

SO-SFP-10GE-LR40

SFP+, 10Gbps Multirate, 1310nm, DDM, 16dB, 40km

OVERVIEW

The SO-SFP-10GE-LR40 is a versatile 1310nm transceiver supporting a wide range of traffic formats. The optical performance is in accordance with the IEEE 802.3ae ER/EW-standard, providing a bridgeable distance of up to 40km for 10GbE-LAN and 10GbE-WAN services.

This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

TECHNICAL DATA

Parameter	Value
Technology	Grey SFP+
Transmission media	SM (2x LC)
Typical reach	40km
Nominal wavelengths	1310 nm
Bit rate range	614 Mbps – 11.3 Gbps
Protocol support	10GbE-LAN (10GBASE-ER) 10GbE-WAN (10GBASE-EW) OTU2e OTU2 OTU1 STM-64/OC192 STM-16/OC48 STM-4/OC12 CPRI Opt 1 (0.6144 Gbps) CPRI Opt 2 (1.2288 Gbps) CPRI Opt 3 (2.4576 Gbps) CPRI Opt 4 (3.0720 Gbps) CPRI Opt 5 (4.9152 Gbps) CPRI Opt 6 (6.1440 Gbps) CPRI Opt 7 (9.8304 Gbps) CPRI Opt 7A (8.11008 Gbps) CPRI Opt 8 (10.1376 Gbps) OBSAI 0.768 Gbps OBSAI 1.536 Gbps OBSAI 3.0720 Gbps OBSAI 6.1440 Gbps
Power budget	4.5 – 16 dB
Optical path penalty	2 dB
Power consumption	< 1.5 W
Operating temperature	0°C to +70°C

Parameter	Value
Transmitter data:	
Output power	Min: +1 dBm ¹⁾ Max: +5 dBm ¹⁾
Transmit wavelength	1270 to 1355 nm
Receiver data:	
Minimum input power	-15 dBm ^{1) 2)}
Overload (max power)	+0.5 dBm ^{1) 2)}
Wavelength range	1260 – 1565 nm
DDM	Yes
MSA compliance	SFF-8472 SFF-8431
Storage temperature	-40°C to +85°C

¹⁾ Average power

²⁾ Measured at 10GbE-LAN using PRBS31 @ BER 1x10⁻¹²



ORDERING INFORMATION

Ordering number	Description
SO-SFP-10GE-LR40	SFP+, 10G Multirate 0.6-11.3Gbps, SM, 1310nm, 40km, 16dB, LC

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.