

Product features

- Working wave, C band single wave/multi-wave optional
- working mode, ACC/APC/AGC optional
- communication mode, RS232/RS422/TTL optional

General requirements

- 16849 Generic specification for optical fibre amplifiers



Product code description

| 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 ordered product (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 UGF: 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.

 Product outline ruler

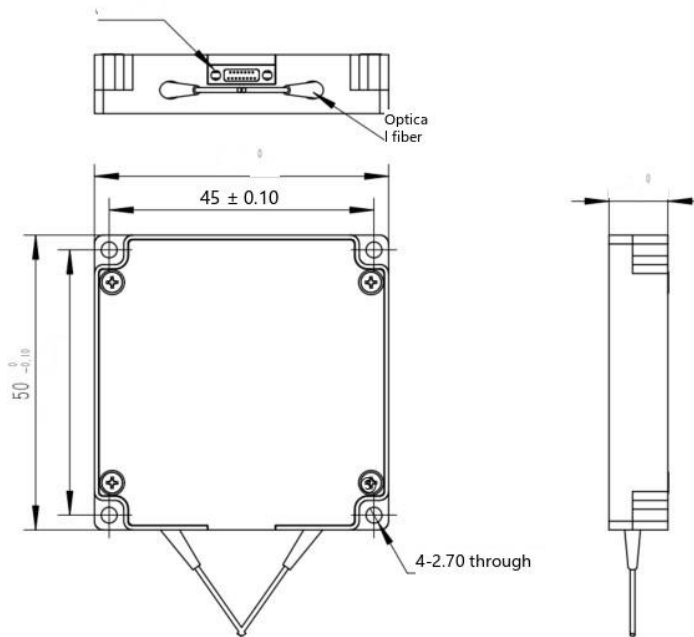


Fig. 1 Outline structure diagram

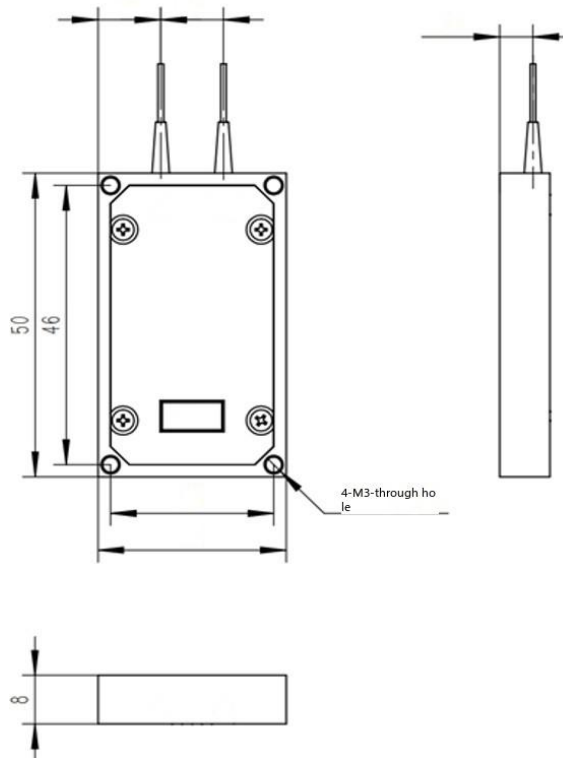


Fig. 2 Outline structure diagram

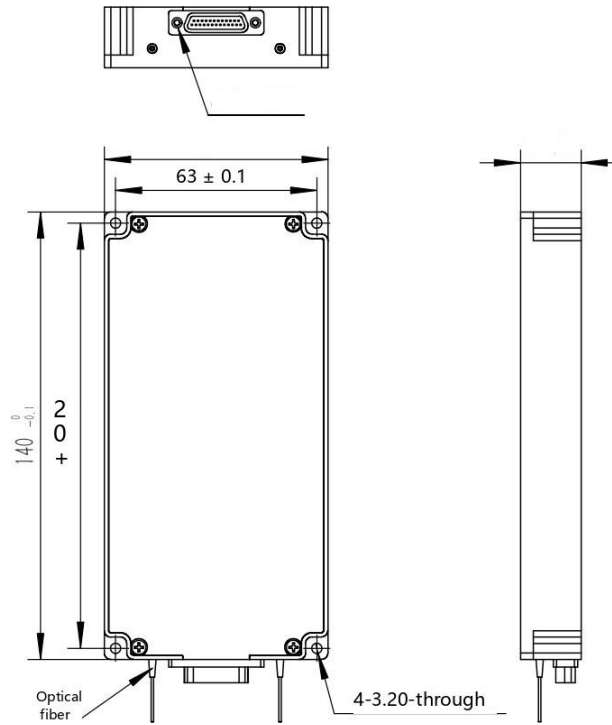


Fig. 3 Outline Structure Diagram

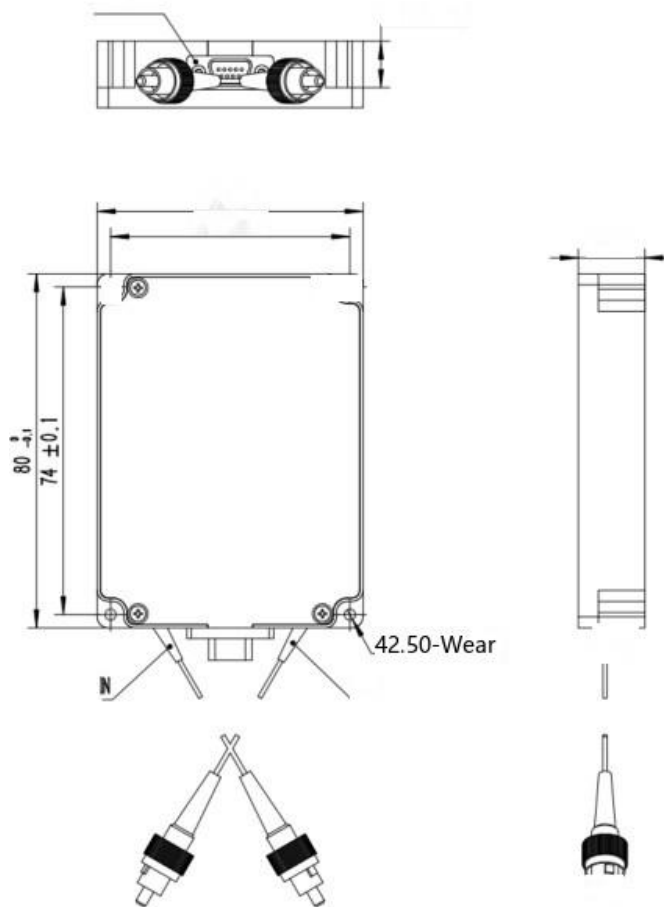


Fig. 4 Outline Structure Diagram

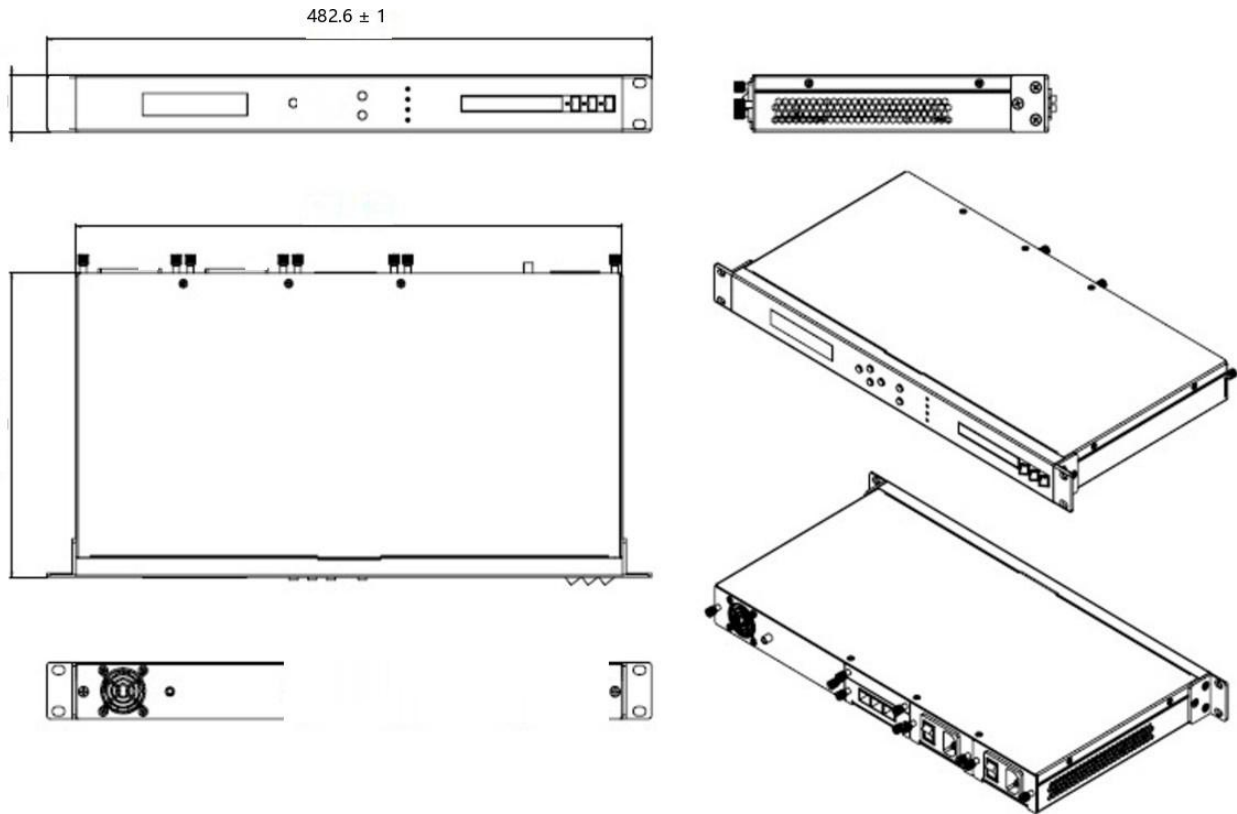


Figure 5 Outline structure diagram

Products functional requirement

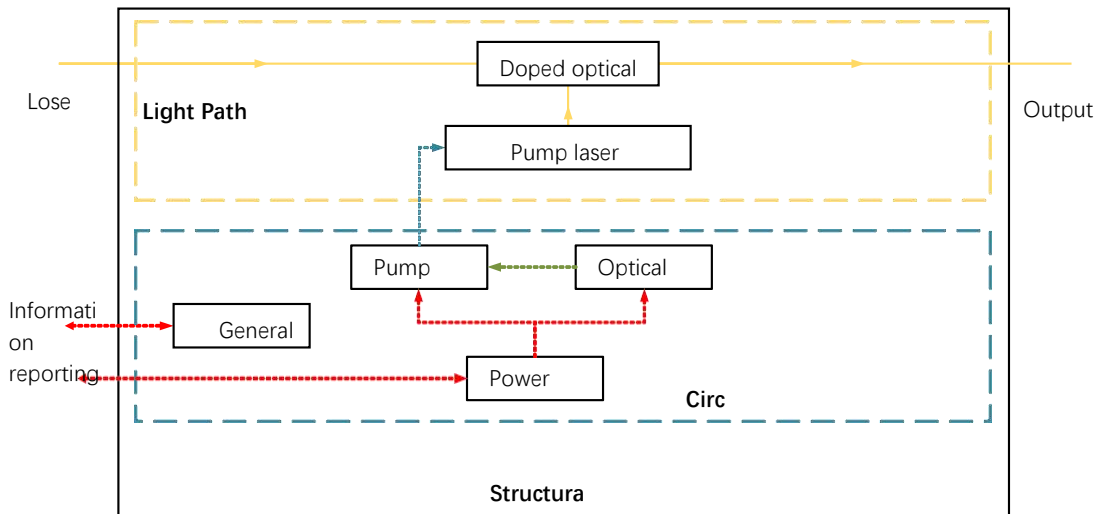
Our modular optical fiber amplifier products are mainly characterized by low cost and low power consumption. Using the device and the bend radius of the fiber, the EDFA ruler

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.

- ▣ The power amplification of the optical signal in the transmission broadband is realized, and the in-band output power consistency is ensured;
- ▣ realizes the closed-loop control of the output optical power to achieve the stable output of the power in the whole environment;
- ▣ The optical pow of that internal output of the module is monitored and report;
- ▣ 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 |

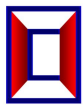
Optical connection identification

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 | |
| Communication type | 485/232/TTL optional | | | | |


Packaging requirements

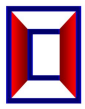
-  Anti-static packaging box;
-  The product shall pass the inspection, and the accessories and accompanying parts shall be complete;
-  The product shall be subject to necessary cleaning, dust removal, reinforcement, protection, etc.;
-  Valuable parts in products can be removed and packed separately;
-  The packing box shall be marked with "handle with care", "keep dry", "upward", "inclination", etc.;
-  Accessories and spare parts (such as cables, general assembly fasteners, seals, etc., and their spare parts) matched with the product shall be packed and placed in an appropriate place in the box.

Transportation requirements

-  Packaged equipment can be transported by road, railway, air, etc.
-  products shall not be transported in an open compartment;
-  During all transportation, the vibration and shock to which the products in the packing box are subjected shall be at the acceptance level. After being transported by highway and railway, the product shall be in good condition and stable in performance.

Storage requirements

-  The storehouse for storing products shall be dustproof and dustproof. The ambient temperature shall be 15 °C ~ + 35 °C and the humidity shall be 35% ~ 60%. The storehouse shall be acid, alkali and corrosive. Body, and strong mechanical vibration, shock and strong magnetic field.



☐ Delivery list

| Serial number | Name | Quantity | Remark |
|---------------|--------------------------|---------------------------|------------|
| 1 | Shipped product | Execute by order quantity | |
| 2 | Product accessories | 1 per batch | Power cord |
| 3 | Test report | 1 serving per product | |
| 4 | User's manual | 1 per batch | |
| 5 | client computer software | 1 per batch | |