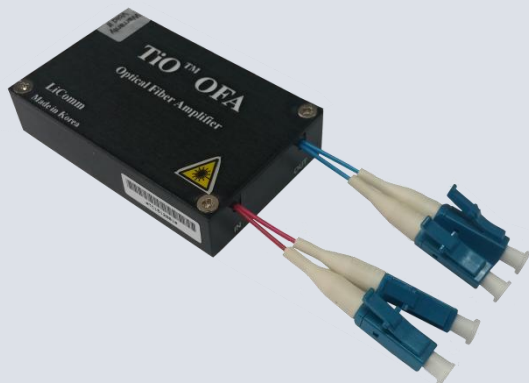


2 in 1 Optical Fiber Amplifier

TiO™ OFA



The world's smallest EDFAs, TiO™ series are two full-functioning EDFAs in a package. The electric control board permits to control and monitor separately two EDFAs. It is designed for c-band applications for channel cards in fiber optic communications system of core networks, access networks, or CATV networks. The TiO™ series provides very stable output power over the wide operating temperature range. Ultra compact size (55 x 35 x 12 mm), combined with the extremely low power consumption, allows the TiO™ 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 cards and loss compensation for compact active optical module.

Features

- Two EDFAs are independently controlled and monitored.
- EDFA module including micro process control circuit
- Uncooled 980 nm pump laser modules
- Extremely low power consumption over wide operating temperature range
- Output power up to 17dBm for each
- AGC(automatic Gain Control) or APC (Automatic Power Control)
- Control & monitoring by RS232
- LVTTL Alarm
- Single + 3.3 V power supply

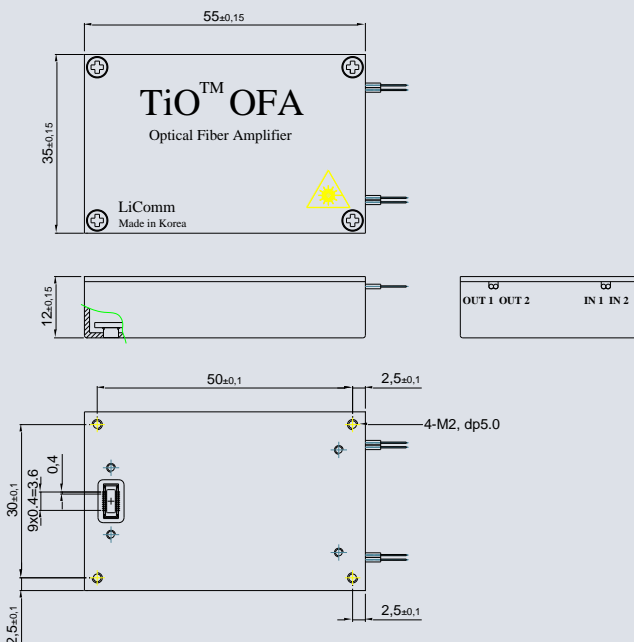
Applications

- Power equalization and Pre-emphasis Amplifier for DWDM Metro System
- 2.5G/10G/40G/100G Channel Amplifier
- Signal loss compensation in switch matrix
- Loss Compensation for active optical modules
- Optimized for integration into 100 Gbps coherent modules
- SONET/SDH system
- OADM access networks
- CATV System

2 in 1 Optical Fiber Amplifier

TiO™ OFA

Mechanical Dimension (WxLxH = 55 x 35 x 12 [mm])



Optical Characteristics

Parameter	Symbol	OFA-TCP	Unit
Signal wavelength range	λ	1528 ~ 1563	nm
Input power	P_{IN}	-30~0	dBm
Saturation Output power ⁽¹⁾	P_{OUT}	17	dBm
Small signal gain ⁽²⁾	G	30	dB
Noise figure	NF	Typ. 5	dB
Optical isolation	ISO	>30	dB
Gain Flatness ⁽³⁾	ΔG	Typ.1	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

(3) AGC Mode

Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	+3.3 V
Interface	RS232
Alarm	LVTTL
Operating case temperature	0 ~ 70 °C
Storage temperature	- 40 ~ 85 °C
Storage humidity	5 ~ 85 % R.H
Power consumption*	5.0 W

* For full temperature range

Control and Monitoring Functions

Parameter	Typical Value
Control Scheme	APC or AGC
Monitor	IPM / OPM / LD-Bias / Case-Temp
Alarm	LOS/ LOP / LD-Bias / Case-Temp

Ordering Information

OFA - xCO - xx₁xx₂

xx_2 : EDFA No.
 xx_1 : Max. Output Power (dBm)
 T : Digital
 C : Analog (CATV)

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