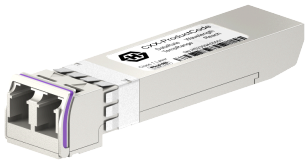
DATA SHEET

Transceivers
10G SFP+ CWDM LR
CSS-891A09

Properties

- Multi-protocol support
- Data rate up to 11.3 Gbps
- Reach up to 10km
- Any ITU CWDM channel between 1471nm and 1611nm
- LC/PC duplex connector
- Singlemode fiber
- Temp. range 0 ... 70°C
- Link budget at least 9 dB



General data	
Form factor	SFP+
Product image	Actual product may differ from the images shown. Colours, design, and details can vary.
Protocol	1/10G Ethernet, 1/2/4/8/10G FC, STM-64/OC-48, CPRI Option 2...8, OBSAI
Data rate standards	10GBASE-LR/LW
	CPRI Option 2 to 8
Media type	Singlemode
Connector	LC/PC duplex
Modulation Format	NRZ
Built-in FEC	No
CDR	none
Operation temperature	0 °C ... 70 °C
Supply voltage typical	3.13 V ... 3.47 V
Supply Current	< 420 mA
Power consumption	< 1.4 W
Digital Diagnostic Management (DDM)	Yes
Laser hazard level	1

Absolute Maximum Ratings	
Max. supply voltage range	-0.5 V ... 4 V
Max. Storage Temperature Range	-40 °C ... 85 °C
Max. relative humidity range	5 % ... 95 %

Transmitter Specifications	
Laser Type	Uncooled DFB
Grid	CWDM 20nm
Available Wavelength in nm	Any ITU CWDM channel between 1471nm and 1611nm

Transceivers

10G SFP+ CWDM LR

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Transmitter Specifications	
Average launch power per lane	-6 dBm ... -0.5 dBm
Dispersion Penalty	< 3.2 dB
Extinction Ratio	> 3.5 dB
Side Mode Suppression	> 30 dB
Supported Data rate	1.0625 Gbps ... 11.3 Gbps

Receiver Specifications	
Receiver Type	PIN
Operating Wavelength Range	1260 nm ... 1620nm
Receiver Overload	> 0.5 dBm
Receiver Sensitivity	< -15 dBm
Bit Error Rate at Receiver	1E-12
Receiver LOS De-Assert	< -17 dBm
Receiver LOS Assert	> -30 dBm
Receiver LOS Hysteresis	> 0.5 dB
Supported Data rate	1.0625 Gbps ... 11.3 Gbps

Ordering Information Table		
Order Code	Compatibility code explanation	Wavelength code explanation
CSS-891A09cccc-ww	"xxxx" is an alphanumerical string, describing the compatibility. "0000" means no special coding to ensure compatibility with a special switch type.	-ww: CWDM channel chosen from table at the end

Channel Allocation			
Code	Wavelength (nm)	Code	Wavelength (nm)
-47	1471	-55	1551
-49	1491	-57	1571
-51	1511	-59	1591
-53	1531	-61	1611

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