

## Optical Fiber Amplifier MSA DWDM EDFA OFA-WCA Series

The LiComm OFA-WCA series is designed for use in high-performance and wide bandwidth DWDM system of access networks and metropolitan networks. The OFA-WCA offers high saturated output power, wide flat gain range, high gain, low noise figure, and AGC (Automatic gain Control) or VGC (Variable Gain Control)/VTC (Variable Tilt Control) features with low power consumption. 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-WCA reliability test results assure an excellent long-term EDFA performance needed in most of network applications.



### Features

- MSA (90x70x15mm) EDFA
- Low Power Consumption
- 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
- Input/Output optical power monitoring
- Built-in supervisory device (optional)
- APC (Automatic Power Control) or AGC (Automatic Gain Control) or VGC (Variable Gain Control) /VTC (Variable Tilt Control)
- Convenient system interface (RS232 )
- Single +3.3V 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
- LANs and MANs

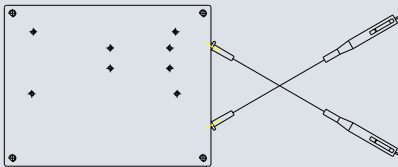
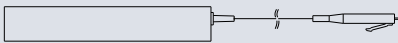
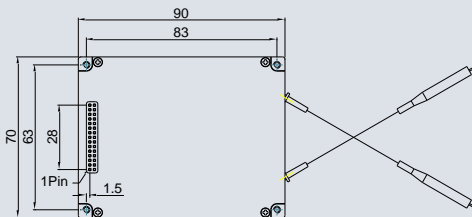
## Optical Fiber Amplifier

# MSA DWDM EDFA

### Optical Characteristics

Parameter	Symbol	WCA-22AG	WCA-20VG	Unit
Signal wavelength range	$\lambda$	1528 ~ 1563	1528 ~ 1563	nm
Saturated output power	$P_{OUT}$	22	20	dBm
Signal gain	G	Typ.24	Typ. 24	dB
Noise figure <sup>(1)</sup>	NF	Typ.5.0	Typ.5.0	dB
Gain flatness	$\Delta G$	Typ.1.0	Typ.1.0	dB
Variable Gain Range	VG	-	10	dB
Variable Tilt Range	VT	-	-3 ~ 1	dB
Input dynamic range	$P_{ID}$	23	23	dB
Channel gain variation	$G_C$	-0.5 ~ 0.5	-0.5 ~ +0.5	dB
Transient suppression <sup>(2)</sup>	$T_G$	0.2	0.2	dB
Optical isolation	ISO	>30	>30	dB
Return loss	RL	>40	>40	dB
Polarization mode dispersion	PMD	<0.5	<0.5	ps
Polarization dependent gain	PDG	<0.3	<0.3	dB

### Mechanical Dimension (90 X 70 X 15mm)



(1) Gain = Max. Gain,  $P_{OUT}$  = Max. output, Normal Tilt

(2) 3dB Add/Drop at output power of Max. Output

### Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+3.3V
Interface	RS232
Operating temperature	-5 ~ 65 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	5 ~ 90% R.H
Power consumption*	5W

\*Output power = 22dBm, at 25 °C

### Ordering Information

OFA - WCA - XX<sub>1</sub>XX<sub>2</sub>

XX<sub>1</sub> : Saturated Output Power  
 XX<sub>2</sub> : Control Method  
 - AG: Automatic Gain Control  
 - VG: Variable Gain Control

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