INDEPENDENT DATA SOLUTIONS

smartoptics

DATASHEET 5.0

SO-CFP2-LR4

CFP2, 100GBASE-LR4, OTU4, 1310nm, SM, DDM, 6.3dB, 10kmz

OVERVIEW

The SO-CFP2-LR4 is a CFP2 (C Form-factor Pluggable) transceiver for 100 Gbps Ethernet (100GBASE-LR4) and OTN (OTU4) applications. It is intended for use in inter- and intra-connect applications within and between data centers between switches, routers, storage equipment etc. The optical performance is in accordance with the 100GBASE-LR standard, i.e. for optical distances up to 10km over a SingleMode (SM) fiber.

SO-CFP2-LR4 uses four channels/lanes @ 25.78 Gbps and 27.95 Gbps to transport an Ethernet and OTN signal, respectively.

[1] Aggregated line rate (100GbE / OTU4)

[2] Per lane line rate (100GbE / OTU4)

[3] Total power (all lanes)

[4] Lane 1

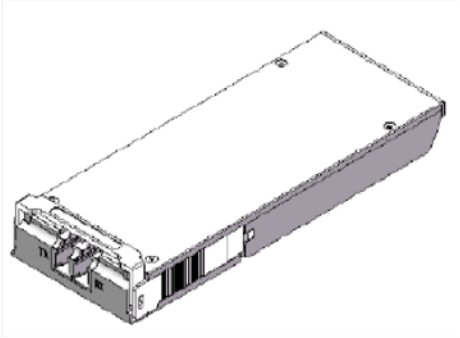
[5] Lane 2

[6] Lane 3

[7] Lane 4

[8] Per lane @ 25.78 Gbps (100GbE)

[9] Per lane @ 27.95 Gbps (OTU4)



TECHNICAL DATA

Technology		Grey CFP2
Transmission media		SM (2x LC)
Typical reach		10 km
Nominal wavelengths		Lane 1: 1295.56 nm
		Lane 2: 1300.05 nm
		Lane 3: 1304.58 nm
		Lane 4: 1309.14 nm
Interface standards		100GBASE-LR4
		OTU4 4I1-9D1F
Bit rate range		103.12 / 111.81 Gbps [1]
		25.78 / 27.95 Gbps [2]
Protocol support	Eth:	100GbE
	ONT:	OTU4
Power budget		0 - 6.3 dB (100GbE)
		0 - 7.8 dB (OTU4)
Temperature range		-0°C to +70°C
Power consumption		< 6W
Transmitter data:		
Output power, tot:		Max: +8.9 dBm [3]
Output power, per lane		Min: -4.3dBm [8]
		Max: +2.5 dBm [8]
		Min: -2.9 dBm [9]
		Min: +2.9 dBm [9]
Tx avelength (nm)		1294.53 – 1296.59 [4]
		1299.02 – 1301.09 [5]
		1303.54 – 1305.63 [6]
		1308.09 – 1310.19 [7]

Receiver data:	
Minimum input power	-10.6 dBm [8)]
	-8.8 dBm [9)]
Overload (Maz power)	+4.5 dBm [8)]
	+2.9 dBm [9)]
Wavelength range	1294.53 – 1296.59 [4)]
	1299.02 – 1301.09 [5)]
	1303.54 – 1305.63 [6)]
	1308.09 – 1310.19 [7)]
DDM	Yes
MSA compliance	CFP2 MSA

Regulatory compliance	
EMC CE	EN 55032:2012
	EN 55032:2015
	EN 55024:2010
UL/Safety	UL 60950-1, EN 55024:2010+A1
FCC	47 CFR PART 15 OCT, 2013
RoHS	RoHS 6, 2011/65/EU
TUV	EN 60950-1:2006+A11+A1+A12+A2
	EN 60825-1:2014
	EN 60825-2:2004+A1+A2
Storage temp.	-40°C to 85°C

ORDERING INFORMATION

Part Number	Description
SO-CFP2-LR4	CFP2, 100GBASE-LR4, OTU4, 1310nm, SM, DDM, 6.3dB, 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 giving a BER, normally $1E^{-12}$.
DDM	Digital Diagnostic Monitoring functionality as defined in SFF-8472 MSA.

Level 6, 50 Berry Street, North Sydney NSW 2060
P. 02 8205 3139 | **E.** sales@ids-g.com | **www.ids-g.com**