

Optical Fiber Amplifier

MSA Size Standard EDFA OFA-TC1 Series

The LiComm standard EDFA OFA-TC1 series is a full-functioning EDFA module with control circuitry packaged inside. It is designed for a single wavelength and narrow band fiber optic communications system in core networks, access networks, or CATV networks. The OFA-TC1 series provides very stable output power up to 17dBm and noise figure of less than 5 dB in C-band over wide operating temperature range. Compact size (90 x 70 x 15 mm), combined with extremely low power consumption, allows the OFA-TC1 series to be highly suitable for applications of power equalization or pre-emphasis in very crowded telecom and CATV transmission systems.



Features

- Ultra compact size (90 x 70 x 15 mm)
- Cooled 980 nm pump laser module
- Extremely low power consumption over wide operating temperature range
- EDFA module including electric control circuit
- High output power up to 23 dBm
- Wide input dynamic range
- Low noise figure
- APC (Automatic Power Control) or AGC (Automatic Gain Control)
- Control & monitor by RS232
- LVTTTL Alarm
- Single + 3.3 V power supply

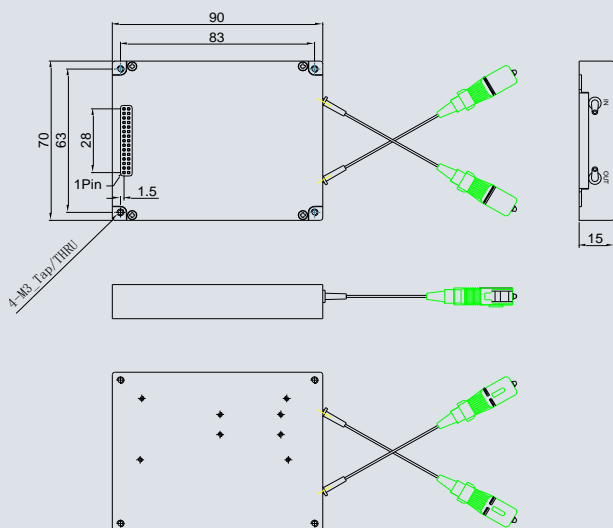
Applications

- Narrow band amplification in C-band
- CATV networks
- DWDM metro & long haul system
 - Power equalization
 - Pre-emphasis
- Signal loss compensation in switch matrix
- SONET/SDH system
- OADM access networks

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Standard EDFA

Mechanical Dimension (90 X 70 X 15 mm)



Optical Characteristics

Parameter	Symbol	OFA-TCA	Unit
Signal wavelength range	λ	1528 ~ 1563	nm
Input power	P_{IN}	-30~0	dBm
Saturation Output power ⁽¹⁾	P_{OUT}	23	dBm
Small signal gain ⁽²⁾	G	40	dB
Noise figure	NF	Typ. 5	dB
Optical isolation	ISO	>30	dB
Return loss	RL	>40	dB
Polarization mode dispersion	PMD	<0.3	ps
Polarization dependent gain	PDG	<0.3	dB

(1) Input Power = 0 dBm

(2) Input Power = -30 dBm at 1545 nm

Electric & Environmental Characteristics

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

*At maximum output power, at 25 °C

Ordering Information

OFA - XC1 - XX₁XX₂

$\begin{cases} T : \text{Digital} \\ C : \text{Analog (CATV)} \end{cases}$
 $\begin{cases} XX_1 : \text{Max. Output Power (dBm)} \\ : \text{AP(APC), AG(AGC), AC(ACC)} \end{cases}$

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