

SO-SFP-16GFC-ER-Cxx

SFP+, 16/8/4G FC, CWDM, DDM, 13dB, 40km, 1470nm-1550nm (5ch)

OVERVIEW

The SO-SFP-16GFC-ER-Cxx is a versatile CWDM transceiver in SFP+ form-factor supporting a wide range of Fiber Channel (FC) services (4G to 16G).

The transceiver is provided in 5 channel versions at the CWDM grid as specified in the ITU-T 694.2 standard.

The optical performance provides a bridgeable distance of up to 40km (without dispersion compensation) for 16G FC. This transceiver provides digital diagnostic functions via a 2-wire serial interface as defined by the SFF-8472 specification.

The transceiver module is compliant to RoHS-6/6.

TECHNICAL DATA

| Parameter | Value |
|-----------------------|----------------------|
| Technology | CWDM SFP+ |
| Transmission media | SM (2x LC) |
| Typical reach | 40km |
| Nominal wavelengths | 1471 – 1551nm (5ch) |
| Bit rate range | 4.25 – 14.025Gbps |
| Protocol support | 4G FC, 8G FC, 16G FC |
| Power budget | 2 – 13dB |
| Dispersion tolerance | 800ps/nm |
| Optical path penalty | 2dB |
| Power consumption | < 1.9W |
| Operating temperature | 0°C to +70°C |
| Storage temperature | -40°C to +85°C |

| Parameter | Value |
|--------------------------|--|
| Transmitter data: | |
| Output power | Min: -1.0dBm ²⁾ Max: +3.0dBm ²⁾ |
| Transmit wavelength | 1471 to 1551nm (G.694.2) |
| Receiver data: | |
| Minimum input power | -14.0dBm ^{1) 2)} |
| Overload (max power) | +1dBm ^{1) 2)} |
| Wavelength range | 1260 – 1620 nm |
| LOS Assert | Min -24dBm |
| LOS De-assert | Max -14dBm |
| DDM | Yes |
| MSA compliance | SFP MSA, SFF-8472 |

¹⁾ At 14.025Gbps (16G FC) using PRBS31 @ BER 1x10⁻¹².

²⁾ Average power



Safety/regulatory compliance:

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

RoHS compliance

ORDERING INFORMATION

| Ordering number | Description |
|---------------------|---|
| SO-SFP-16GFC-ER-C47 | SFP+, 16/8/4G FC, CWDM 40km, 13dB, LC, 1470nm |
| SO-SFP-16GFC-ER-C49 | SFP+, 16/8/4G FC, CWDM 40km, 13dB, LC, 1490nm |
| SO-SFP-16GFC-ER-C51 | SFP+, 16/8/4G FC, CWDM 40km, 13dB, LC, 1510nm |
| SO-SFP-16GFC-ER-C53 | SFP+, 16/8/4G FC, CWDM 40km, 13dB, LC, 1530nm |
| SO-SFP-16GFC-ER-C55 | SFP+, 16/8/4G FC, CWDM 40km, 13dB, LC, 1550nm |

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 or 100G 4WDM-10 etc. |
| 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): 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. |

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