(D)(x)xxC	32GFC SFP28 AOC	1.00m ~ 100m	<1W per end	C-Temp
GSS-MDO280-(D)(x)xxT		1.00m ~ 100m	<1W per end	I-Temp
GSS-MDO280-E(D)(x)xxC	32GFC SFP28 AOC (enhanced)	1.00m ~ 300m	<1W per end	C-Temp
GSS-MDO280-E(D)(x)xxT		1.00m ~ 300m	<1W per end	I-Temp
GQS-MDO111-(D)(x)xxC	128GFC QSFP28 AOC	1.00m ~ 100m	<2W per end	C-Temp
GQS-MDO111-(D)(x)xxT		1.00m ~ 100m	<2W per end	I-Temp
GQS-MDO111-E(D)(x)xxC	128GFC QSFP28 AOC (enhanced)	1.00m ~ 300m	<2W per end	C-Temp
GQS-MDO111-E(D)(x)xxT		1.00m ~ 300m	<2W per end	I-Temp

5G Backhaul 200GE/400GE

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-SPO201-LR4C	200G QSFP56 LR4	10km	LWDM4	EML	PIN	Dual LC	< 7.5W	C-Temp
GQS-SPO201-L24C		20km						
GQD-SPO401-LR8C	400G QSFP-DD LR8	10km	LWDM8	EML	PIN	Dual LC	< 13W	C-Temp

5G Backhaul 200GE/OTN

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQD-SPO201-LR8C	200G QSFP-DD LR8	10km	LWDM8	DML	PIN	Dual LC	< 7.5W	C-Temp
GQD-SPO201-L28C		20km						

5G Backhaul 100GE/OTN

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-SPO111-LR4C	100G QSFP28 LR4	10km	LWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO111-L24C		20km						
GQS-SPO111-ES4C	100G QSFP28 ER4 Lite	40km	LWDM4	DML	APD	Dual LC	< 3.8W	C-Temp

Coherent Optical Modules

200GE/OTN CFP2-DCO (DP-QPSK)

P/N	Reach	Wavelength	EDFA	Min. Tx OSNR	Typical Rx OSNR Tolerance	Power Consumption
GF2-S201-ZR-1TC	80km	Full C-band Tunable 50GHz	with	35dB @ 0.1nm	17dB @ 0.1nm	< 18W
GF2-S201-ZR-0TC			without			< 17W
GF2-S201-MR-1TC	600km		with		15.5dB @ 0.1nm	< 19W
GF2-S201-MR-0TC			without			< 18W
GF2-S201-ZR-1TC	1200km		with		13dB @ 0.1nm	< 24W
GF2-S201-ZR-0TC			without			< 23W

100GE/OTN CFP2-DCO (DP-QPSK)

P/N	Reach	Wavelength	EDFA	Min. Tx OSNR	Typical Rx OSNR Tolerance	Power Consumption
GF2-S101-ZR-1TC	80km	Full C-band Tunable 50GHz	with	35dB @ 0.1nm	17dB @ 0.1nm	< 18W
GF2-S101-ZR-0TC			without			< 17W
GF2-S101-MR-1TC	600km		with		15.5dB @ 0.1nm	< 19W
GF2-S101-MR-0TC			without			< 18W
GF2-S101-ZR-1TC	1200km		with		13dB @ 0.1nm	< 24W
GF2-S101-ZR-0TC			without			< 23W

100GE/OTN CFP-DCO (DP-QPSK)

P/N	Reach	Wavelength	EDFA	Min. Tx OSNR	Typical Rx OSNR Tolerance	Power Consumption
GCF-S101-ZR-1TC	80km	Full C-band Tunable 50GHz	with	35dB @ 0.1nm	17dB @ 0.1nm	< 23W
GCF-S101-ZR-0TC			without			< 22W
GCF-S101-MR-1TC	600km		with		15.5dB @ 0.1nm	< 24W
GCF-S101-MR-0TC			without			< 23W
GCF-S101-ZR-1TC	1200km		with		13dB @ 0.1nm	< 31W
GCF-S101-ZR-0TC			without			< 23W

Metro Optical Transceivers

100GE/OTN CFP

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GCF-M101-SR10C	100G CFP SR10	400m	850nm	VCSEL	PIN	MPO24	< 7W	C-Temp
GCF-S101-LR4C	100G CFP LR4	10km	LWDM4	EML	PIN	Dual LC	< 9W	C-Temp

100GE/OTN CFP2

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GF2-M101-SR10C	100G CFP2 SR10	400m	850nm	VCSEL	PIN	MPO24	< 8W	C-Temp
GF2-S101-LR4C	100G CFP2 LR4	10km	LWDM4	EML	PIN	Dual LC	< 6W	C-Temp
GF2R-S101-LR4C	100G CFP2 LR4 Rx	10km	LWDM4	N/A	PIN	Dual LC	< 3W	C-Temp
GF2-S101-ER4C	100G CFP2 ER4	40km	LWDM4	EML	PIN	Dual LC	< 9W	C-Temp

100GE/OTN CFP4

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GF4-M101-SR4C	100G CFP4 SR4	100m	850nm	VCSEL	PIN	MPO12	< 2.5W	C-Temp
GF4-S101-LR4C	100G CFP4 LR4	10km	LWDM4	EML	PIN	Dual LC	< 4W	C-Temp

Data Center Optical Transceivers

Ethernet Silicon Photonics (1/4/8x100G PAM4)

P/N	Product Name	Reach	Wavelength	Interface	Power Consumption	Temperature
GQS-SPO101-DRC	100G QSFP28 DR1	500m	1310nm	Dual LC	< 4.5W	C-Temp
GDM-SPO401-DR4C	400G QSFP-DD DR4	500m	1310nm	MPO12	< 10W	C-Temp
GDM-SPO801-DR8C	800G QSFP-DD800 PSM8	500m	1310nm	MPO24	< 15W	C-Temp

Ethernet 400GE QSFP-DD (8x50G PAM4)

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQD-MPO401-SR8C	400G QSFP-DD SR8	100m	850nm	VCSEL	PIN	MPO24/MPO16	< 10W	C-Temp
GDM-SPO401-FR8C	400G QSFP-DD PSM8	2km	1310nm	EML	PIN	MPO24	< 12W	C-Temp
GQD-SPO401-LR8C	400G QSFP-DD LR8	10km	LWDM8	EML	PIN	Dual LC	< 13W	C-Temp

Ethernet 200GE QSFP56 (4x50G PAM4)

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-MPO201-SR4C	200G QSFP56 SR4	100m	850nm	VCSEL	PIN	MPO12	< 5W	C-Temp
GQS-MPO201-DR4C	200G QSFP56 DR4	500m	1310nm	EML	PIN	MPO12	< 5.5W	C-Temp
GQS-SPO201-FR4C	200G QSFP56 FR4	2km	CWDM4	EML	PIN	Dual LC	< 5W	C-Temp
GQS-SPO201-EFR4C	200G QSFP56 EFR4	10km	CWDM4	EML	PIN	Dual LC	< 7W	C-Temp
GQS-SPO201-LR4C	200G QSFP56 LR4	10km	LWDM4	EML	PIN	Dual LC	< 7.5W	C-Temp
GQS-SPO201-L24C		20km						
GQS-SPO201-ER4C	200G QSFP56 ER4	40km	LWDM4	EML	APD	Dual LC	< 9W	C-Temp
GQS-SPO201-ZR4C	200G QSFP56 ZR4	80km	LWDM4	EML	PIN+SOA	Dual LC	< 10W	C-Temp

Ethernet 50GE SFP56 (50G PAM4)

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-MPO560-SRC	50G SFP56 SR	100m	850nm	VCSEL	PIN	Dual LC	< 2W	C-Temp

Ethernet 200GE QSFP-DD (8x25G NRZ)

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQD-MPO201-DSR4C	200G QSFP-DD SR8	100m	850nm	VCSEL	PIN	MPO24/MPO16	< 4W	C-Temp
GDM-SPO201-FR8C	200G QSFP-DD PSM8	2km	1310nm	DML	PIN	MPO24	< 6W	C-Temp
GDM-SPO201-LR8C		10km					< 6.5W	
GQD-SPO201-LR8C	200G QSFP-DD LR8	10km	LWDM8	DML	PIN	Dual LC	< 7.5W	C-Temp
GQD-SPO201-L28C		20km						

Ethernet 100GE QSFP28 (4x25G NRZ)

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-MPO101-SR4C	100G QSFP28 SR4	100m	850nm	VCSEL	PIN	MPO12	< 2.5W	C-Temp
GQS-MPO101-SR4T							< 2W	I-Temp
GQS-MPO101-ESR4C	100G QSFP28 ESR4	300m	850nm	VCSEL	PIN	MPO12	< 2W	C-Temp
GQS-MPO101-ESR4T								I-Temp
GQM-SPO101-IR4C	100G QSFP28 PSM4	2km	1310nm	DML	PIN	MPO12	< 3.5W	C-Temp
GQM-SPO101-LR4C		10km						
GQS-SPO101-CIR4C	100G QSFP28 CWDM4	2km	CWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO101-CLR4C		10km						
GQS-SPO101-CLR4T								I-Temp
GQS-SPO101-CCR4C	100G QSFP28 CLR4	2km	CWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO101-CMR4C		10km						
GQS-SPO101-4LR4C	100G QSFP28 4WDM-10	10km	CWDM4	DML	PIN	Dual LC	< 4W	C-Temp
GQS-SPO101-4LR4T								I-Temp
GQS-SPO101-LR4C	100G QSFP28 LR4	10km	LWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO101-LR4T								I-Temp
GQS-SPO101-L24C		20km						C-Temp
GQS-SPO101-4ER4C	100G QSFP28 4WDM-40	40km	LWDM4	DML	APD	Dual LC	< 3.8W	C-Temp
GQS-SPO101-4ER4T								I-Temp
GQS-SPO101-ES4C	100G QSFP28 ER4 Lite	30km/40km	LWDM4	EML/DML	APD	Dual LC	< 4W	C-Temp
GQS-SPO101-ER4C	100G QSFP28 ER4	40km	LWDM4	EML/DML	PIN+SOA	Dual LC	< 5.5W	C-Temp
GQS-SPO101-ZR4C	100G QSFP28 ZR4	80km	LWDM4	EML	PIN+SOA	Dual LC	< 6.5W	C-Temp

Fibre Channel 128GFC QSFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-MPO111-SR4C	100m	850nm	VCSEL	PIN	MPO12	< 2W	C-Temp
GQS-MPO111-SR4T							I-Temp
GQS-MPO111-ESR4C	300m	850nm	VCSEL	PIN	MPO12	< 2W	C-Temp
GQS-MPO111-ESR4T							I-Temp

Fibre Channel 32GFC SFP28

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GSS-MPO280-SRC	100m	850nm	VCSEL	PIN	Dual LC	< 1W	C-Temp
GSS-MPO280-SRT							I-Temp
GSS-MPO280-ESRC	300m	850nm	VCSEL	PIN	Dual LC	< 1W	C-Temp
GSS-MPO280-ESRT							I-Temp
GSS-SPO280-LRC	10km	1310nm	DML	PIN	Dual LC	< 1W	C-Temp
GSS-SPO280-ESC	40km	1310nm	EML	APD	Dual LC	< 1.8W	C-Temp
GSS-Dxx280-LRT	10km	C18 ~ C61	EML	APD	Dual LC	< 1.8W	I-Temp

Fibre Channel 16GFC SFP+

P/N	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GPP-8514G-SRC	125m	850nm	VCSEL	PIN	Dual LC	< 0.8W	C-Temp
GPP-3114G-LRC	10km	1310nm	DML	PIN	Dual LC	< 1W	C-Temp
GPP-3114G-ESC	40km	1310nm	EML	APD	Dual LC	< 1.8W	C-Temp
GDP-xx14G-04C	40km	C18 ~ C61	EML	APD	Dual LC	< 1.8W	C-Temp
GDP-xx14G-04T							I-Temp

DPI Receiver-only Optical Modules

P/N	Product Name	Reach	Wavelength	Rx	Interface	Power Consumption	Temperature
GQSR-SPO400-LR4C	40G QSFP+ LR4 Rx	10km	CWDM4	PIN	Single LC	< 1.5W	C-Temp
GQSR-SPO400-LR4N							E-Temp
GQSR-SPO101-LR4C	100G QSFP28 LR4 Rx	10km	LWDM4	PIN	Single LC	< 1.5W	C-Temp
GF2R-S101-LR4C	100G CFP2 LR4 Rx	10km	LWDM4	PIN	Single LC	< 3W	C-Temp

100GE/OTN QSFP28

P/N	Product Name	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GQS-MPO111-SR4C	100G QSFP28 SR4	100m	850nm	VCSEL	PIN	MPO12	< 2W	C-Temp
GQS-MPO111-SR4T		100m	850nm	VCSEL	PIN	MPO12	< 2W	I-Temp
GQS-MPO111-ESR4C	100G QSFP28 ESR4	300m	850nm	VCSEL	PIN	MPO12	< 2W	C-Temp
GQS-MPO111-ESR4T		300m	850nm	VCSEL	PIN	MPO12	< 2W	I-Temp
GQS-SPO111-LR4C	100G QSFP28 LR4	10km	LWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO111-L24C		20km	LWDM4	DML	PIN	Dual LC	< 3.5W	C-Temp
GQS-SPO111-ES4C	100G QSFP28 ER4 Lite	40km	LWDM4	DML	APD	Dual LC	< 3.8W	C-Temp
				EML			< 4W	
GQS-SPO111-ER4C	100G QSFP28 ER4	40km	LWDM4	DML	PIN+SOA	Dual LC	< 5.5W	C-Temp
				EML			< 6W	
GQS-SPO111-ZR4C	100G QSFP28 ZR4	80km	LWDM4	EML	PIN+SOA	Dual LC	< 6.5W	C-Temp

12G-SDI Optical Modules

12G-SDI SFP+

P/N	Pin-out	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GHP-3112G-L2CDM	MSA	20km	1310nm	DML	PIN	Dual LC	< 1.8W	C-Temp
GHP-3112G-L2CD	Non-MSA							

12G-SDI SFP+ Tx

P/N	Pin-out	Reach	Wavelength	Tx	Interface	Power Consumption	Temperature
GHT-3112G-L2CDM	MSA	20km	1310nm	DML	Single LC	< 1W	C-Temp
GHT-3112G-L2CD	Non-MSA						

12G-SDI SFP+ Rx

P/N	Pin-out	Reach	Rx	Interface	Power Consumption	Temperature
GHR-12G-L2CDM	MSA	20km	PIN	Single LC	< 0.5W	C-Temp
GHR-12G-L2CD	Non-MSA					

12G-SDI SFP+ 2Tx

P/N	Pin-out	Reach	Wavelength	Tx	Interface	Power Consumption	Temperature
GTT-313112G-L2CD	Non-MSA	20km	1310nm	DML	Dual LC	< 2W	C-Temp

12G-SDI SFP+ 2Rx

P/N	Pin-out	Reach	Rx	Interface	Power Consumption	Temperature
GRR-12G-L2CD	Non-MSA	20km	PIN	Dual LC	< 1W	C-Temp

12G-SDI CWDM SFP+

P/N	Pin-out	Reach	Wavelength	Tx	Rx	Interface	Power Consumption	Temperature
GHPC-xx12G-L1CDM	MSA	10km	1270nm~ 1570nm	DML	PIN	Dual LC	< 1.8W	C-Temp
GHPC-xx12G-L1CD	Non-MSA							

12G-SDI CWDM SFP+ Tx

P/N	Pin-out	Reach	Wavelength	Tx	Interface	Power Consumption	Temperature
GHTC-xx12G-L1CDM	MSA	10km	1270nm~ 1570nm	DML	Single LC	< 1W	C-Temp
GHTC-xx12G-L1CD	Non-MSA						

12G-SDI CWDM SFP+ 2Tx

P/N	Pin-out	Reach	Wavelength	Tx	Interface	Power Consumption	Temperature
GTTC-xxxx12G-L2CD	Non-MSA	20km	1270nm~ 1570nm	DML	Dual LC	< 2W	C-Temp