

# SO-SFP-622M-L160D-Cxx

SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1470nm-1610nm (8ch)

## OVERVIEW

The SO-SFP-622M-L160D-Cxx is a CWDM high performance transceiver primarily for 622 Mbps SDH/SONET (STM-4/OC-12) services. The support extends down to 100M Fast Ethernet (FE) services. The optical performance provides a bridgeable distance of up to 160 km.

The transceiver is available in 8 CWDM wavelengths, spanning from 1470nm to 1610nm in accordance with the G.694.2 standard. This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

## TECHNICAL DATA

<b>Technology</b>	CWDM SFP
<b>Transmission media</b>	SM (2x LC)
<b>Typical reach</b>	160 km
<b>Nominal wavelength</b>	1470 - 1610 nm (8ch)
<b>Bit rate range</b>	125 – 622.080 Mbps
<b>Protocols</b>	Eth: 100M Ethernet SDH/SONET: STM-1/OC-3 STM-4/OC-12
<b>Power budget</b>	17 - 41 dB <sup>1)</sup>
<b>Dispersion tolerance</b>	2400 ps/nm
<b>Dispersion penalty</b>	1 dB
<b>Temperature range</b>	0°C to +70°C
<b>Power consumption</b>	< 1.0W

<b>Transmitter data</b>	<b>Output power:</b>	Min: +4.0 dBm Max: +7.0 dBm
	<b>Tx wavelength:</b>	1470 - 1610 nm in 20nm steps (G.694.2)
<b>Receiver data</b>	<b>Minimum input power:</b>	-37.0 dBm <sup>1)</sup> -38.0 dBm <sup>2)</sup> -39.0 dBm <sup>3)</sup>
	<b>Overload (max power):</b>	-10.0 dBm
	<b>Wavelength range:</b>	1100 - 1650 nm
<b>DDM</b>		Yes
<b>MSA compliance</b>		SFP-MSA SFF-8472

<sup>1)</sup> @ STM-4/OC-12 & BER 1E-12

<sup>2)</sup> @ STM-1/OC-3 & BER 1E-12

<sup>3)</sup> @ 100M FE & BER 1E-12

### Regulatory compliance

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

<b>Storage temp.</b>	-40°C to +85°C
----------------------	----------------

Note! See "Definitions" below.

## ORDERING INFORMATION

Part number	Description
SO-SFP-622M-L160D-C47	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1470nm
SO-SFP-622M-L160D-C49	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1490nm
SO-SFP-622M-L160D-C51	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1510nm
SO-SFP-622M-L160D-C53	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1530nm
SO-SFP-622M-L160D-C55	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1550nm
SO-SFP-622M-L160D-C57	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1570nm
SO-SFP-622M-L160D-C59	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1590nm
SO-SFP-622M-L160D-C61	SFP, 622Mbps, CWDM, DDM, 41dB, 160km, 1610nm

## 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.