

# SFP-10G-CWDMxxxx-ZR-SY

## 10GBASE-CWDM ZR SFP+, xxxx nm, 80 km SMF TRANSCEIVER

#### 1. FEATURES AND SPECIFICATIONS

▶ Form Factor: SFP+

> Operating Data Rate: 10G

Protocol(s): 10GE, FC

▶ Fiber Type: **SMF** 

> Technique: CWDM ZR

Lane Count: 1

Wavelength(s)/Channel(s): 1471~1611 nm

Nominal Distance: 80 km

Nominal Power Budget: 24 dB

Connector: LC duplex

Temperature Range: 0 to +70°C, -40 to +85°C

> Compliance: SFP+ MSA, SFF-8431, IEEE 802.3ae

Monitoring: Digital diagnostic monitor interface

▶ Laser Type: EML

Receiver Type: APD

▶ Power Dissipation: 1.5 W

#### 2. ABSOLUTE CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
SIGNAL INPUT VOLTAGE	$V_{IN}$	0.1	-	0.8	V
POWER SUPPLY VOLTAGE	$V_{CC}$	-0.5	-	4	V
OPERATING TEMPERATURE	$T_{CASE}$	0	-	+70	°C
STORAGE TEMPERATURE	Ts	-40	-	+85	°C



## 3. ELECTRICAL OPERATING CONDITIONS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
SUPPLY CURRENT	I <sub>cc</sub>	-	-	0.5	А
SUPPLY VOLTAGE	$V_{\text{CC}}$	3.13	3.3	3.47	V

## 4. OPTICAL CHARACTERISTICS

## **RECEIVER**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
OPTICAL WAVELENGTH	λC	1260	-	1620	nm
LOS HYSTERESIS	LOS <sub>H</sub>	0.5	-	0	dB
LOS ASSERT	$LOS_A$	-35	-	-	dBm
LOS DE-ASSERT	LOS <sub>D</sub>	-	-	-26	dBm
RX MAX. SENSITIVITY	$P_{MIN}$	-	-	-24	dBm
DAMAGE THRESHOLD	P <sub>MAX</sub>	-7	-	-	dBm

#### **TRANSMITTER**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
OPTICAL WAVELENGTH	λC	λ - 7.5	λ	λ + 7.5	nm
OPTICAL EXTINCTION RATIO	ER	9	-	-	dB
SIDE MODE SUPPRESSION RATIO	SMSR	30	-	-	dBm
SPECTRAL WIDTH	Δλ	-	-	1	dBm
OPTICAL TRANSMIT POWER	P <sub>OUT</sub>	0	-	5	dBm



## 5. ORDERING INFORMATION

	PART NAME	DESCRIPTION		
SFP-10G-CWDMxxxx-ZR-SY		10GBase CWDM ZR SFP+, xxxx nm, 80 km over SMF, LC duplex, speeddy		
SFP-10G-CWDMxxxx-ZR-I-SY		10GBase CWDM ZR SFP+, xxxx nm, 80 km over SMF, LC duplex, Industrial temperature -40 to +85°C, speeddy		

## 6. ITU-T G.694.2 CWDM CHANNELS OVERVIEW

ITU CHANNEL NO.	WAVELENGTH (nm)	LATCH COLOR BY WAVELENGTH
27	1271	
29	1291	
31	1311	
33	1331	
35	1351	
37	1371	
39	1391	
41	1411	
43	1431	
45	1451	
47	1471	
49	1491	
51	1511	
53	1531	
55	1551	
57	1571	
59	1591	
61	1611	



#### 7. WARNINGS AND SECURITY INFORMATION



CAUTION: Class 1 visible laser radiation present. Long term viewing of the laser can be harmful to the human eye.



This equipment has been tested according to European legislation and has been found safe, non-intervening with other electronic devices and is not subject to interference from other electronic devices



Hazardous Goods; our products are fully compliant with Directive 2011/65/EU (RoHS II) and 2002/95 EC (RoHS I)

Laser Class 1

Our products comply with 21 CFR 1040.10 and 1040.11, except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007



Only (dis)connect the transceivers in an ESD Protected Area while using certified equipment and taking all necessary precautions as specified in IEC 61340-5-1.

#### 8. DISCLAIMER AND LEGAL NOTICES

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