

# SO-SFP-MR80D-CXX

SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1270nm-1610nm (18ch)

## OVERVIEW

The SO-SFP-MR80D-Cxx is a CWDM transceiver covering a wide range of services up to 2.67Gbps, such as the SDH/SONET range STM-1/OC-3 to STM-16/OC-48 as well as 1Gbps Ethernet (GbE) services etc. The optical performance provides a bridgeable distance of up to 80 km.

The transceiver is available in 18 CWDM wavelength versions, spanning from 1270nm 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>	80 km
<b>Nominal wavelength</b>	1270 nm - 1610 nm (18ch)
<b>Bit rate range</b>	100 Mbps – 2.67 Gbps
<b>Protocols</b>	Eth: FE GbE
	SDH/SONET: STM-1/OC-3 STM-4/OC-12 STM-16/OC-48
	OTN: OTU1
	FC: 1G FC 2G FC
	CPRI: Opt 1 (0.6144 Gbps) Opt 2 (1.2288 Gbps) Opt 3 (2.4576 Gbps)
	OBSAI: 0.768 Gbps 1.536 Gbps
<b>Power budget</b>	12.0 – 29.0 dB <sup>1)</sup>
<b>Dispersion tolerance</b>	1600 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: 0.0 dBm Max: +3.0 dBm
	<b>Tx wavelength:</b>	1270 - 1610 nm in 20nm steps (G.694.2)
<b>Receiver data</b>	<b>Minimum input power:</b>	-29.0 dBm <sup>1)</sup>
	<b>Overload (max power):</b>	-9.0 dBm
	<b>Wavelength range:</b>	1260 - 1600 nm
<b>DDM</b>		Yes
<b>MSA compliance</b>		SFP MSA SFF-8472

<sup>1)</sup> @ 2.488 Gbps & BER 1E-12

<b>Regulatory compliance</b>	
<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
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**Note! See “Definitions” below.**

## ORDERING INFORMATION

Part number	Description
SO-SFP-MR80D-C27	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1270nm
SO-SFP-MR80D-C29	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1290nm
SO-SFP-MR80D-C31	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1310nm
SO-SFP-MR80D-C33	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1330nm
SO-SFP-MR80D-C35	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1350nm
SO-SFP-MR80D-C37	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1370nm
SO-SFP-MR80D-C39	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1390nm
SO-SFP-MR80D-C41	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1410nm
SO-SFP-MR80D-C43	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1430nm
SO-SFP-MR80D-C45	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1450nm
SO-SFP-MR80D-C47	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1470nm
SO-SFP-MR80D-C49	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1490nm
SO-SFP-MR80D-C51	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1510nm
SO-SFP-MR80D-C53	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1530nm
SO-SFP-MR80D-C55	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1550nm
SO-SFP-MR80D-C57	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1570nm
SO-SFP-MR80D-C59	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 1590nm
SO-SFP-MR80D-C61	SFP, 100Mbps-2.7Gbps, Multirate, CWDM, DDM, 29dB, 80km, 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.