

SP-SMx2xCW040D-GP
CWDM SFP+ Single-Mode for 10GbE Duplex SFP+ Transceiver
RoHS6 Compliant

Features

- ◆ Supports 9.95Gb/s to 11.3Gb/s bit rates
- ◆ Hot-Pluggable SFP+ footprint
- ◆ 10-Wavelength CWDM DFB Transmitter from 1270nm to 1390nm, with step 20nm
- ◆ 14dB Power Budget
- ◆ Duplex LC connector
- ◆ Power Dissipation < 1.2W
- ◆ Case operation temperature range -5°C to 70°C
- ◆ Compliant with SFP+ MSA Specification SFF-8431
- ◆ Build-in digital diagnostic functions
- ◆ Compliant SFF-8472 MSA

Applications

- ◆ 10GBASE-ER/EW 10G Ethernet
- ◆ 10GBASE-ER at 10.31Gbps
- ◆ 10GBASE-EW at 9.95Gbps
- ◆ Other optical links

Ordering information

Part No.	Description
SP-SMx2xCW040D-GP	SFP+ CWDM 10G (1270-1390nm) LC DDM SMF 14dB 20km laser

CWDM Wavelength

Band	Nomenclature	Wavelength(nm)		
		Min.	Typ.	Max.
	27	1264	1270	1277.5
	29	1284	1290	1297.5
	31	1304	1310	1317.5
	33	1324	1330	1337.5
	35	1344	1350	1357.5
	37	1364	1370	1377.5
	39	1384	1390	1397.5

Absolute Maximum Ratings

Parameter	Symbol	Min	Typical	Max	Unit	Note
Maximum Supply Voltage 1	V _{cc}	-0.5		4.0	V	
Storage Temperature	T _s	-40		85	°C	

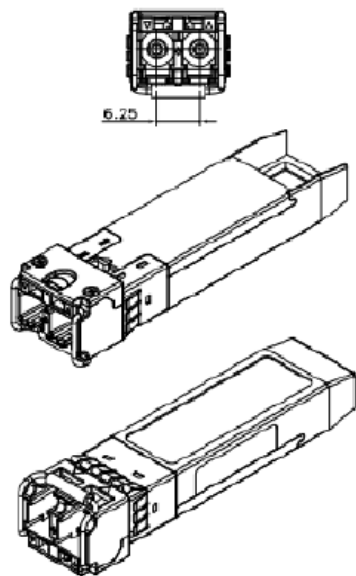
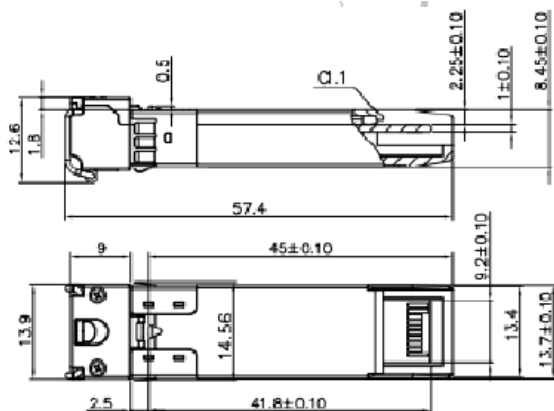
Parameter	Symbol	Min	Typical	Max	Units	Note
Operating Temperature	T _c	-5		+70	°C	
Supply Voltage	V _{cc}	3.13	3.3	3.45	V	
Supply Current	I _{cc}			350	mA	
Data Rate		0.614		11.3	Gbps	

Parameter	Symbol	Min.	Typ.	Max	Unit	Notes
Transmitter						
CML Inputs(Differential)	V _{in}	150		1200	mVpp	1
Input Impedance (Differential)	Z _{in}	85	100	115	ohm	
Tx_DISABLE Input Voltage – High		2		V _{cc} +0.3	V	
Tx_DISABLE Input Voltage – Low		0		0.8	V	
Tx_FAULT Output Voltage – High		2		V _{cc} +0.3	V	
Tx_FAULT Output Voltage – Low		0		0.5	V	
Receiver						
CML Outputs (Differential)	V _{out}	350		700	mVpp	1
Output Impedance (Differential)	Z _{out}	85	100	115	ohms	
Rx_LOS Output Voltage – High		2		V _{cc} +0.3	V	
Rx_LOS Output Voltage – Low		0		0.8	V	
MOD_DEF (2:0)	VoH	2.5			V	2
	VoL	0		0.5	V	

Optical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit	Note
Transmitter						
Output Opt. Pwr: 9/125 SMF	P _{out}	-1		4	dBm	1
Optical Extinction Ratio	ER	3.5			dB	
Optical Wavelength	λ	$\lambda_c - 6$	λ_c	$\lambda_c + 7.5$	nm	2
-20dB Spectrum Width	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Transmitter and Dispersion Penalty	TDP			2	dB	
Average Launch Power of OFF Transmitter	P _{OFF}			-30	dBm	
Receiver						
Receiver Sensitivity @ 10.5Gb/s	P _{min}			-15	dBm	3
Maximum Input Power	P _{max}	+0.5			dBm	
Optical Center Wavelength	λ	1260		1460	nm	
Receiver Reflectance	R _{rf}			-27	dB	
LOS De-Assert	LOS _D			-16	dBm	
LOS Assert	LOS _A	-28			dBm	
LOS Hysteresis		1			dB	

Mechanical Specifications



Unremarked tolerances $\pm 0.2\text{mm}$