

Optical Fiber Amplifier
DWDM EDFA
OFA-Wx2-SG Series
(Switchable Gain)



The LiComm OFA-Wx2-SG series is designed for high performance and wide bandwidth DWDM system of long haul and ultra long haul network, where a variety of DWDM amplifiers are required. The OFA-Wx2-SG series offers high saturated output power, wide flat range, high gain, low noise figure at extremely wide variable gain. LiComm developed the intelligent amplifier with superior optical performance with gain flatness in each stage and optimized gain tilt. This series provides variable gain and fast transient suppression with large mid-stage access loss. It improves robustness on the input variations in long cascade networks and also offers great flexibility in DWDM system design. The built-in MCU and FPGA provides flexible and versatile monitoring and controlling of various optical amplifier characteristics. In addition, OFA-Wx2-SG series reliability test results assure an excellent long-term EDFA performance needed in most of network applications.

Features

- Extremely Wide Variable gain range
- Fast gain transient suppression
- Integrated electric control circuit
- High output power up to 24dBm
- Wide flat wavelength range and gain flatness
- Wide input dynamic range
- Low noise figure
- Add/Drop OSC or OTDR Filter (optional)
- Input/Output optical power monitoring Port (optional)
- AGC (Automatic Gain Control) or APC (Automatic Power Control)
- Convenient system interface (RS232)
- Single +5V power supply

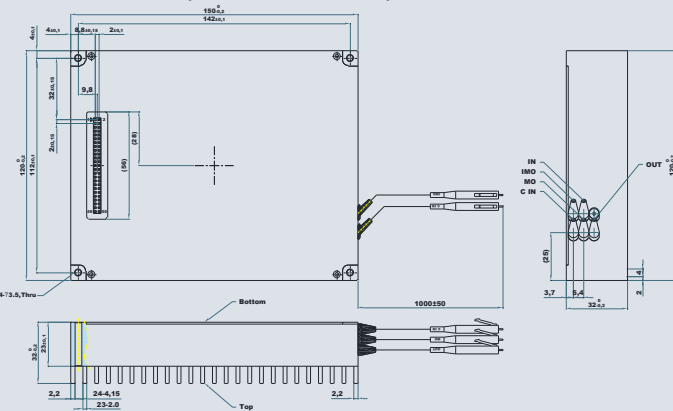
Applications

- Pre or In-Line Amplifier with wide span loss distribution or Booster Amplifier for wide node loss distribution
- 100G DWDM long haul & ultra long haul networks
 - Booster, In-line, Pre-Amp.
- 400G or Higher Bit Rate DWDM long haul & ultra long haul networks
 - Booster, In-line, Pre-Amp.
- LANs and MANs
- SONET/SDH systems

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Mechanical Dimension (150 X 120 X 32 mm)



Optical Characteristics

Parameter	Symbol	OFA-WC2-SG	OFA-WL2-SG	Unit
Signal wavelength range	λ	1528.58~1566.93	1571.86~1609.02	nm
Saturated output power	P_{OUT}	~ 24	~ 23	dBm
Settable signal gain range	G	14 ~ 35	14 ~ 39	dB
Switching Gain Mode	-	3 Modes	3 Modes	-
Noise figure ⁽¹⁾	NF1	<5.6	<6.1	dB
Noise figure ⁽²⁾	NF2	<9.8	<10.3	dB
Gain flatness ⁽¹⁾	$\Delta G1$	<1.0	<1.0	dB
Gain flatness ⁽²⁾	$\Delta G2$	<1.5	<1.5	dB
Input dynamic range	P_{ID}	19.8	19.8	dB
Channel gain variation	G_C	-0.5 ~ +0.5	-0.5 ~ +0.5	dB
Transient suppression ⁽³⁾	T_G	<0.5	<0.5	dB
Return loss	RL	>40	>40	dB
Polarization mode dispersion	PMD	<0.5	<0.5	ps
Polarization dependent gain	PDG	<0.5	<0.5	dB

(1) C : Gain = 35 dB, P_{OUT} = 24 dBm, L : Gain = 39 dB, P_{OUT} = 23 dBm

(2) C : Gain = 14 dB, P_{OUT} = 24 dBm, L : Gain = 14 dB, P_{OUT} = 23 dBm

(3) 1msec19.8 dB Add/Drop Ratio

Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+5 V
Interface	RS232
Operating temperature	-5 ~ 55 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	5 ~ 90 % R.H
Power consumption	35 W

*Output power = 24 dBm, at 25 °C

Ordering Information

OFA - WX2 - XX₁SG

XX₁ : Saturated Output Power
 C(C-band) or L(L-band)

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