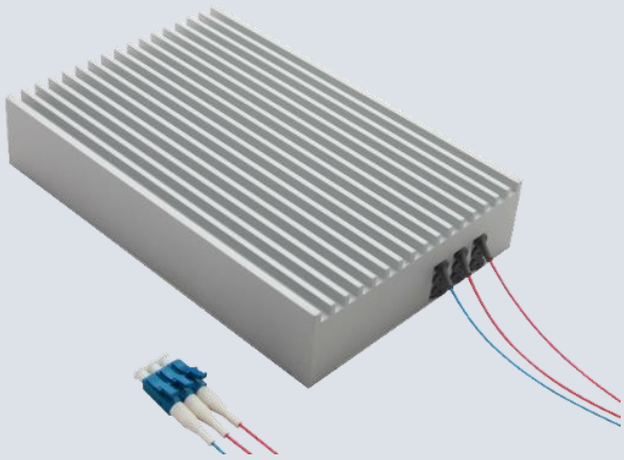
Optical Fiber Amplifier

DWDM EDFA

OFA-Wx2-AG Series (Fixed Gain)



The LiComm OFA-Wx2-AG series is designed for use in high-performance and wide bandwidth DWDM system of core networks and metropolitan networks. The OFA-Wx2-AG offers high saturated output power, wide flat gain range, high gain, low noise figure, and AGC (Automatic gain Control) features. Excellent transient suppression capability of the OFA-Wx2-AG series, developed by LiComm's EDFA control circuit experts, provides sub milli second over-shoot and under-shoot gain control in order to prevent degradation of transmission quality in channel add drop and routing path change. This feature allows great flexibility to system engineers in designing WDM or OADM systems in metro or core networks. MCU and FPGA controlled circuitry facilitates convenient monitoring and controlling of various EDFA characteristics, such as input power, output power, pump LD bias, temperature, and so on. In addition, OFA-Wx2-AG reliability test results assure an excellent long-term EDFA performance needed in most of network applications.

Features

- Fast transient suppression
- Integrated electric control circuit
- High output power up to 24dBm
- Wide flat wavelength range and excellent 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

- Booster Amplifier for wide node loss distribution
- 100G DWDM OADM & long haul networks
  - Booster, In-line, Pre-Amp.
- 400G or Higher Bit Rate DWDM OADM & long haul networks
  - Booster, In-line, Pre-Amp.
- OADM access network
- LANs and MANs

LiComm
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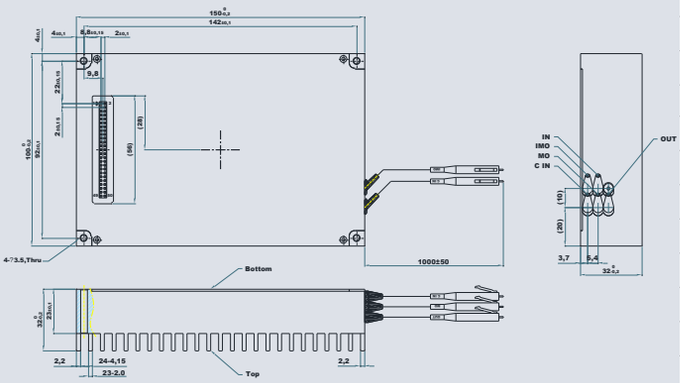
Mechanical Dimension
(150 X 100 X 32 mm)



Optical Characteristics

Parameter	Symbol	OFA-WC2	OFA-WL2	Unit
Signal wavelength range	λ	1528.58~1566.93	1571.86~1609.02	nm
Saturated output power	P_{OUT}	~ 24	~ 23.5	dBm
Signal gain	G	18	18	dB
Noise figure (1)	NF	<6.3	<6.8	dB
Gain flatness	ΔG	<1.0	<1.0	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(2)	T_G	<0.5	0.5	dB
Optical isolation	ISO	>30	>30	dB
Return loss	RL	>40	>40	dB
Polarization mode dispersion	PMD	<0.3	<0.3	ps
Polarization dependent gain	PDG	<0.3	<0.3	dB

(1) C : Input power = 6 dBm/tot, P_{OUT} = 24 dBm, L : Input power = 5.5 dBm/tot, P_{OUT} = 23.5 dBm
(2) 1msec 19.8dB Add/Drop Ratio

Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+5 V
Interface	RS232
Operating temperature	-5 ~ 55 ℃
Storage temperature	- 40 ~ 85 ℃
Storage humidity	5 ~ 90 % R.H
Power consumption	30 W

*Output power = 24 dBm, at 25 ℃

Ordering Information

OFA - WX2 - XX_1XX_2

- XX_1 : Saturated Output Power
- XX_2 : Control Method
  - AG: Automatic Gain Control
  - VG: Variable Gain Control
- C(C-band) or L(L-band)

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