SO-SFP-155M-L200D-C51

SFP, 125Mbps – 155Mbps, CWDM, DDM, 47dB, 200 km, 1510nm

OVERVIEW

The SO-SFP-155M-L200D-C51 is a CWDM transceiver for 155Mbps SDH/SONET and Fast Ethernet services (100M). The optical performance provides a bridgeable distance of up to 200km depending on the actual optical path attenuation. Note that the lower wavelengths have a higher attenuation on standard SM fiber.

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	200km [1]
Nominal wavelengths	1510 nm
Bit rate range	125Mbps – 155Mbps
Protocol support	FE
	STM-1 / OC3
Power budget	17 – 47 dB
Optical path penalty	1 dB [2]
Power consumption	< 1 W
Operating temperature	0°C to +70°C
Storage temperature	-40°C to +85°C

Parameter	Value
Transmitter data:	
Output power	Min: +3dBm [3]
	Max: +7dBm [3]
Transmit wavelength	1511nm (G.694.2)
Receiver data:	
Minimum input power	-44dBm [2] [3]
Overload (max power)	-10dBm [2] [3]
Wavelength range	1100 – 1650nm
DDM	Yes
LOS De-assert	Max -45dBm
LOS Assert	Min -55dBm
LOS Hysteresis	Min 0.5dB
MSA compliance	SFP MSA
	SFF-8472

[1] Dependent on actual optical path attenuation.

[2] Measured at 155Mbps using PRBS23 @ BER 1x10^{-10}

[3] Average power

Safety/regulatory compliance:
TUV/UL/FDA (contact Smartoptics for latest certification information)
RoHS compliance

ORDERING INFORMATION

Ordering number	Description
SO-SFP-155M-L200D-C51	SFP, 100M Ethernet, STM-1/OC3, CWDM, 200km, 47dB, LC, 1510nm

GENERAL DEFINITIONS

Parameter	Description
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 cable with attached connectors. AOC: Active Optical Cable. 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 typical fiber dispersion, fiber loss and power budget properties, i.e. w/o dispersion compensation and optical amplification. Actual distance is dependent on actual optical path loss and dispersion properties.
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(s) from transmitter.
Interface standards	Referenced interface standards or MSA's, e.g. IEEE 802.3 standard for 10GbE services or 100G 4WDM-10 etc.
Power budget	Min and max power budget between Transmitter and Receiver w/o optical path penalties.
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. Standard 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 $1E^{-12}$. Note that some protocols require FEC to achieve sufficient BER.
Receiver max input power	Maximum average input power giving a BER, normally $1E^{-12}$.
DDM	Digital Diagnostic Monitoring functionality as defined in e.g. SFF-8472 MSA.