SO-SFP-155M-L270D-Cxx

SFP, 100/155Mbps, CWDM, DDM, 50dB,1470nm-1610nm (8ch)

OVERVIEW

The SO-SFP-155M-L270D-Cxx is a high performance CWDM transceiver for 155 Mbps SDH/SONET and Fast Ethernet services (100M). The optical performance provides a bridgeable distance of up to 270 km dependent on optical path attenuation. The power budget is 50dB.

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

Parameter	Value
Technology	CWDM SFP
Transmission media	SM (2x LC)
Typical reach	270km [1]
Nominal wavelengths	1471 – 1611 nm (8ch)
Bit rate range	125 Mbps – 155.5Mbps
Protocol support	FE
	STM-1 / OC3
Power budget	18 – 50dB
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: +5.0dBm [3]
	Max: +8.0dBm [3]
Transmit wavelength	1471 to 1611nm (G.694.2)
Receiver data:	
Minimum input power	-45dBm [2] [3]
Overload (max power)	-10dBm [2] [3]
LOS Assert	Min -55dBm
LOS De-assert	Max -46dBm
LOS hysteresis	1dB
Wavelength range	1260 – 1600 nm
DDM	Yes [4]
MSA compliance	SFP MSA
	SFF-8472

[1] Dependent on actual optical path attenuation.

[2] Measured at 155Mbps using PRBS31 @ BER $1x10^{-10}$

[3] Average power

[4] Due to the resolution limitation of Digital Diagnostic Monitoring, the effect readout range for the Rx received power at EEPROM A2 is from -10 to -34dBm.

ORDERING INFORMATION

Ordering number	Description
SO-SFP-155M-L270D-C47	SFP STM1/OC3 100M Eth CWDM 50dB 1470nm
SO-SFP-155M-L270D-C49	SFP STM1/OC3 100M Eth CWDM 50dB 1490nm
SO-SFP-155M-L270D-C51	SFP STM1/OC3 100M Eth CWDM 50dB 1510nm
SO-SFP-155M-L270D-C53	SFP STM1/OC3 100M Eth CWDM 50dB 1530nm
SO-SFP-155M-L270D-C55	SFP STM1/OC3 100M Eth CWDM 50dB 1550nm
SO-SFP-155M-L270D-C57	SFP STM1/OC3 100M Eth CWDM 50dB 1570nm
SO-SFP-155M-L270D-C59	SFP STM1/OC3 100M Eth CWDM 50dB 1590nm

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.
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): 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. 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.