

# Optical Fiber Amplifier

## L-band

# UNCOOLED EDFA

## OFA-TLH Series

The LiComm uncooled EDFA OFA-TLH series is a full-functioning L-band EDFA module with control circuitry packaged inside. It is designed for a single wavelength applications in fiber optic communications system in core networks, access networks, or CATV networks. The OFA-TLH series provides very stable output power up to 13dBm and noise figure of less than 6dB in L-band over wide operating temperature range. Ultra compact size (70 x 45 x 15mm) for L-band, combined with extremely low power consumption, allows the OFA-TLH series to be highly suitable for applications of power equalization or pre-emphasis in densely packaged telecom and CATV transmission systems.



### Features

- **Very compact size (70 x 45 x 15mm) for L-band**
- 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 13dBm
- Multiple package sizes
- Low noise figure
- APC (Automatic Power Control) with ALS (Automatic Laser Shutdown)
- Control & monitoring by RS232
- LVTTTL Alarm
- Single + 3.3V power supply

### Applications

- 2.5G/10G/40G 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

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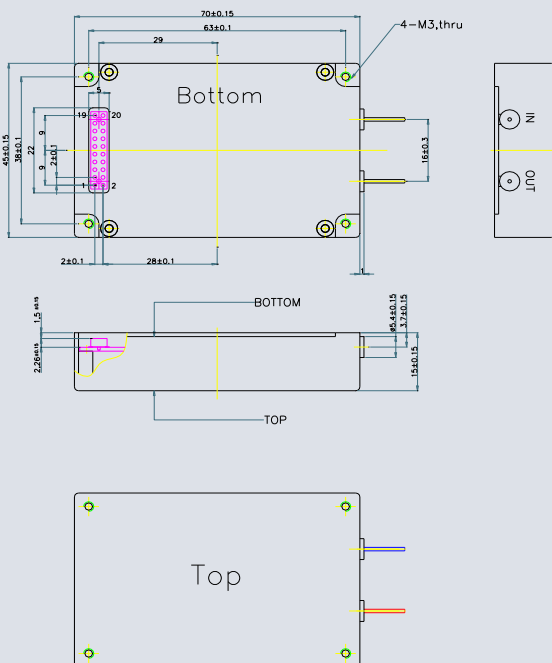
### Optical Characteristics

Parameter	Symbol	OFA-TLH-13AP	Unit
Signal wavelength range	$\lambda$	1573 ~ 1608	nm
Input power	$P_{IN}$	-30~0	dBm
Saturation Output power(1)	$P_{OUT}$	13	dBm
Small signal gain(2)	G	30	dB
Noise figure	NF	Typ.6.0	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 1590nm

### Mechanical Dimension (WxLxH = 70x45x15[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 ALS and FLS*
Monitor	IPM/OPM / LD-Bias / Case-Temp
Alarm	LOP / LD-Bias / Case-Temp

\* ALS: Automatic Laser Shutdown

\*\* FLS: Forced Laser Shutdown

### Ordering Information

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

T : Digital  
 C : Analog (CATV)

XX<sub>1</sub> : Max. Output Power (dBm)  
 XX<sub>2</sub> : AP(APC), AG(AGC), AC(ACC)

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