

# SO-SFP-155M-L120D-C51

SFP, 100/155Mbps, CWDM, DDM, 34dB, 1510nm

## OVERVIEW

The SO-SFP-155M-L120D-C51 is a 1510nm CWDM transceiver for OSC channels in the Smartoptics DCP systems. The optical performance provides a power budget of 34dB.

The transceiver is available in the 1510nm CWDM wavelength, 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

Parameter	Value
Technology	CWDM SFP
Transmission media	SM (2x LC)
Typical reach	120km <sup>1)</sup>
Nominal wavelengths	1510nm
Bit rate range	100Mbps / 155Mbps
Protocol support	100M Ethernet STM-1 / OC3
Power budget	15 – 34dB
Optical path penalty	1 dB
Power consumption	< 1 W
Operating temperature	0°C to +70°C
Storage temperature	-40°C to +85°C

Parameter	Value
<b>Transmitter data:</b>	
Output power	Min: 0dBm <sup>3)</sup> Max: +5dBm <sup>3)</sup>
Transmit wavelength	1511nm (G.694.2)
<b>Receiver data:</b>	
Minimum input power	-34 dBm <sup>2) 3)</sup>
Overload (max power)	-10 dBm <sup>2) 3)</sup>
Wavelength range	1100 – 1650 nm
LOS De-Assert	Max: -35dBm
LOS Assert	Min: -45dBm
LOS Hysteresis	Min: 0.5dB
DDM	Yes
MSA compliance	SFP MSA SFF-8472

<sup>1)</sup> Dependent on actual optical path attenuation.

<sup>2)</sup> Measured at 155Mbps using PRBS23 @ BER 1x10<sup>-10</sup>

<sup>3)</sup> Average power



## ORDERING INFORMATION

Ordering number	Description
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## GENERAL 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 (DAC). 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.
Dispersion tolerance/penalty:	Maximum amount of tolerated dispersion and required reduction of power budget to maintain stipulated Bit Error Rate (BER) and at a given bit rate.
Temperature range:	Max operating case temperature range. Commercial temperature range (C-temp): 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. Will vary over temperature.
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.

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