

# Compact Optical Amplifier

## Features

- ✧ **Smallest package in the world**
- ✧ Wide Operating Wavelength
- ✧ High Efficiency
- ✧ Low Noise Figure
- ✧ Low Power Consumption
- ✧ +5V or +3.3V Operation

## Application

- ✧ Metro Pre-Amplifier

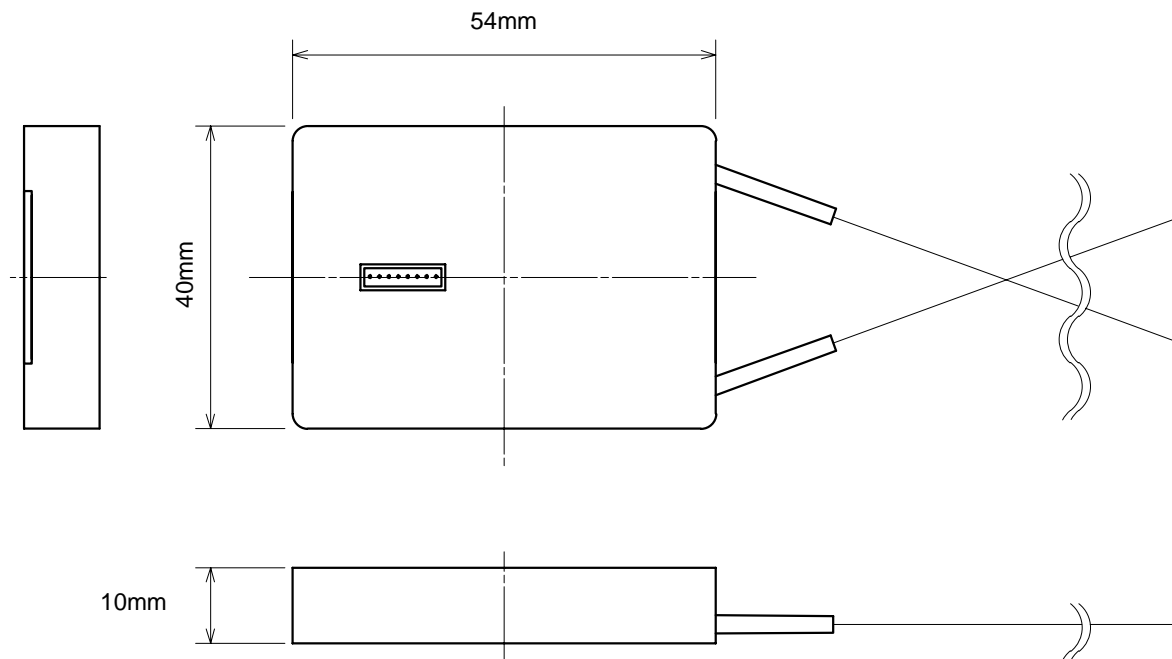
Fujikura's Compact Optical Amplifier is an erbium doped fiber amplifier module for a single-channel application. It is included un-cooled pump laser diode and LD power control circuit in vary small package. Input / Output power are monitored by built-in photodiodes and relative voltage outputs are supplied to electrical I/O connector. .

Parameters	Unit	Performance		
		min	Typ.	max
Wavelength	nm	1528	-	1562
Signal Input Power	dBm	-30		
Signal Output Power	dBm	-5	-	-
Gain	dB	25	-	-
Noise Figure	dB	-	-	5.5
PDG	dB	-	-	0.3
PMD	ps	-	-	0.5
Power Consumption	W	-	-	1
Operating Case Temperature	°C	0	-	65
Storage Temperature	°C	-40	-	85

\* Specifications are subject to change without notice.

\*\* Each specifications can be modified on request.

## Dimensions (full-size)



Input and Output pigtails are terminated by SC/SPC connector. Other connectors are available on request.

## Pin Information

Electrical connection to the amplifier is made via a 8 way header. (single row, 1.25mm pitch)

Pin	Description
1	Vcc
2	Vcc
3	GND
4	LD current monitor
5	Input power monitor
6	Output power monitor
7	GND
8	Pump power control

## Pin Definitions

**Pin 1, 2 Vcc:** DC power supplies. Either +5V or +3.3V is available.

**Pin 3, 7 GND:** Ground power pins. These pins are also used as signal ground for each monitor outputs and pump power control input.

**Pin 4 LD current monitor:** Analog output signal for operating current of pump laser diode. Output voltage is relative to the LD current.  
$$\text{LD current (mA)} = \text{Pin 4 (V)} \times 200$$

**Pin 5 Input power monitor:** Analog output signal for input monitor photodiode current. Output voltage is relative to the input power.

**Pin 6 Output power monitor:** Analog output signal for output monitor photodiode current. Output voltage is relative to the total output power (included ASE power).

**Pin 8 Pump power control:** Analog input signal for pump laser diode output power control. Pump power is changed according to the following equation.  
$$\text{Pump power (mW)} = \text{Pin 8 (V)} \times 50$$