

SO-SFP-L120D-DXXX & DXXX-E

SFP, 1.25Gbps GbE/FC, DWDM, 100GHz, DDM, 32dB, 120km, D9190-D9600 (42ch)

OVERVIEW

The SO-SFP-L120D-Dxxx is a DWDM transceiver for services from 100 Mbps (Fast Ethernet) up to 1.25 Gbps (Gigabit Ethernet).

The optical performance provides a bridgeable distance of up to 120km. The transceiver is provided in 42 channel versions at the 100GHz DWDM grid as specified in the ITU-T 694.1 standard.

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification. The transceiver is available in two temperature range options, one being an extended temperature range (E-temp): -20°C to +75°C (-4°F to +167°F).

The transceiver module is compliant to RoHS-6/6

TECHNICAL DATA

Technology	DWDM 100GHz SFP
Transmission media	SM (2x LC)
Typical reach	120 km
Nominal wavelength	191.90 - 196.00 THz (42ch)
Bit rate range	0.1 – 1.25 Gbps
Protocols	Eth: GbE FE SDH/SONET: STM-4/OC-12 STM-1/OC-3 FC: 1G FC CPRI: Opt 1 (0.6144 Gbps) Opt 2 (1.2288 Gbps) OBSAI: 1x (0.768 Gbps)
Power budget	15.0 - 28.0 dB
Dispersion tolerance	+2400 ps/nm ¹⁾
Temperature range	0°C to +70°C (Dxxx) -20°C to +75°C (Dxxx-E)
Power consumption	< 1.5W

Transmitter data	Output power:	Min: 0.0 dBm Max: +5.0 dBm
	Tx wavelength:	191.90 - 196.00 THz in 100GHz steps (G.694.1)
Receiver data	Minimum input power:	-32.0 dBm ¹⁾
	Max input power:	-10.0 dBm
	Wavelength range:	1520 – 1566 nm
DDM		Yes
MSA compliance		SFP MSA SFF-8472

¹⁾ @ 1.25 Gbps

Regulatory compliance

EMC CE	EN 55022:2010 EN 55024:2010
UL/Safety	UL 60950-1
FCC	47 CFR PART 15 OCT, 2013
RoHS	RoHS 6
TUV	EN 60950-1:2006+A11+A1+A12+A2 EN 60825-1:2014 EN 60825-2:2004+A1+A2

Storage temp.	-40°C to 85°C
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Note! See "Definitions" below.

ORDERING INFORMATION

Part number	Freq. THz	λ nm	Part number	Freq. THz	λ nm
SO-SFP-L120D-D919	191.90	1562.23	SO-SFP-L120D-D940	194.00	1545.32
SO-SFP-L120D-D920	192.00	1561.42	SO-SFP-L120D-D941	194.10	1544.53
SO-SFP-L120D-D921	192.10	1560.61	SO-SFP-L120D-D942	194.20	1543.73
SO-SFP-L120D-D922	192.20	1559.79	SO-SFP-L120D-D943	194.30	1542.94
SO-SFP-L120D-D923	192.30	1558.98	SO-SFP-L120D-D944	194.40	1542.14
SO-SFP-L120D-D924	192.40	1558.17	SO-SFP-L120D-D945	194.50	1541.35
SO-SFP-L120D-D925	192.50	1557.36	SO-SFP-L120D-D946	194.60	1540.56
SO-SFP-L120D-D926	192.60	1556.55	SO-SFP-L120D-D947	194.70	1539.77
SO-SFP-L120D-D927	192.70	1555.75	SO-SFP-L120D-D948	194.80	1538.98
SO-SFP-L120D-D928	192.80	1554.94	SO-SFP-L120D-D949	194.90	1538.19
SO-SFP-L120D-D929	192.90	1554.13	SO-SFP-L120D-D950	195.00	1537.40
SO-SFP-L120D-D930	193.00	1553.33	SO-SFP-L120D-D951	195.10	1536.61
SO-SFP-L120D-D931	193.10	1552.52	SO-SFP-L120D-D952	195.20	1535.82
SO-SFP-L120D-D932	193.20	1551.72	SO-SFP-L120D-D953	195.30	1535.04
SO-SFP-L120D-D933	193.30	1550.92	SO-SFP-L120D-D954	195.40	1534.25
SO-SFP-L120D-D934	193.40	1550.12	SO-SFP-L120D-D955	195.50	1533.47
SO-SFP-L120D-D935	193.50	1549.32	SO-SFP-L120D-D956	195.60	1532.68
SO-SFP-L120D-D936	193.60	1548.51	SO-SFP-L120D-D957	195.70	1531.90
SO-SFP-L120D-D937	193.70	1547.72	SO-SFP-L120D-D958	195.80	1531.12
SO-SFP-L120D-D938	193.80	1546.92	SO-SFP-L120D-D959	195.90	1530.33
SO-SFP-L120D-D939	193.90	1546.12	SO-SFP-L120D-D960	196.00	1529.55

The transceiver version supporting the extended temperature range -20°C to +75°C (-4°F to +167°F) has the suffix “-E” in the part number, e.g. SO-SFP-L120D-D919-E.

DEFINITIONS

Technology:	Grey; Transceiver type for non-WDM applications. Electrical or optical. CWDM; Transceiver type for CWDM applications using G.694.2 channel grid. DWDM; Transceiver type for DWDM applications using G.694.1 channel grid. BiDi; Transceiver pair using two different wavelength channels operating on a single-fiber.
Transmission Media:	DAC: Direct Attach Cable. Electrical or optical cable with attached connectors. Type of fiber, e.g. Multimode (MM) or Singlemode (SM). Number of and connector type within brackets (e.g. 2x LC, 1x MPO).
Typical reach:	Nominal distance performance based on dispersion and power budget properties, i.e. w/o dispersion compensation and optical amplification.
Bit rate range:	Supported bit rate range in Gigabit or Megabit per second (Gbps or Mbps).
Protocols:	Protocols within supported bit rate range.
Nominal wavelength:	Typical wavelength from transmitter.
Interface standards:	Referenced interface standards e.g. IEEE 802.3 standard for 10GbE services.
Power budget:	Min and max power budget between Transmitter and Receiver. Excluding any dispersion penalty.
Dispersion tolerance/penalty:	Maximum amount of tolerated dispersion and required reduction of power budget to maintain BER better than $1E^{-12}$. Defined at a specific bit rate.
Temperature range:	Max operating case temperature range. Standard temperature range: Typically 0°C to +70°C (32°F to +158°F) Extended temperature range (E-temp): Typically -20°C to +75°C (-4°F to +167°F) Industrial temperature range (I-temp): -40°C to +85°C (-40°F to +185°F)
Power consumption:	Worst case power consumption.
Transmitter Output power:	Average output power. Provided in min and max values.
Receiver minimum input power:	Minimum average input power at specified BER, normally $1E^{-12}$.
Receiver max input power:	Maximum average input power at specified BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.