

SO-SFP-L80D-DXXX & DXXX-E

SFP, 1.25 Gbps GbE/FC, DWDM, 100GHz, DDM, 28dB, 80km, D9190-D9600 (42ch)

OVERVIEW

The SO-SFP-L80D-Dxxx is a DWDM transceiver for services from 100 Mbps (Fast Ethernet) up to 1.25 Gbps (Gigabit Ethernet).

The optical performance enables a bridgeable distance of up to 80km. The transceiver is provided in 42 channel versions at the 100GHz DWDM grid as specified in the ITU-T 694.1 standard.

This transceiver supports 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: -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	80 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	8.0 - 28.0 dB
Dispersion tolerance	+2080 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:	-28.0 dBm ¹⁾
	Max input power:	-3.0 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
----------------------	---------------

Note! See “Definitions” below.

ORDERING INFORMATION

Part number	Freq. THz	λ nm	Part number	Freq. THz	λ nm
SO-SFP-L80D-D919	191.90	1562.23	SO-SFP-L80D-D940	194.00	1545.32
SO-SFP-L80D-D920	192.00	1561.42	SO-SFP-L80D-D941	194.10	1544.53
SO-SFP-L80D-D921	192.10	1560.61	SO-SFP-L80D-D942	194.20	1543.73
SO-SFP-L80D-D922	192.20	1559.79	SO-SFP-L80D-D943	194.30	1542.94
SO-SFP-L80D-D923	192.30	1558.98	SO-SFP-L80D-D944	194.40	1542.14
SO-SFP-L80D-D924	192.40	1558.17	SO-SFP-L80D-D945	194.50	1541.35
SO-SFP-L80D-D925	192.50	1557.36	SO-SFP-L80D-D946	194.60	1540.56
SO-SFP-L80D-D926	192.60	1556.55	SO-SFP-L80D-D947	194.70	1539.77
SO-SFP-L80D-D927	192.70	1555.75	SO-SFP-L80D-D948	194.80	1538.98
SO-SFP-L80D-D928	192.80	1554.94	SO-SFP-L80D-D949	194.90	1538.19
SO-SFP-L80D-D929	192.90	1554.13	SO-SFP-L80D-D950	195.00	1537.40
SO-SFP-L80D-D930	193.00	1553.33	SO-SFP-L80D-D951	195.10	1536.61
SO-SFP-L80D-D931	193.10	1552.52	SO-SFP-L80D-D952	195.20	1535.82
SO-SFP-L80D-D932	193.20	1551.72	SO-SFP-L80D-D953	195.30	1535.04
SO-SFP-L80D-D933	193.30	1550.92	SO-SFP-L80D-D954	195.40	1534.25
SO-SFP-L80D-D934	193.40	1550.12	SO-SFP-L80D-D955	195.50	1533.47
SO-SFP-L80D-D935	193.50	1549.32	SO-SFP-L80D-D956	195.60	1532.68
SO-SFP-L80D-D936	193.60	1548.51	SO-SFP-L80D-D957	195.70	1531.90
SO-SFP-L80D-D937	193.70	1547.72	SO-SFP-L80D-D958	195.80	1531.12
SO-SFP-L80D-D938	193.80	1546.92	SO-SFP-L80D-D959	195.90	1530.33
SO-SFP-L80D-D939	193.90	1546.12	SO-SFP-L80D-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-L80D-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. DAC: Direct Attach Cable (DAC). Electrical or optical cable with attached connectors.
Transmission Media:	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 giving a BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.