

Optical Module Specification

1. Common SFP/XFP/QSFP28 Optical Characteristics

常用 SFP/XFP/QSFP/QSFP28 模块的主要参数

产品型号 Model	描述 Description	输出功率 (dBm) Optical output Power(Tx)	接收灵敏度 (dBm) Receiver Sensitivity Max ~Min(Rx)	饱和输入功率 (dBm) Input Saturation Power (Overload)
SFP-31-01-20	SFP, 1310nm, SM, 155M, 20km DDM	-15 ~ -8	-28 ~ -8	-8
SFP-31-01-40	SFP, 1310nm, SM, 155M, 40km DDM	-5~0	-34 ~ -10	-10
SFP-31-12-10	SFP, 1310nm, SM, 1.25G, 10km DDM	-9.5~ -3	-20 ~ -3	-3
SFP-31-12-40	SFP, 1310nm, SM, 1.25G, 40km DDM	-5~0	-25 ~ -2	-2
SFP-55-12-80	SFP, 1310nm, SM, 1.25G, 80km DDM	0~5	-25 ~ -7	-7
SFP-55-12-120	SFP, 1310nm, SM, 1.25G, 120km DDM	0~5	-30 ~ -9	-9
SFP-850-12	SFP, 850nm, MM, 1.25G, 500m DDM	-9.5 ~ -4	-18 ~ 0	0
SFP-Wxx-01-40	SFP, BIDI 单纤(1310/1550), FE , 40km,DDM,注意成对使用	-7 ~ -2	-32 ~ -10	-10
SFP-Wxx-12-40	SFP, BIDI 单纤(1310/1550), GE , 40km,DDM,注意成对使用	-5 ~ 0	-24 ~ -1	-1
SFP-Wxx-12-80	SFP, BIDI单纤(1550/1490), GE , 80km,DDM,注意成对使用	-5 ~ 0	-26 ~ -3	-3
SFP-Wxx-12-120	SFP, BIDI单纤(1470,1490,1510,1530 / 1550,1570,1590,1610), GE , 120km,DDM,注意成对使用	-5 ~ 0	-31 ~ -10	-10
SFP-Cxx-12-40	SFP, CWDM(1270-1610), 1.25G, 40km/20dB Gain, DDM	-4 ~ +1	-24 ~ -1	-1
SFP-Cxx-12-80	SFP, CWDM(1270-1610), 1.25G, 80km/24dB Gain, DDM	0 ~ +5	-24 ~ -9	-9
SFP-Cxx-12-120	SFP, CWDM(1270-1610), 1.25G, 120km/28dB Gain, DDM	0 ~ +5	-28 ~ -9	-9
SFP-31-25-2	SFP, 1310nm, SM, 2.5G, 2km DDM	-9.5 ~ -3	-18 ~ 0	0
SFP-850-25	SFP, 850nm, MM, 2.5G, 500m DDM	-9 ~ -3	-18 ~ 0	0
SFP-Cxx-25-40	SFP, CWDM(1470-1610), 2.5G, 40km DDM	0 ~ +5	-20 ~ -3	-3
SFP-Cxx-25-80	SFP, CWDM(1470-1610), 2.5G, 80km DDM	0 ~ +5	-27 ~ -9	-9
SFP-Dxx-25-80	SFP, DWDM(ch21-60) 2.5G, 80km DDM	0 ~ +3	-26 ~ -9	-9
SFP-Dxx-25-120	SFP, DWDM(ch21-60) 2.5G, 120km DDM	0 ~ +5	-28 ~ -10	-10
XP-850	XFP, 850nm, MM,10G, 300m	-5 ~ -1	-11~ +0.5	0.5
XP-31-10	XFP, 1310nm,SM, 10G, 10km	-6 ~ +1	-15 ~ 0.5	0.5
XP-31-MM	XFP, 1310nm, MM, 10G, 300m	-6.5 ~ +0.5	-10 ~ +1.5	1.5
XP-55-40	XFP, 1550nm, SM,10G, 40km	-1 ~ +2	-14 ~ -7	-7
XP-55-80	XFP, 1550nm, SM,10G, 80km	-1 ~ +2	-24 ~ -9	-9
SFPP-850	SFP, 850nm, MM, 10G, 300m	-6 ~ -1	-10 ~ +0.5	+0.5
SFPP-31-10	SFP+ 1310nm, SM, 10G, 10km	-6 ~ -1	-15 ~ 0.5	+0.5
SFPP-55-40	SFP+, 1550nm, SM, 10G, 40km	-1 ~ +4	-15.8 ~ +0.5	+0.5

SFPP-55-80	SFP+, 1550nm, SM, 10G, 80km	0 ~ + 5	-23 ~ -7	-7
SFPP-Dxx-40	SFP+, DWDM(ch21-60), SM, 10G, 40km	-1 ~ + 4	-15.8 ~ +0.5	+0.5
SFPP-Dxx-80	SFP+, DWDM(ch21-60), SM, 10G, 80km	0 ~ + 5	-23 ~ -7	-7
XP-Dxx-40	XFP, DWDM(ch21-60), SM, 10G, 40km	-1 ~ + 2	-14 ~ -7	-7
XP-Dxx-80	XFP, DWDM(ch21-60), SM, 10G, 80km	-1 ~ + 2	-24 ~ -9	-9
XP-Dxx-80-OTN	OTN XFP DWDM(ch21-60) SM, 11.1G, 80km	-1 ~ + 2	-30 ~ -9	-9
40G-QSFP-100	QSFP 40G(39.81-44.8 Gbps) SR4 多模 850nm 150 m	-7.6 ~ -1	-9.5 ~ 2.4	2.4
40G-QSFP-10	QSFP 40G(39.81-44.8 Gbps) LR4	-4 ~ 2.3	-13.7 ~ 2.3	2.3
40G-QSFP-40	QSFP 40G(39.81-44.8 Gbps) ER4	-2.7 ~ 4.5	-19 ~ -7	-7
100G-QSFP28-100	100GBASE-SR4 QSFP28, 应用 100GbE/103.125 Gbps	-8.4 ~ 2.4	-10.3 ~ 2.4	3.4
100G-QSFP28-2	QSFP28 应用 100GbE/103.125 Gbps, LAN WDM 1310nm 2km	-6 ~ 2.5	-13 ~ 0	3.3
100G-QSFP28-10	100GBASE-LR4 QSFP28, 应用 100GbE/103.125 Gbps	-4 ~ 4.5	-10.6 ~ 0	3.4
100G-QSFP28-40	100GBASE-ER4 Lite, QSFP28, 应用 100GbE/103.125 Gbps	-1 ~ 4	-17(No FEC) ~ -7 -21(FEC) ~ -7	3.3
100G-QSFP28-80	100GBASE-ZR4 QSFP28, 应用 100GbE/103.125 Gbps	2 ~ 6.5	-28 ~ -7	5.5

VERY IMPORTANT 非常重要:

- 1) 40G/100G Optical module, Output power power(Tx) and Receiver sensitivity(Rx) is for each lane
- 2) Input power should be not higher than MAX of receiver sensitivity 对于接收功率, 要求输入功率不要超过饱和输入功率
- 3) For any optical link, it should be reserve 3~6dB margin 对于接收功率余量, 建议距离越长, 余量要留的越多, 一般 3-6dB

2. NOTES 使用注意事项

- Before the optical power is connected to optical module RX (receiver), it must be measured with an optical power meter to see if the power is within the range 光功率接入光模块 Rx(接收)前, 一定要用光功率计测一下, 看功率是否在范围内.
- The fiber patch cord used should be wiped clean with special cleaning tools (such as cleaning paper, alcohol cotton, etc.) 使用的跳线, 一般要用专用清洁工具(如: 清洁纸, 酒精棉等)擦拭干净.
- When optical module or fiber patch cord is not in use, please cover it with a protective cap to prevent dust 光模块或跳线不使用时, 请用保护帽盖上防尘.
- For SFP, 2.5G, CWDM 80km optical module: all are equipped with optical isolator by default; GE CWDM optical module generally does not 对于 SFP, 2.5G, CWDM 80km: 默认都配有隔离器, GE CWDM 一般没有.