

Optical Fiber Amplifier OADM EDFA OFA-WC3 Series



The LiComm OFA-WC3 series is designed for use in high-performance and wide bandwidth DWDM or CWDM system of access networks and metropolitan networks. The OFA-WC3 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-WC3 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 OADMs (Optical Add/Drop Multiplexers). This feature allows great flexibility to system engineers in designing WDM or OADM systems in metro or core networks. DSP (Digital Signal Processor) 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-WC3 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 22dBm
- Wide flat wavelength range and excellent gain flatness
- Wide input dynamic range
- Low noise figure
- Mid-stage access (optional)
- Input/Output optical power monitoring (optional)
- Built-in supervisory device (optional)
- APC (Automatic Power Control) or AGC (Automatic Gain Control)
- Convenient system interface (RS232 or Parallel)
- Single +5V power supply

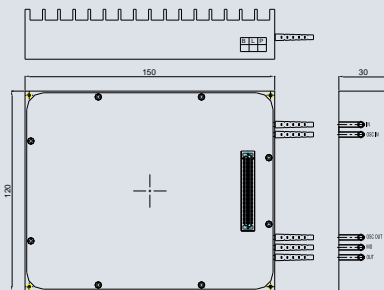
Applications

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

Optical Fiber Amplifier

OADM EDFA

Mechanical Dimension (150 X 120 X 30mm)



Optical Characteristics

Parameter	Symbol	OFA-WC3	Unit
Signal wavelength range	λ	1530 ~ 1562	nm
Saturated output power	P_{OUT}	<22	dBm
Signal gain	G	25	dB
Noise figure (at Gain : 25dB)	NF	<5.0	dB
Noise figure w/interstage loss(1)	NF	<6.0	dB
Gain flatness	ΔG	<1.5	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(2)	T_G	0.5	dB
Optical isolation	ISO	>30	dB
Return loss	RL	>40	dB
Polarization mode dispersion	PMD	<0.4	ps
Polarization dependent gain	PDG	<0.4	dB

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

(2) 3dB Add/Drop at output power of 22dBm, for two stage amplifier

Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+5V
Interface	RS232, Parallel
Operating temperature	-10 ~ 60 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	5 ~ 90% R.H
Power consumption	9.5W

*Output power = 22dBm, at 25 °C

Ordering Information

OFA - WC3 - XX_1XX_2

XX_1 : Saturated Output Power
 XX_2 : Control Method
 - AG: Automatic Gain Control
 - VG: Variable Gain Control

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