

## Optical Fiber Amplifier **UNCOOLED EDFA** OFA-TCN Series



The LiComm uncooled EDFA OFA-TCN series is a full-functioning EDFA module with control circuitry packaged inside, but instead the fiber routing and EDF are extracted outside of the package. It is designed for a single wavelength applications in fiber optic communications system in core networks, access networks, or CATV networks. The OFA-TCN series provides very stable output power up to 17dBm and noise figure of less than 6dB in C-band over wide operating temperature range. Ultra compact size (40 x 27 x 7.5mm), combined with extremely low power consumption, allows the OFA-TCN series to be highly suitable for applications of power equalization or pre-emphasis in densely packaged telecom systems, especially for densely integrated high speed transmitter or receiver card.

### Features

- **Ultra compact size (40 x 27 x 7.5mm)**
- Uncooled 980nm pump laser module
- Extremely low power consumption over wide operating temperature range
- **EDFA module including micro process control circuit**
- High output power up to 17dBm
- Multiple package sizes
- Low noise figure
- APC (Automatic Power Control) with FLS (Forced Laser Shutdown)
- Control & monitoring by RS232
- LVTTTL Alarm
- Single + 3.3V power supply

### Applications

- 2.5G/10G/40G/100G Channel Amplifier
- Narrow band amplification in C-band
- Power equalization and Pre-emphasis Amplifier for DWDM Metro System
- Signal loss compensation in switch matrix
- SONET/SDH system
- OADM access networks
- CATV System

# Optical Fiber Amplifier

## UNCOOLED EDFA

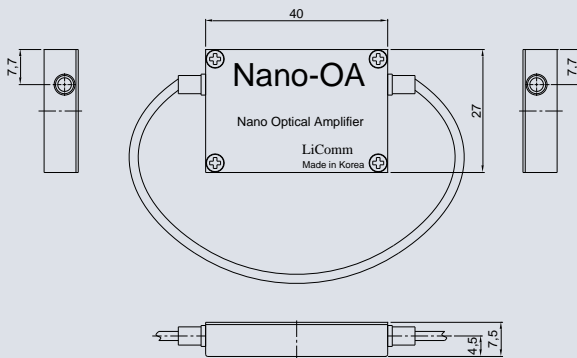
### Optical Characteristics

Parameter	Symbol	OFA-TCN	Unit
Signal wavelength range	$\lambda$	1528 ~ 1563	nm
Input power	$P_{IN}$	-30~0	dBm
Saturation Output power(1)	$P_{OUT}$	17	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 = 0dBm

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

### Mechanical Dimension (WxLxH = 40X27X7.5[mm])



### Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+3.3V
Interface	RS232
Alarm	LVTTL
Operating case temperature	0 ~ 70 °C
Storage temperature	- 40 ~ 85 °C
Storage humidity	5 ~ 85% R.H
Power consumption*	2.0W

\* in normal input power and full temperature range

### Control and Monitoring Functions

Parameter	Typical Value
Control Scheme	APC with FLS*
Monitor	OPM / LD-Bias / Case-Temp
Alarm	LOP / LD-Bias / Case-Temp

\* FLS: Forced Laser Shutdown

### Ordering Information

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

$\begin{cases} T : \text{Digital} \\ C : \text{Analog (CATV)} \end{cases}$ 
 $\begin{cases} \text{---} & \text{XX}_1 : \text{Max. Output Power (dBm)} \\ \text{---} & \text{XX}_2 : \text{AP(APC), AG(AGC), AC(ACC)} \end{cases}$

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