

# Optical Fiber Amplifier (OADM EDFA)

The LiComm Optical Fiber Amplifier OFA-WC3 series are designed for high-performance and wide bandwidth DWDM system of core networks and metropolitan networks. It offers high saturated output power, wide flat range, high gain, low noise figure and automatic gain control(AGC).

LiComm developed the OFA-WC3 series which control very fast to suppress transient gain overshoot and under-shoot to prevent degradation of transmission quality in optical add/drop multiplexer (OADM). It improves robustness on the input variations in long cascade and also offers great flexibility in DWDM system. The built-in digital signal processor provides control and monitoring of many functions - input and output power, LD bias, temperature and etc.. The OFA-WC3 series promise the convenience of DWDM system design in a real field with OADM.



## Features

- ▶ **Fast transient suppression**
- ▶ Integrated electric control (full function EDFA)
- ▶ High output power up to 22dBm
- ▶ Wide flat wavelength range and excellent gain flatness
- ▶ Wide input dynamic range
- ▶ Low noise figure
- ▶ Mid-stage access (optional)
- ▶ Input / Output optical monitoring (optional)
- ▶ Built-in supervisory device (optional)
- ▶ Automatic power control or Automatic gain control
- ▶ Convenient system interface(RS232 or Parallel)
- ▶ Single +5V power supply

## Applications

- ▶ 2.5G DWDM OADM & long haul networks
  - Booster, In-line , Pre-Amp.
- ▶ 10G DWDM OADM & long haul networks
  - Booster, In-line, Pre- Amp.
- ▶ In-line DWDM amplifier with interstage access for dispersion compensating module (DCM) or optical add/drop multiplexer (optional)
- ▶ LANs and MANs
- ▶ SONET/SDH systems

## Optical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Signal wavelength range	$\lambda$	1530	-	1562	nm
Saturated output power	$P_{OUT}$	-	-	22	dBm
Signal gain	G	-	25	-	dB
Noise figure (@ Gain : 25dB)	NF	-	4.5	5.0	dB
Noise figure w/interstage loss <sup>1)</sup>	NF	-	5.5	6.0	dB
Gain flatness	$\Delta G$	-	1	-	dB
Input dynamic range	$P_{ID}$	-	16	-	dB
Interstage loss (optional)	$L_M$	-	10	-	dB
Channel gain variation	$G_C$	-0.5	-	0.5	dB
Transient suppression <sup>2)</sup>	$T_G$	-	0.5	-	dB
Optical isoation	ISO	30	-	-	dB
Return loss	RL	40	-	-	dB
Polarization mode dispersion	PMD	-	-	0.4	ps
Polarization dependent gain	PDG	-	-	0.4	dB

Note 1) @Gain = 25dB,  $P_{OUT}$  = 20dBm, Interstage loss = 10dB

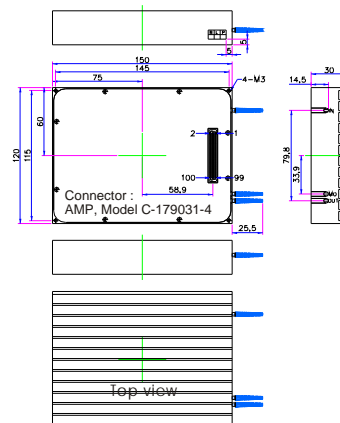
2) @3dB Add / Drop Case (@22dBm including two stages)

## Electrical & Environmental

Parameter	Typical value
Power supply voltage	+5V
Interface	RS232, Parallel
Operating temperature	-20 ~ 75 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	0 ~ 95% R.H
Power consumption*	9.5 W

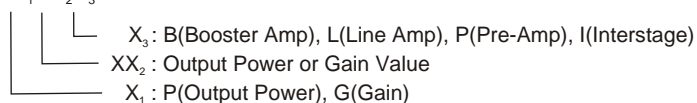
\*Output power = 22dBm (@25 °C)

## Mechanical Dimension ( 150 x 120 x 30mm with heat sink)



## Ordering Information

OFA - WC3 - X<sub>1</sub>XX<sub>2</sub>X<sub>3</sub>



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**OFA**