

ODL (Optical Data Link) Products



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Products Selection Guide for Two-Fiber

Form	Data Rate	Distance	Connector	Product P/N	LD / PD	DDM	Temp.	RoHS
SFP	155Mbps	15km	LC	SFP03-IS3LC-xxx	1310nm FP LD / PIN PD			
		40km	LC	SFP03-LS3LC-xxx	1310nm FP LD / PIN PD			
		80km	LC	SFP03-US3LC-xxx	1550nm DFB LD / PIN PD			
	622Mbps	15km	LC	SFP12-IS3LC-xxx	1310nm FP LD / PIN PD			
		40km	LC	SFP12-LS3LC-xxx	1310nm DFB LD / PIN PD			
		80km	LC	SFP12-US3LC-xxx	1550nm DFB LD / PIN PD			
	1.25Gbps	500m	LC	SFP24-MS3LC-xxx	850nm VCSEL LD / GaAs PD			
		10km	LC	SFP24-IS3LC-xxx	1310nm FP LD / PIN PD			
		20km	LC	SFP24-SS3LC-xxx	1310nm FP LD / PIN PD			
		40km	LC	SFP24-LS3LC-xxx	1310nm DFB LD / PIN PD			
		60km	LC	SFP24-TS3LC-xxx	1550nm DFB LD / PIN PD			
		80km	LC	SFP24-US3LC-xxx	1550nm DFB LD / PIN PD			
	1.25Gbps CWDM	40km	LC	SFP24-LS3LC-yy ¹ -xxx	yy-nm-DFB LD / PIN PD			
		80km	LC	SFP24-US3LC-yy ¹ -xxx	yy-nm-DFB LD / PIN PD			
	2.5Gbps	200m	LC	SFP48-MS3LC-xxx	850nm VCSEL LD / GaAs PD			
		2km	LC	SFP48-IS3LC-xxx	1310nm FP LD / PIN PD			
		15km	LC	SFP48-SS3LC-xxx	1310nm DFB LD / PIN PD			
40km		LC	SFP48-LS3LC-xxx	1310nm DFB LD / APD				
40km		LC	SFP48-TS3LC-xxx	1550nm DFB LD / PIN PD				
80km		LC	SFP48-US3LC-xxx	1550nm DFB LD / APD				
GBIC	1.25Gbps	500m	SC	GBC24-MS3SC	850nm VCSEL LD / GaAs PD			
		10km	SC	GBC24-IS3SC	1310nm FP LD / PIN PD			
		20km	SC	GBC24-SS3SC	1310nm FP LD / PIN PD			
		40km	SC	GBC24-LS3SC	1310nm DFB LD / PIN PD			
		60km	SC	GBC24-TS3SC	1550nm DFB LD / PIN PD			
		80km	SC	GBC24-US3SC	1550nm DFB LD / PIN PD			
	1.25Gbps CWDM	40km	SC	GBC24-LS3SC-yy ¹	yy-nm-DFB LD / PIN PD			
		80km	SC	GBC24-US3SC-yy ¹	yy-nm-DFB LD / PIN PD			
XFP	10Gbps	15km	SC	XFP192-SS3LC-xxx	1310nm DFB LD / PIN PD			

CWDM Wavelength

yy¹: 47:1470nm, 49:1490nm, 51:1510nm, 53:1530nm, 55: 1550nm, 57:1570nm, 59:1590nm, 61:1610nm

Form	Data Rate	Distance	Connector	Product No.	LD / PD	DDM	Temp.	RoHS		
Bi-Di SFP	155Mbps	15km	SC	WSP03-3S3SC-xxx	1310nm FP LD / 1550nm PIN PD					
		15km	SC	WSP03-5S3SC-xxx	1550nm FP LD / 1310nm PIN PD					
		40km	SC	WSP03-3L3SC-xxx	1310nm FP LD / 1550nm PIN PD					
		40km	SC	WSP03-5L3SC-xxx	1550nm DFB LD / 1310nm PIN PD					
		80km	SC	WSP03-4U3SC-xxx	1510nm DFB LD / 1570nm PIN PD					
		80km	SC	WSP03-5U3SC-xxx	1570nm DFB LD / 1510nm PIN PD					
	1.25Gbps	10km	10km	SC	WSP24-3I3SC-xxx	1310nm FP LD / 1490, 1550nm PIN PD				
			10km	SC	WSP24-4I3SC-xxx	1490nm DFB LD / 1310nm PIN PD				
		20km	10km	SC	WSP24-5I3SC-xxx	1550nm DFB LD / 1310nm PIN PD				
			20km	SC	WSP24-3S3SC-xxx	1310nm FP LD / 1490, 1550nm PIN PD				
		40km	20km	SC	WSP24-4S3SC-xxx	1490nm DFB LD / 1310nm PIN PD				
			20km	SC	WSP24-5S3SC-xxx	1550nm DFB LD / 1310nm PIN PD				
		80km	40km	SC	WSP24-3L3SC-xxx	1310nm DFB LD / 1490, 1550nm PIN PD				
			40km	SC	WSP24-4L3SC-xxx	1490nm DFB LD / 1310nm PIN PD				
		2.5Gbps	80km	40km	SC	WSP24-5L3SC-xxx	1550nm DFB LD / 1310nm PIN PD			
				80km	SC	WSP24-49U3SC-xxx	1490nm DFB LD / 1590nm PIN PD			
			2km	80km	SC	WSP24-59U3SC-xxx	1590nm DFB LD / 1490nm PIN PD			
				2km	SC	WSP48-3I3SC-xxx	1310nm FP LD / 1490nm PIN PD			
	2.5Gbps	2km	2km	SC	WSP48-4I3SC-xxx	1490nm DFB LD / 1310nm PIN PD				
			15km	SC	WSP48-3S3SC-xxx	1310nm DFB LD / 1490nm PIN PD				
		15km	15km	SC	WSP48-4S3SC-xxx	1490nm DFB LD / 1310nm PIN PD				
40km			SC	WSP48-49L3SC-xxx	1490nm DFB LD / 1590nm PIN PD					
40km		40km	SC	WSP48-59L3SC-xxx	1590nm DFB LD / 1490nm PIN PD					
Bi-Di GBIC	1.25Gbps	10km	SC	WGC24-3I3SC	1310nm FP LD / 1490, 1550nm PIN PD					
		10km	SC	WGC24-5I3SC	1550nm FP LD / 1310nm PIN PD					
		20km	SC	WGC24-3S3SC	1310nm FP LD / 1490, 1550nm PIN PD					
		20km	SC	WGC24-5S3SC	1550nm DFB LD / 1310nm PIN PD					
		40km	SC	WGC24-3L3SC	1310nm DFB LD / 1490, 1550nm PIN PD					
		40km	SC	WGC24-5L3SC	1550nm DFB LD / 1310nm PIN PD					
		80km	SC	WGC24-4U3SC	1490nm DFB LD / 1550nm PIN PD					
		80km	SC	WGC24-5U3SC	1550nm DFB LD / 1490nm PIN PD					

155Mbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
SFP03-IS3LC-xxx	15km	LC	1310nm FP / PIN	SMF	-14	-10	-8	< -28 dBm	14 dB	+3.3V	
SFP03-LS3LC-xxx	40km	LC	1310nm FP / PIN	SMF	-5	-2	0	< -34 dBm	29 dB	+3.3V	
SFP03-USLC-xxx	80km	LC	1550nm DFB / PIN	SMF	-5	-2	0	< -34 dBm	29 dB	+3.3V	

622Mbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
SFP12-IS3LC-xxx	15km	LC	1310nm FP / PIN	SMF	-14	-10	-8	< -28 dBm	14 dB	+3.3V	
SFP12-LS3LC-xxx	40km	LC	1310nm DFB / PIN	SMF	-3	0	2	< -28 dBm	25 dB	+3.3V	
SFP12-USLC-xxx	80km	LC	1550nm DFB / PIN	SMF	-3	0	2	< -28 dBm	25 dB	+3.3V	

1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
SFP24-MS3LC-xxx	500m	LC	VCSEL / GaAs PD	MMF	-9	-5	-3	< -17 dBm	8 dB	+3.3V	
SFP24-IS3LC-xxx	10km	LC	1310nm FP / PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3V	
SFP24-SS3LC-xxx	20km	LC	1310nm FP / PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
SFP24-LS3LC-xxx	40km	LC	1310nm DFB / PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3V	
SFP24-TS3LC-xxx	60km	LC	1550nm DFB / PIN	SMF	-3	0	2	< -26 dBm	23 dB	+3.3V	
SFP24-US3LC-xxx	80km	LC	1550nm DFB / PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3V	

CWDM 1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
SFP24-LS3LC-yy ¹ -xxx	40km	LC	yy nm DFB / PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3V	
SFP24-US3LC-yy ¹ -xxx	80km	LC	yy nm DFB / PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3V	

CWDM Wavelength yy¹: 47:1470nm, 49:1490nm, 51:1510nm, 53:1530nm, 55: 1550nm, 57:1570nm, 59:1590nm, 61:1610nm

2.5Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
SFP48-MS3LC-xxx	200m	LC	VCSEL / GaAs PD	MMF	-9	-5	-3	< -17 dBm	8 dB	+3.3V	
SFP48-IS3LC-xxx	2km	LC	1310nm FP / PIN	SMF	-9	-5	-3	< -18 dBm	9 dB	+3.3V	
SFP48-SS3LC-xxx	15km	LC	1310nm DFB / PIN	SMF	-5	-2	0	< -18 dBm	13 dB	+3.3V	
SFP48-LS3LC-xxx	40km	LC	1310nm DFB / APD	SMF	-3	-1	2	< -27 dBm	24 dB	+3.3V	
SFP48-LS3LC-xxx	40km	LC	1550nm DFB / PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
SFP48-US3LC-xxx	80km	LC	1550nm DFB / APD	SMF	-2	1	3	< -28 dBm	26 dB	+3.3V	

10G XFP

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
XFP192-SS3LC-xxx	15	LC	1310nm DFB / PIN PD	SMF	-4	-3	-1	< -13 dBm	-10 dB	3.3 / 1.8V	Under Development

SFPXX-IS3LC-XXX
 ① ② ③ ④

① Data Rate
 03 : OC-03, FE (155Mbps)
 12 : OC-12 (622Mbps)
 24 : GbE (1.25Gbps)
 48 : OC-48 (2.5Gbps)

② DDM Capability
 D : w/ DDM Capability
 N : w/o DDM Capability

③ Operating Temperature (Case)
 C : 0~+70°C
 R : -20~+85°C
 I : -40~+85°C

④ RoHS Compliance
 R : RoHS Compliant
 N : Non-Compliant



155Mbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
WSP03-3S3SC-xxx	15km	SC	1310nm FP / 1550nm PIN	SMF	-14	-10	-8	< -28 dBm	14 dB	+3.3V	
WSP03-5S3SC-xxx	15km	SC	1550nm FP / 1310nm PIN	SMF	-14	-10	-8	< -28 dBm	14 dB	+3.3V	
WSP03-3L3SC-xxx	40km	SC	1310nm FP / 1550nm PIN	SMF	-5	-2	0	< -34 dBm	29 dB	+3.3V	
WSP03-5L3SC-xxx	40km	SC	1550nm DFB / 1310nm PIN	SMF	-5	-2	0	< -34 dBm	29 dB	+3.3V	

1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
WSP24-3I3SC-xxx	10km	SC	1310nm FP / 1490, 1550nm PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3V	
WSP24-4I3SC-xxx	10km	SC	1490nm DFB / 1310nm PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3V	
WSP24-5I3SC-xxx	10km	SC	1550nm DFB / 1310nm PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3V	
WSP24-3S3SC-xxx	20km	SC	1310nm FP / 1490, 1550nm PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
WSP24-4S3SC-xxx	20km	SC	1490nm DFB / 1310nm PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
WSP24-5S3SC-xxx	20km	SC	1550nm DFB / 1310nm PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
WSP24-3L3SC-xxx	40km	SC	1310nm DFB / 1490, 1550nm PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3V	
WSP24-4L3SC-xxx	40km	SC	1490nm DFB / 1310nm PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3V	
WSP24-5L3SC-xxx	40km	SC	1550nm DFB / 1310nm PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3V	
WSP24-49U3SC-xxx	80km	SC	1490nm DFB / 1590nm PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3V	
WSP24-59U3SC-xxx	80km	SC	1590nm DFB / 1490nm PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3V	

2.5Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
WSP48-3I3SC-xxx	10km	SC	1310nm FP / 1490nm PIN	SMF	-9	-5	-3	< -18 dBm	9 dB	+3.3V	
WSP48-4I3SC-xxx	10km	SC	1490nm DFB / 1310nm PIN	SMF	-9	-5	-3	< -18 dBm	9 dB	+3.3V	
WSP48-3S3SC-xxx	20km	SC	1310nm DFB / 1490nm PIN	SMF	-5	-2	0	< -18 dBm	13 dB	+3.3V	
WSP48-4S3SC-xxx	20km	SC	1490nm DFB / 1310nm PIN	SMF	-5	-2	0	< -18 dBm	13 dB	+3.3V	
WSP48-49L3SC-xxx	40km	SC	1490nm DFB / 1590nm PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	
WSP48-59L3SC-xxx	40km	SC	1590nm DFB / 1490nm PIN	SMF	-5	-2	0	< -23 dBm	18 dB	+3.3V	

WSP XX - 3 S 3 S C - XXX

①

②

③

④

① Data Rate
 03 : OC-03, FE (155Mbps)
 24 : GbE (1.25Gbps)
 48 : OC-48 (2.5Gbps)

② DDM Capability
 D : w/ DDM Capability
 N : w/o DDM Capability

③ Operating Temperature (Case)
 C : 0~+70°C
 R : -20~+85°C
 I : -40~+85°C

④ RoHS Compliance
 R : RoHS Compliant
 N : Non-Compliant



Duplex GBIC Transceiver

1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
GBC24-MS3SC	500m	SC	VCSEL / GaAs PD	MMF	-9	-6	-4	< -17 dBm	8 dB	+3.3 / 5 V	
GBC24-IS3SC	10km	SC	1310nm FP / PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3 / 5 V	
GBC24-SS3SC	20km	SC	1310nm FP / PIN	SMF	-9	-5	-3	< -23 dBm	14 dB	+3.3 / 5 V	
GBC24-LS3SC	40km	SC	1310nm DFB / PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3 / 5 V	
GBC24-TS3SC	60km	SC	1550nm DFB / PIN	SMF	-3	0	2	< -26 dBm	23 dB	+3.3 / 5 V	
GBC24-US3SC	80km	SC	1550nm DFB / PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3 / 5 V	

CWDM 1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
GBC24-LS3SC-yy ¹⁾	40km	LC	yy nm DFB / PIN	SMF	-5	-2	0	< -25 dBm	20 dB	+3.3 / 5V	
GBC24-US3SC-yy ¹⁾	80km	LC	yy nm DFB / PIN	SMF	-2	1	3	< -26 dBm	24 dB	+3.3 / 5V	

CWDM Wavelength yy ¹⁾ : 47:1470nm, 49:1490nm, 51:1510nm, 53:1530nm, 55: 1550nm, 57:1570nm, 59:1590nm, 61:1610nm

Bi-directional GBIC Transceiver

1.25Gbps

Product No.	Distance	Connector	Tx / Rx	Fiber	Optical Power (dBm)			Sensitivity	Link Budget	Voltage Supply	Remarks
					Min.	Typ.	Max.				
WGC24-3I3SC	10km	SC	1310nm FP / 1490, 1550nm PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3 / 5 V	
WGC24-5I3SC	10km	SC	1550nm FP / 1310nm PIN	SMF	-9	-5	-3	< -21 dBm	12 dB	+3.3 / 5 V	
WGC24-3S3SC	20km	SC	1310nm FP / 1490, 1550nm PIN	SMF	-9	-5	-3	< -23 dBm	14 dB	+3.3 / 5 V	
WGC24-5S3SC	20km	SC	1550nm DFB / 1310nm PIN	SMF	-9	-5	-3	< -23 dBm	14 dB	+3.3 / 5 V	
WGC24-3L3SC	40km	SC	1310nm DFB / 1490, 1550nm PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3 / 5 V	
WGC24-5L3SC	40km	SC	1550nm DFB / 1310nm PIN	SMF	-3	0	2	< -23 dBm	20 dB	+3.3 / 5 V	
WGC24-4U3SC	80km	SC	1490nm DFB / 1550nm PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3 / 5 V	
WGC24-5U3SC	80km	SC	1550nm DFB / 1490nm PIN	SMF	0	3	5	< -26 dBm	26 dB	+3.3 / 5 V	







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