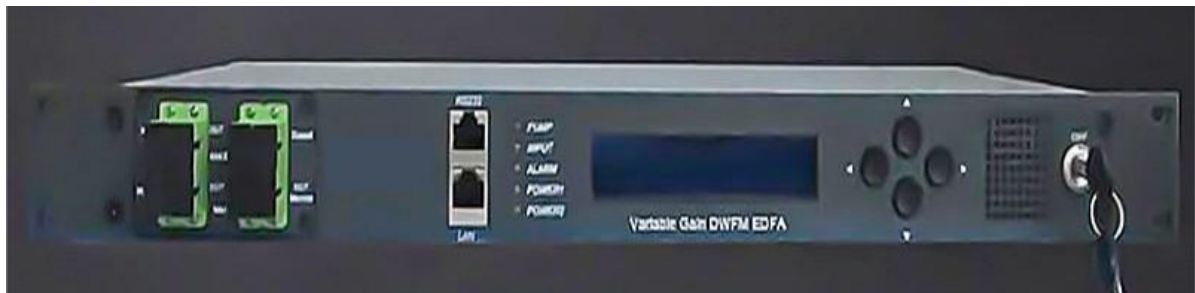


C-band variable gain fiber amplifier (optical power 24dB gain range 25~37dB)



● Product Description

Idealphotonics' MP4700 series is a next generation variable gain fiber amplifier, which is a variable gain fiber amplifier with excellent performance and complete functions on the market today. It adopts the current excellent optical performance, advanced electronic technology, and complete software functions. Excellent transient suppression technology and thermal management control technology enable many complex optical functions to be realized. It is a versatile fiber amplifier commonly used in the market today. The next generation variable gain fiber amplifier consists of a variable gain preamplifier (PA) and a variable gain power amplifier (BA), two-stage amplifier. The gain of the two-stage amplifier can be set independently within a certain range. There is an access connector between the two-stage amplifier, which can be used for mid-stage access, such as optical add/drop multiplexing module (OADM), dispersion compensation module (DCM) and other application optical modules. MP4700 is a version with mid-stage access. The product meets the communication technology requirements of C-Band 44-wavelength or 88-wavelength DWDM system and is widely used in long-distance and ultra-long-distance transmission networks. With its complete functions, it can be used as a line amplifier, preamplifier, power amplifier, and add-drop multiplexing amplifier.

● Part Number

MPA4724-G35-M00-S00

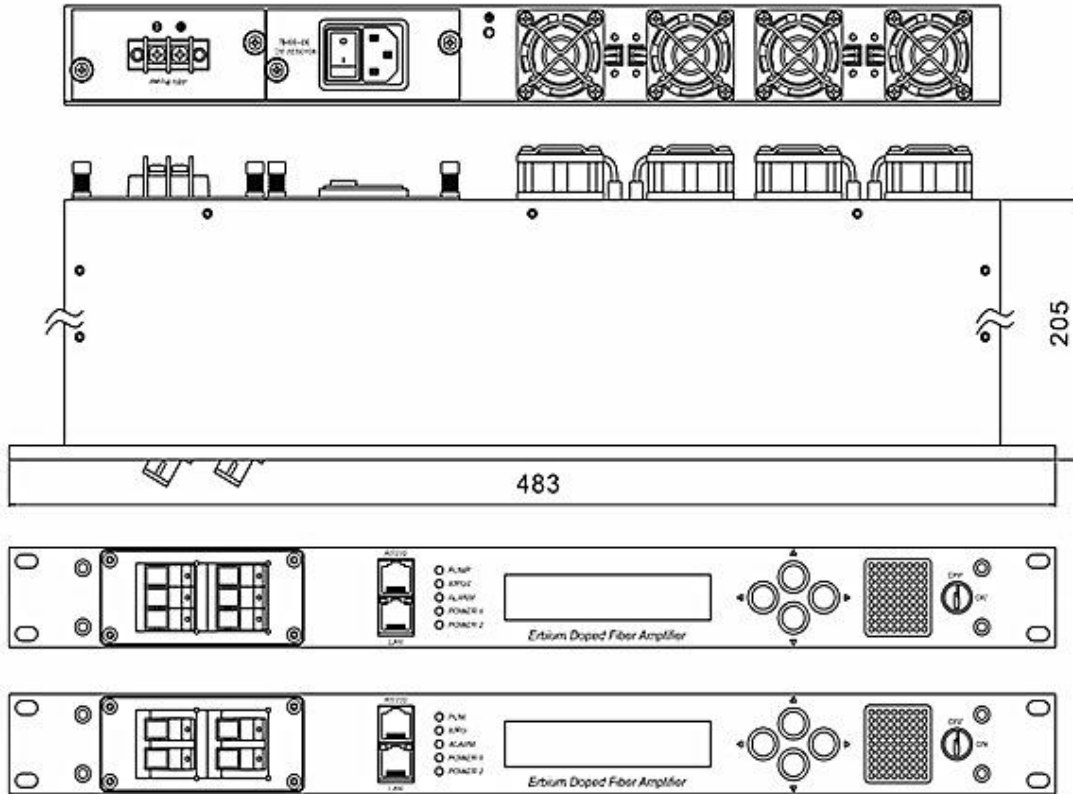
● Product features

Next generation variable gain amplifier、 With intermediate access version、
Adopt digital control technology that adapts to thermal management 、
Intermediate version can be set up as separate preamplifier and power
amplifier、 Saturated output power can be selected as 18dBm, 20dBm, 23dBm、
AGC, APC, ACC working modes、 SNMP network management function 、
RS232 command interface 、 Optional optical monitoring channel OSC
Add/Drop 、 Carrier-level security, reliability and network management
functions、 Low power consumption、 1+1 power backup, supports hot swap、
Excellent performance-price ratio in the industry

● Application area

OADM optical add/drop multiplexing 、 DCM ultra-long trunk line dispersion
compensation、 ASON Intelligent Optical Network、 ROADM reconfigurable
optical add/drop multiplexing、 Long-distance and ultra-long-distance networks
between cities 、 Line amplifier, preamplifier, power amplifier, add/drop
multiplexer amplifier

Dimensional Drawing



General Parameters

| Performance | | | Index | | | Replenish |
|--------------------|--|-------|---------|------|---------|---------------------------|
| | | | Min | Type | Max | |
| Optical properties | Working wavelength range (λ) | (nm) | 1529.16 | | 1563.86 | ITU 88CH |
| | Input optical power range1) | (dBm) | -35 | | +3 | MPA4718 Typical Values |
| | | | -35 | | +3 | MPA4720 Typical Values |
| | | | -40 | | 0 | MPA4723 Typical Values |
| | | | -40 | | 0 | MPA4724 Typical Values |
| | Gain range2) | (dB) | 13 | | 21.5 | G21 Typical Value |
| | | | 18 | | 30 | G30 Typical Value |
| | | | 23 | | 35 | G35 Typical Value |
| | | | 29 | | 41 | G40 Typical Value |
| | | | 12 | | 24 | G25 Typical Value |
| | Intermediate insertion loss range3) | (dBm) | 0 | | 8 | MPA4718 |
| | | | 0 | | 10 | |
| | | | 0 | | 12 | |
| | Maximum output optical power4) | (dBm) | | | 18.5 | MPA4718 |
| | | | | | 20 | MPA4720 |
| | | | | 23 | MPA4723 | |
| | | | | 24 | MPA4724 | |

| | | | | | | |
|---------------------------|-------------------------------------|------------|------|-------|------|---------------|
| | Gain Flatness | (dB) | | 0.7 | 1.0 | Peak-to-peak |
| | Noise Figure | (dB) | | 5.0 | 5.9 | Max. gain |
| | Polarization Dependent Loss | (dB) | | | 0.3 | |
| | Polarization Dependent Gain | (dB) | | | 0.3 | |
| | Polarization Mode Dispersion | (ps) | | | 0.3 | |
| | Pump light leakage | (dBm) | | | -30 | |
| | Reflection loss5) | (dB) | 40 | | | UPC |
| | Monitoring channel wavelength range | (nm) | 1500 | 1510 | 1520 | |
| Transient characteristics | Transient suppression time | (μ s) | | | 500 | |
| | Transient overshoot | (dB) | 1.5 | | 1.0 | 16dB Add/Drop |
| | Transient gain change | (dB) | | | 0.5 | 16dB Add/Drop |
| General Features | SNMP network management interface | | | RJ45 | | |
| | Communication interface | | | RS232 | | |
| | Powered by | (V) | 90 | | 265 | 220VAC |
| | | | 30 | | 72 | -48VDC |
| | Power consumption | (W) | | | 25 | |
| | Operating temperature | (°C) | 0 | | 70 | |
| | Storage temperature | (°C) | -40 | | 85 | |
| Working relative humidity | (%) | 5 | | 95 | | |

| | | | |
|--|----------------------------|-------------------|--|
| | Dimensions (W) ×(D)×(H) | 483×205×44 (mm) | |
|--|----------------------------|-------------------|--|

Note:

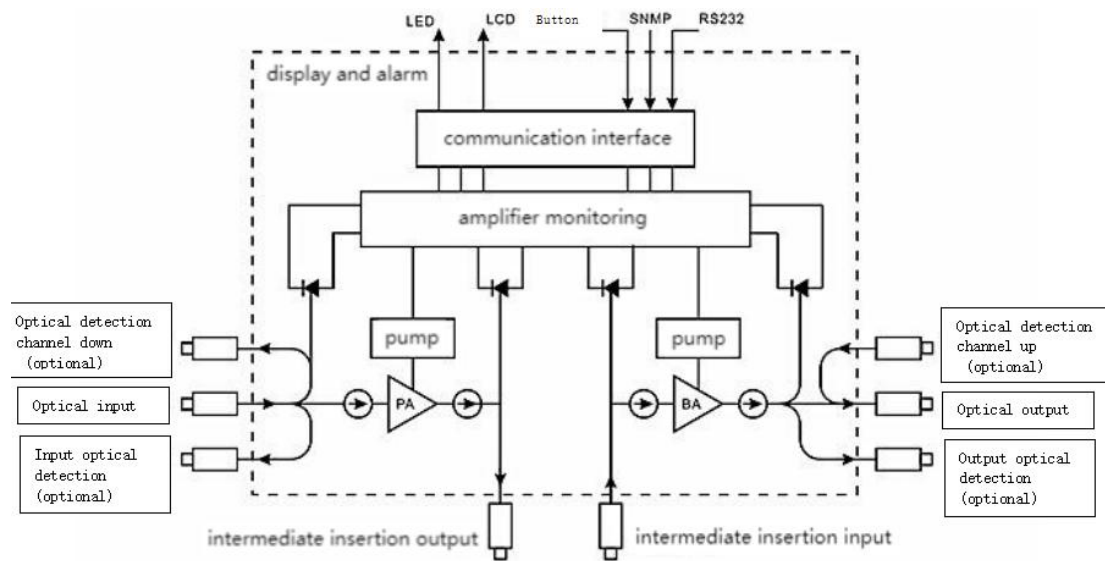
1, 2, 3, 4: These optical performances are for a typical application and can be customized according to customer needs;

5: Optional APC, reflection loss> 50dB

Function, detection and alarm:

| Function | Firmware Upgrade |
|----------|---|
| | Automatic shutdown |
| | Variable Gain Control Mode (VGA) (with power limiting) |
| | The working mode of each level can be set independently (when there is intermediate access) |
| | Output Power Control Mode (APC) |
| | Pump current control mode (ACC) |
| | Eye-safe power mode |
| | Non-volatile event log |
| Monitor | Total input power |
| | Total output power |
| | Backlight power (reflected light power) |
| | Pump status |
| | Chassis temperature |
| Alarm | Signal loss alarm |
| | Low output alarm |
| | Chassis temperature warning |
| | Pump temperature alarm |
| | Pump current alarm |
| | Excessive reflected optical power alarm (optional) |

Photoelectric diagram:



Model

| Model | Maximum output power (dBm) | Gain range typical value (dB) | Input power range typical value (dBm) | Intermediate insertion loss (dB) | Detection optical port mode | OSC optical port mode |
|---------------------|----------------------------|-------------------------------|---------------------------------------|----------------------------------|-----------------------------|-----------------------|
| MPA4718-G21-M00-S00 | 18.5 | 13~21.5 | +3~-30 | 0~8 | none | none |
| MPA4718-G30-M00-S00 | | 18~28 | +3~-35 | 0~10 | | |
| MPA4718-G35-M00-S00 | | 23~35 | 0~-35 | 0~12 | | |
| MPA4718-G40-M00-S00 | | 28.5~40.5 | +3~-30 | 0~12 | | |
| MPA4720-G30-M00-S00 | 20 | 18.5~30.5 | +3~-35 | 0~12 | | |
| MPA4720-G35-M00-S00 | | 23~35 | 0~-35 | | | |

| | | | | | | |
|-------------------------|----|---------------|------------|------|--|--|
| MPA4720-G40-M00-S0 0 | | 29~41 | +3~-3 5 | | | |
| MPA4723-G30-M00-S0 0 | 23 | 19~31 | 0~-35 | 0~12 | | |
| MPA4723-G35-M00-S0 0 | | 25~37 | 0~-37 | | | |
| MPA4723-G40-M00-S0 0 | | 29~41 | 0~-40 | | | |
| MPA4724-G35-M00-S0 0 | 24 | 25~37 | 0~-37 | 0~12 | | |
| MPA4724-G40-M00-S0 0 | | 30.5~42. 5 | 0~-40 | | | |

Remark:

- 1) Detection optical port mode options: 1. MO (with output monitoring optical port); 2. MI (with input monitoring optical port); 3. MIO (with input and output monitoring optical port)
- 2) Optical management channel OSC optical port mode options: 1. OD (OSC / Drop); 2. OA (OSC / Add); 3. ODA (OSC / Drop & Add)