

DATASHEET 5.1

SO-CFP4-SR4

CFP4, 100GBASE-SR4, 4x 850nmnm, MM, DDM, 100m, MPO

OVERVIEW

The SO-CFP4-SR4 is a CFP4 form-factor transceiver for 100 Gbps Ethernet (100GBASE-SR4) applications. It is intended for use in inter- and intra-connect applications within data centers between switches, routers, storage equipment etc. The optical performance is in accordance with the 100GBASE-SR standard, i.e. for optical distances up to 100m over a MultiMode (MM) OM4-grade ribbon fiber.

SO-CFP4-SR4 uses 4x channels @ 25.78 Gbps to transport an 100G Ethernet signal. The transceiver has a single 12 lane optical fiber MPO/MPT-connector interface.

TECHNICAL DATA

Parameter	Value
Technology	Grey CFP4
Transmission media	SM (2x LC)
Typical reach	70m @ OM3, 100m @ OM4
Nominal wavelengths	4x 850nm
Interface standards	100GBASE-SR4
Bit rate range	103.12 Gbps ¹⁾ 25.78 Gbps ²⁾
Protocol support	100GbE
Power budget	0 – 1.9dB
Power consumption	< 4W
Temperature range	-0°C to +70°C
Storage temperature	-40°C to +85°C

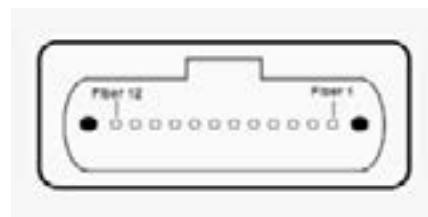
Parameter	Value
Transmitter data:	
Output power, per lane	Min: -8.4dBm ³⁾ Max: +2.4dBm ³⁾
Transmit wavelength	840 – 860nm
Receiver data:	
Minimum input power	-10.6dBm ^{2) 3) 4)}
Overload (max power)	+2.4dBm ^{2) 3) 4)}
LOS Assert	Typ -15dBm
LOS De-Assert	Max -13dBm
LOS Hysteresis	2dB
Wavelength range	840 – 860nm
DDM	Yes
MSA compliance	CFP4 MSA

¹⁾ Aggregated line rate 100GbE

²⁾ Per lane

³⁾ Average power

⁴⁾ Specified at BER 5x10⁻⁵, PRBS 2³¹-1



Safety/regulatory compliance:

TUV/UL/FDA (contact Smartoptics for latest certification information)

RoHS compliance

ORDERING INFORMATION

Ordering number	Description
SO-CFP4-SR4	CFP4, 100GBASE-SR4, 4x 850nm, MM, 100m, MPO

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. DAC: Direct Attach Cable (DAC). 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.
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.

Smartoptics makes no warranties or representations, expressed or implied, of any kind relative to the information or any portion thereof contained in this document or its adaptation or use, and assumes no responsibility or liability of any kind, including, but not limited to, indirect, special, consequential or incidental damages, for any errors or inaccuracies contained in the information or arising from the adaptation or use of the information or any portion thereof. The information in this document is subject to change without notice.