



Sat-Light Gold Series

DWDM/CWDM Long Distance SFP Module



Features & Benefits

- Available in All 16 Channels of the CWDM ITU Grid
- Available in All 80 Channels of the DWDM ITU Grid
- Cold Start-Up Wavelength Compliance
- Low Power Dissipation <1.3W Maximum
- -5÷C to +70°C Operating Case Temperature
- Extended Link Budget with APD Receiver Technology
- RoHS Compliant and Lead Free

Product Description

Global Foxcom's Small Form-Factor Pluggable (SFP) gigabit interface converter is a hot-swappable input/output device that plugs into a gigabit Ethernet port or slot.

The SFP device supports up to 1GB of data rate. It is available in a single fiber kit version and also as a dual fiber in CWDM/DWDM wavelengths for longer distance application.

The SFP is available in 20, 40, 60 and 120Km fiber versions.

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Specifications

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.3	4.0	V
Storage Temperature	Tst	-40	85	°C
Data AC Voltage	TX+ -AC	-	2.4	V
Data DC Voltage	TX +-CD	-0.5	2.5	V
Optical Input Received Power	PIN	-	+5	dBm

Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	Vcc	3.13	3.3	3.47	V
Operating Case Temperature	Tca	-5	-	70	°C
Total Current	Icc	-	-	375	mA
Module Power Dissipation	Pm	-	0.8	1.4	W
Data Rate Multi-rate	Mra	100	2500	2700	Mb

Optical Transmitter Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Optical Transmit Power	Po	0	2	4	dB
Optical Transmit Power (disabled)	PTX_DISABLE	-	-	-40	dB
Extinction Ratio	ER	8.2	-	-	dB
Channel Spacing	Δf	-	100	-	GHz
Jitter Generation	TJP-P	-	-	70	mUI
Spectral Width (20dB)	DL20	-	0.1	0.3	nm
Side Mode Suppression Ratio	SMSR	30	-	-	dB

* Depends on SFP Version

Electrical Transmitter Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	V _{CCTX}	3.13	3.3	3.47	V
PECL/CML Input	V _{TXDIFF}	500	-	1600	mV
Input Rise/Fall	TR / TF	-	-	160	ps
TxFault_Fault	Vf	2	-	Vcc	V

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TxFault_Normal	Vn	Vee	-	Vee+0.5	V
TX_DISABLE (asserted)	V _{DH}	2	-	Vcc	V
TX_DISABLE (negated)	V _{DL}	Vee	-	Vee+0.8	V

Optical APD Receiver Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Receiver Sensitivity	Rsens-1	-	-30	-28	dB
Receiver Sensitivity (OSNR = 20dB)	Rsens-2	-	-	-24	dB
Maximum Input Power	RX-overload	-	-	-7	dB
Input Operating Wavelength	λ	1528	-	15	nm
Reflectance	R _{rx}	-	-	-27	dB
Loss of Signal Asserted	P _A	-40	-	-33	dB
Loss of Signal –De Asserted	P _D	-	-	-31	dB
Hysteresis	P _A P _D	0.5	-	4	dB

Electrical APD Receiver Specifications

Parameter	Symbol	Min	Typical	Max	Unit
Supply Voltage	V _{CCR_X}	3.13	3.3	3.47	V
Differential Output Swing	V _{OUT P-P}	370	-	2000	mV
Rise/Fall Time	T _R / T _F	-	-	170	ps
Loss of Signal –Asserted	V _{OH}	2	-	Vcc	V
Loss of Signal –Negated	V _{OL}	Vee	-	Vee+0.5	V

Ordering Information

CWDM SFP Version

SFP-YYY-1XXX-1000

XXX specifies CWDM wavelength (see CWDM ITU Chart)

YYY specifies maximum fiber length support (20, 40, 60, 120Km)

DWDM Version

SFP-YYY-CHXX-1000

XX specifies DWDM ITU Channel (see DWDM ITU Chart)

YYY specifies maximum fiber length support (20, 40, 60, 120Km)