

SO-SFP-1000BASE-L20D & L20D-I

SFP, 1.25 Gbps GbE, 1310nm, SM, DDM, 14dB, 20km

OVERVIEW

SO-SFP-1000BASE-L20D is a 1310nm SFP transceiver for SingleMode fiber for Gigabit Ethernet (GbE) and 1G Fiber Channel (1G FC) services. The optical performance provides a bridgeable distance of up to 20 km.

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 the Industrial temperature range (I-temp): -40°C to 85°C (-40°F to 185°F).

TECHNICAL DATA

Technology	Grey SFP
Transmission media	SM (2x LC)
Typical reach	20 km
Nominal wavelength	1310 nm
Bit rate range	1.0625 / 1.25 Gbps
Protocols	Eth: GbE FC: 1G FC
Power budget	0 - 14 dB ¹⁾
Temperature range	0°C to +70°C (L20D) -40°C to +85°C (L20D-I)
Power consumption	< 1.0W

Transmitter data	Output power:	Min: -8.0 dBm Max: -3.0 dBm
	Tx wavelength:	Min: 1260 nm Max: 1360 nm
Receiver data	Minimum input power:	-22.0 dBm ¹⁾
	Overload (max power):	-3.0 dBm
	Wavelength range:	1260 - 1600 nm
DDM		Yes
MSA compliance		SFP MSA SFF-8472

¹⁾ @ 1.25 Gbps & BER 1E-12

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	Description
SO-SFP-1000Base-L20D	SFP, 1.25 Gbps GigE, 1310nm, SM, DDM, 14dB, 20km
SO-SFP-1000Base-L20D-I	SFP, 1.25 Gbps GigE, 1310nm, SM, DDM, 14dB, 20km, I-temp

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. 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 at specified BER, normally $1E^{-12}$.
DDM:	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.