

## EDFA Optical Amplifier

### Product features

1. Working wave: C bank Single wave / multi-wave optional
2. Working mode: ACC/APC/AGC Optional
3. Communication mode: RS232/ RS422/ TTL optional



### General requirements

16849 Generic specification for optical fibre amplifiers

### Product Dimension (mm)

Fig. 1 Outline structure diagram

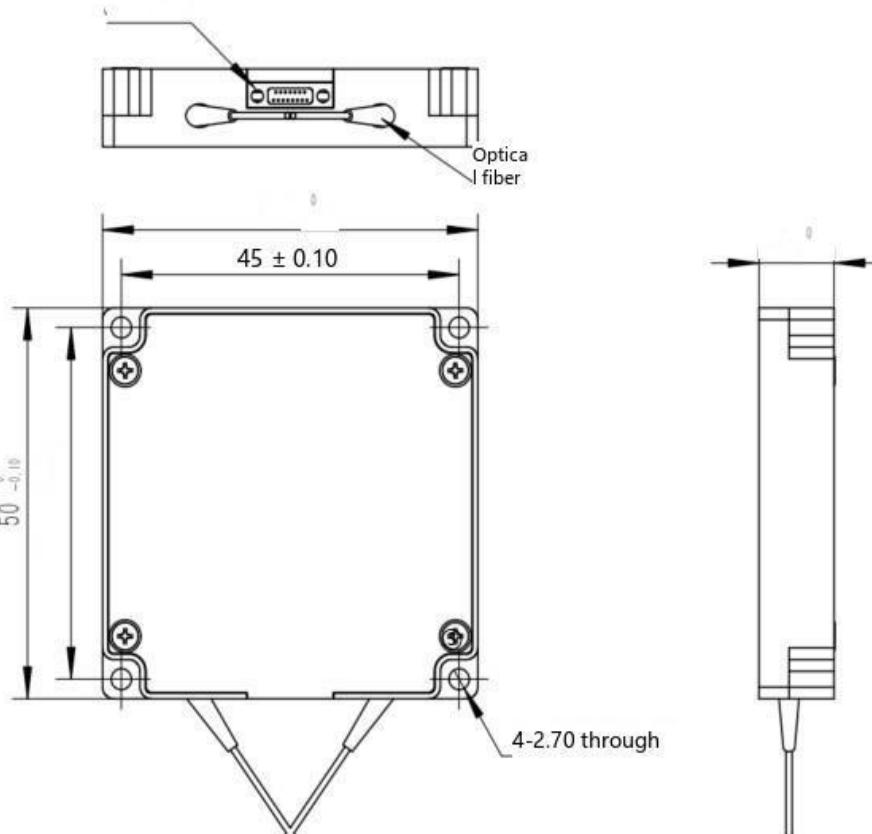


Fig. 2 Outline structure diagram

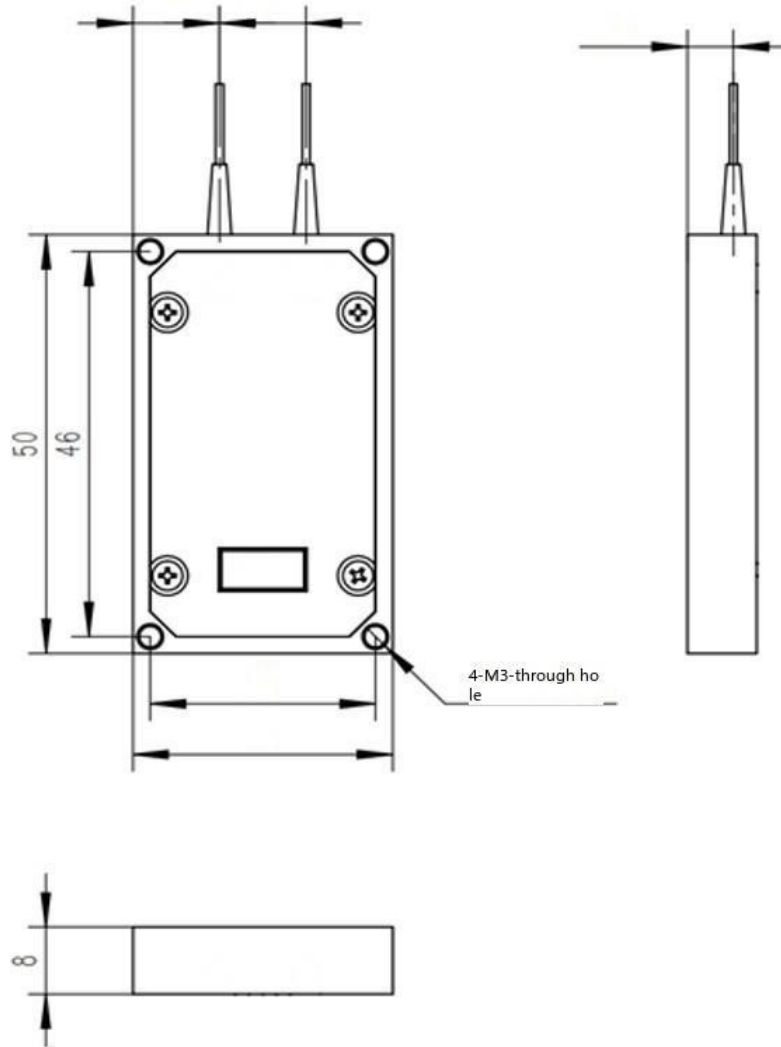


Fig. 3 Outline Structure Diagram

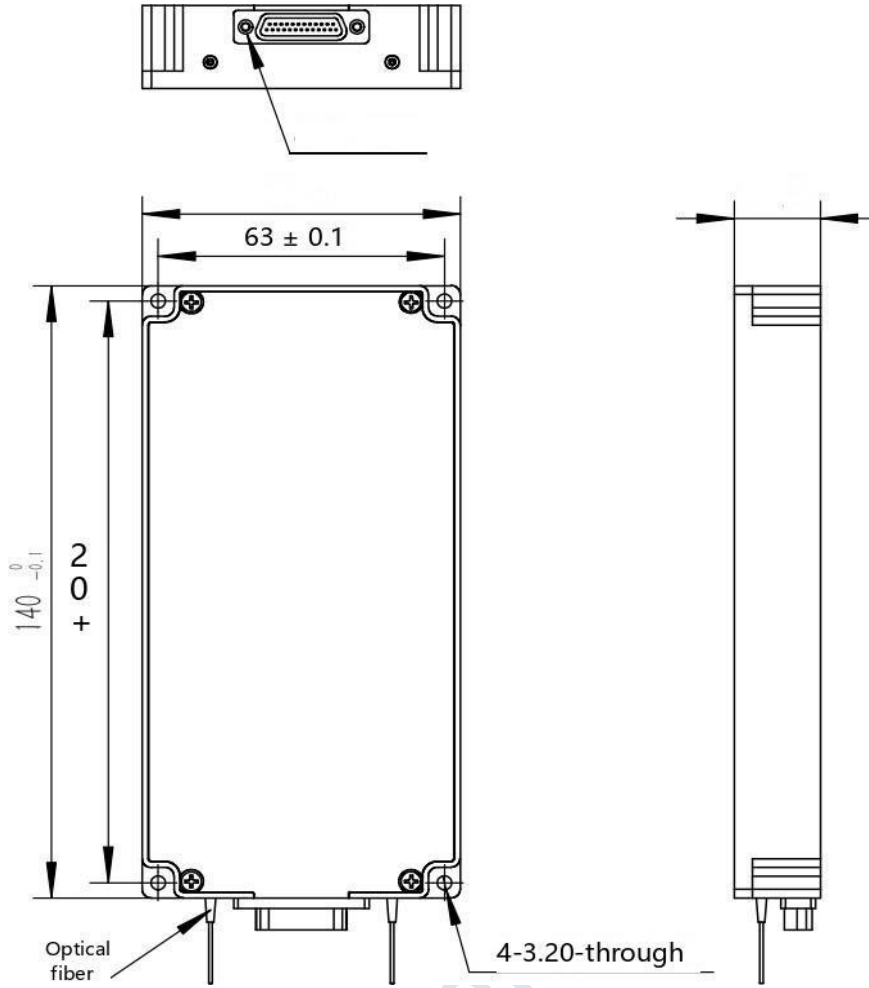
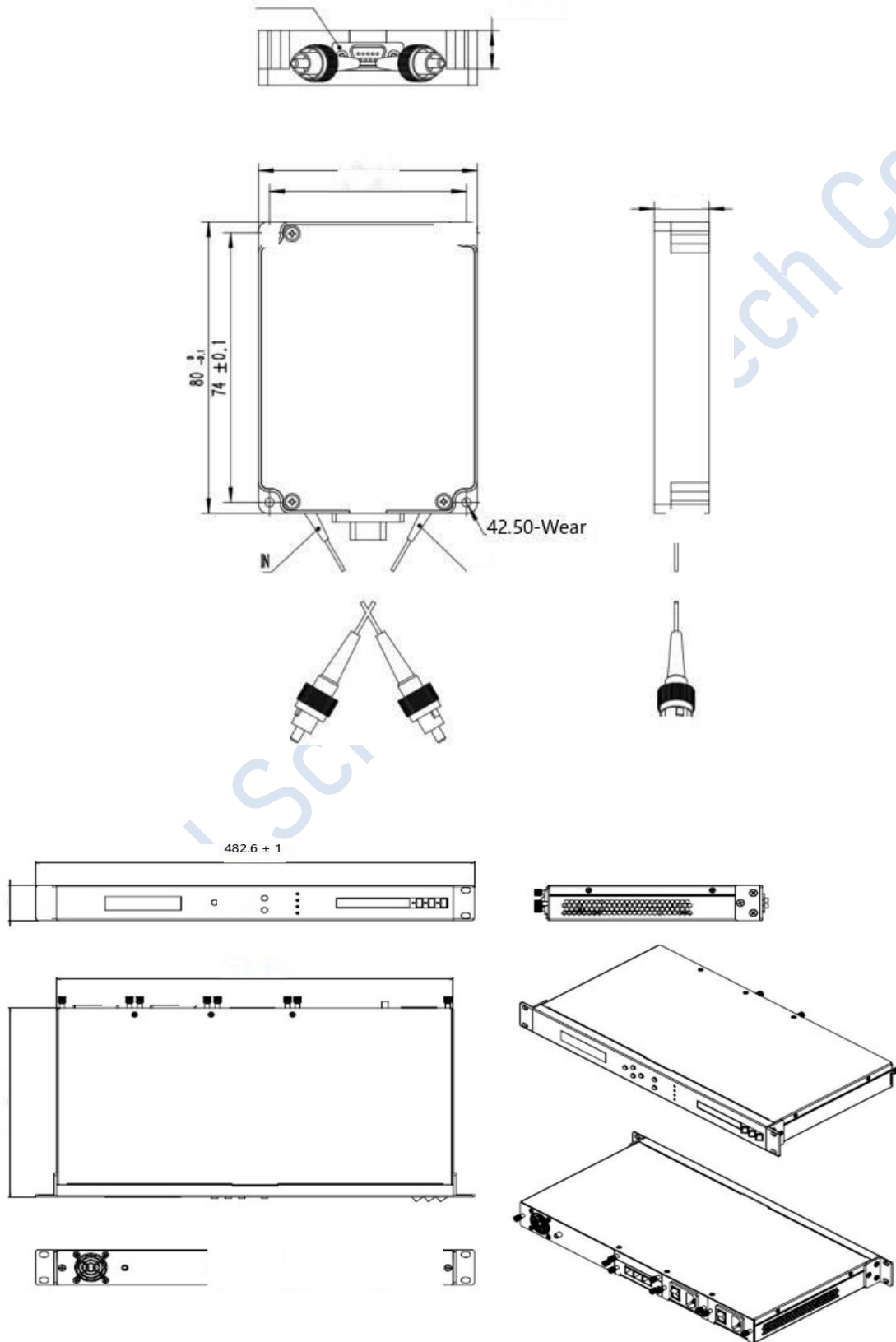


Fig. 4 Outline Structure Diagram



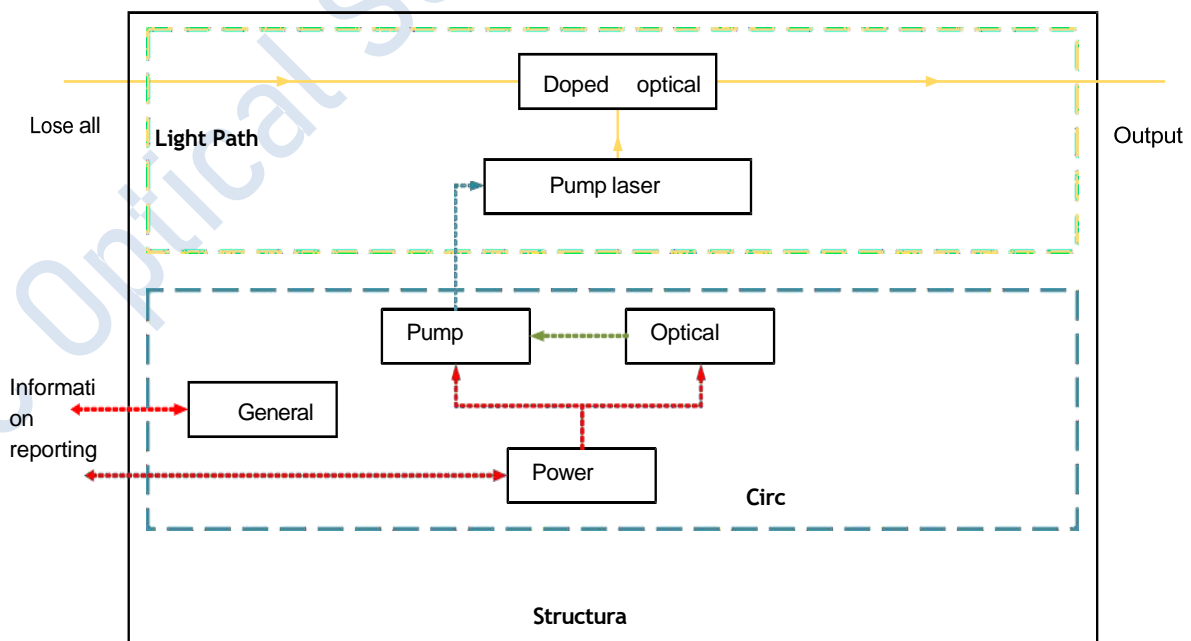
## Products functional requirement

Our modular optical fiber amplifier products are mainly characterized by low cost and low power consumption. Using the device and the bend radius of the fiber, the EDFA ruler From MSA standard, it is reduced to 50 \* 50 \* 10, even 50 \* 30 \* 8mm, which can meet different requirements such as single-wave amplification, multi-wave flat amplification, etc.

In metro, Lidar, phase detection systems, radar systems.

- 1 . The power amplification of the optical signal in the transmission broadband is realized, and the in-band output power consistency is ensured;
2. Realizes the closed-loop control of the output optical power to achieve the stable output of the power in the whole environment;
- 3 The optical power of that internal output of the module is monitored and report;
- 4 When the output power is lower than the threshold value, the module is in active standby, and after the light is recovered, the module is in active recovery output.

## Product principle block diagram



## Shell material requirements

Project	Request	Remark
Material	Aluminum Alloy	
Surface treatment	Black anodizing	

## Definition of electrical connection

Parameter	Unit	Indicators			Remark
		Minimal	Typical	Max	
Supply voltage	V	4.75	5	5.25	Default 5V, support customization
Data and control			RS232		Default RS232, support customization

## Definition of optical connection

Signal definition	Connector model	Connector type	Length	Remark
Optical signal input	Pigtail	FC/APC	1.0±0.1m	Connector and length support customization
Optical signal output	Pigtail	FC/APC	1.0±0.1m	Connector and length support customization

## Optical connection identification

The module identification includes logo, model, batch number, the font is body, and the printing color is. (Can be customized according to customer requirements).

Optical port name	Shell pigtail outlet identification	Pigtail connector end painted identification
Optical input port	IN	Manufacturer's own
Optical output port	OUT	Manufacturer's own

## Specification requirements (example)

Item	Unit	Maximum value	Typical value	Maximum value	Remark
Sakuwa	nm	1529	1550	1565	
Output optical power	dBm	-15	-5	5	
Output optical power	dBm	20	22	23	
Gain Flatness	dB	/	1.5	/	Single-wave and multi-wave options
Transmission isolation	dB	45	/	/	Design assurance
Output isolation	dB	45	/	/	Design assurance
Noise figure	dB	4	4.5	5.5	@ Typical Output
Supply voltage	V	4.75	5	5.25	
Power consumption at full temperature	W	/	10	15	
Make the temperature	°C	-40	25	70	
Storage temperature	°C	-40	25	85	
Relative humidity	%	5	/	95	



**Ordering Information** HC-EDFA-0-2-22-5-4-S-UGF

Product type	Input power	Output Power	Size	Interface type	Polarization type	Flat type
1: Modular 2: Rack-Mount Fiber Amplifier	1: -5 ~ 5dBm 2: -15 ~ -5dBm 3: -40~ -5dBm 0: Custom	XX: XX dBm It represents the actual output power value of the single channel of the order products (should not be greater than 25)  XXN:-XX dBm N means that the output power is negative.	1: 1U chassis 2: 40*70*19 3: 50*50*10 4: 50*30*8 5: 80*60*15 0: Custom	1: SC/PC 2: SC/APC 3: FC/PC 4: FC/APC 0: Custom	S: SM (single mode)  P: PM (Polarization Maintaining)	GF: Gain Flat UG  F:No Gain Flat

Example: HC-EDFA-0-2-22-5-4-S-UGF

Module optical fiber amplifier, customized transmission power range, output power of + 22dBm, optical connection of FC/APC, the module is a single-mode gain-flattened optical fiber amplifier.