

# SO-SFP-16GFC-LD

SFP+, 16/8/4 Gbps FC/FICON, 1310nm, SM, DDM, 6.9dB, 10km

## OVERVIEW

The SO-SFP-16GFC-LD is a versatile tri-rate 1310nm transceiver for SingleMode (SM) fiber and 4G, 8G and 16G Fiber channel services. The optical performance provides a bridgeable distance of up to 10 km in accordance with the 1600-SM-LC-L interface specification within the FC-PI-5 standard.

The transceiver has no minimum distance (i.e. no minimum attenuation) which is ideal for intra-office connections since extra attenuators need not be considered.

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

## TECHNICAL DATA

<b>Technology</b>	Grey SFP+
<b>Transmission media</b>	SM (2x LC)
<b>Typical reach</b>	10 km
<b>Interface standards</b>	16G FC 1600-SM-LC-L
<b>Bit rate range</b>	4.25 / 8.5 / 14.025 Gbps
<b>Protocols</b> FC:	16G FC 8G FC 4G FC
<b>Power budget</b>	0 - 6.9 dB <sup>1)</sup>
<b>Temperature range</b>	0°C to +70°C
<b>Power consumption</b>	< 1.2W

<b>Transmitter data</b>	Output power:	Min: -4.0 dBm Max: +2.0 dBm
	Tx wavelength:	Min: 1295 nm Max: 1325 nm
<b>Receiver data</b>	Minimum input power:	-10.9 dBm <sup>1)</sup>
	Overload (max power):	+2.0 dBm
	Wavelength range:	1260 - 1370 nm
<b>DDM</b>		Yes
<b>MSA compliance</b>		SFF-8431 SFF-8472

<sup>1)</sup> @ 16G FC & BER < 1E-12

Note! See "Definitions" below.

### Regulatory compliance

<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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## ORDERING INFORMATION

Part number	Description
SO-SFP-16GFC-LD	SFP+, 16/8/4 Gbps FC/FICON, 1310nm, SM, DDM, 6.9dB, 10km

## 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.