

**HAPM5000 Series**  
**1.5 $\mu$ m PM Ev-Yb Fiber Amplifier**  
**(PM EYDFA)**  
**TECHNICAL INDEX**

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## **1.0 PRODUCT SUMMARY**

Huatai HAPM5000 is a C-Band Polarization Maintaining Optical Amplifier which worked in 1540~1570nm operating wavelength. Adopt Polarization Maintaining (PM) Multiclad Ev-Yb fiber, output optical power range 27~37dBm(0.5W~5W), extinction ratio >20dB.

HAPM5000 input and output both adopt single-polarized optical isolator and PM optical component. This equipment is used to ensure the high extinction ratio and the stability of amplified output polarization. Mainly maintained by narrow linewidth, single channel seed laser source's power amplification and PM in 1540~1570nm wavelength range.

## **2.0 PRODUCT FEATURE**

- Single mode, TEM<sub>00</sub> Gaussian spectrum, linear polarization output.
- Keep single channel seed light source linewidth, frequency stability and RIN
- High extinction ratio
- Low noise figure
- Stable output polarization
- High power stability
- Single-polarized input/output optical isolation
- Input output and echo reflection monitoring function, offer automatic system protection
- ACC、APC working mode
- RS232 control interface
- SNMP network management function, support remote control
- Rack-mounted type, desktop type, modular type (OEM) optional.
- Excellent P/P ratio

## **3.0 MAIN APPLICATION**

- Narrow linewidth, single channel seed laser source regeneration amplification
- Laser radar
- Optical fiber sensing
- Spectral analysis
- Coherent detection
- Frequency generation
- Coherent combination high precision

## 4.0 TECHNICAL INDEX

| Performance     |                                   |       | Index                          |      |      | Supplement                     |
|-----------------|-----------------------------------|-------|--------------------------------|------|------|--------------------------------|
|                 |                                   |       | Min.                           | Typ. | Max. |                                |
| Optic feature   | Operating wavelength range        | (nm)  | 1540                           |      | 1570 |                                |
|                 | Work mode                         |       | CW                             |      |      |                                |
|                 | Polarization output               |       | Linear polarization            |      |      |                                |
|                 | Optical quality                   |       | Single mode, TEM <sub>00</sub> |      |      |                                |
|                 | Input optical power               | (dBm) | -10                            |      | +10  |                                |
|                 | Output optical power              | (dBm) | 27                             |      | 37   | 0.5~5W                         |
|                 | Output power adjustable range     | (%)   | 10                             |      | 100  |                                |
|                 | Output power stability            | (dB)  |                                |      | 0.2  | 8 hours                        |
|                 | Extinction ratio                  | (dB)  | 15                             | 20   |      |                                |
|                 | Noise figure                      | (dB)  |                                | 5.0  |      |                                |
|                 | Input/output optical isolation    | (dB)  | 30                             |      |      |                                |
|                 | Optical return loss               | (dB)  | 50                             |      |      |                                |
|                 | Optical connector                 |       | FC/APC                         |      |      |                                |
|                 | SNMP network management interface |       | RJ45                           |      |      |                                |
| General feature | Communication interface           |       | RS232                          |      |      |                                |
|                 | Power supply                      | (V)   | 90                             | 220  | 265  | AC, stander type, desktop type |
|                 |                                   |       | 30                             | -48  | 70   | DC, stander type               |
|                 | Power consume                     | (W)   |                                |      | 60   |                                |
|                 | Operating temp.                   | (°C)  | -5                             |      | 65   |                                |
|                 | Store temp.                       | (°C)  | -40                            |      | 80   |                                |
|                 | Relative humidity                 | (%)   | 5                              |      | 95   |                                |
|                 | Size(W) × (D) × (H)               | (mm)  | 483 × 363 × 44                 |      |      | 1U stander type                |
|                 |                                   |       | 483 × 373 × 89                 |      |      | 2U stander type                |
|                 |                                   |       | 279 × 356 × 89                 |      |      | 2U desktop type                |
|                 |                                   |       | 279 × 356 × 133                |      |      | 3U desktop type                |
|                 |                                   |       | 125×150×31                     |      |      | modulator type OEM             |

## 5.0 PRODUCT SERIES

| Model        | Wavelength              | Type                            | Output optical power | Optical connector |
|--------------|-------------------------|---------------------------------|----------------------|-------------------|
| HAPM5127 -FA | 1540~1570nm<br>PM-EYDFA | Single stage<br>power amplifier | 27dBm (0.5W)         | FC/APC            |
| HAPM5130 -FA |                         |                                 | 30dBm (1W)           |                   |
| HAPM5133-FA  |                         |                                 | 33dBm (2W)           |                   |
| HAPM5136FA   |                         |                                 | 36Bm (4 W)           |                   |
| HAPM5137-FA  |                         |                                 | 37dBm (5W)           |                   |

## 6.0 ORDER ONFORMATION

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| Huatai PM<br>Optical Amplifier | Work Wavelength |                         | Type |                                 | Output Power |             | Connector |            | Exterior |             | Power Supply |        |
|--------------------------------|-----------------|-------------------------|------|---------------------------------|--------------|-------------|-----------|------------|----------|-------------|--------------|--------|
|                                | 5               | 1540~1570nm<br>PM-EYDFA | 1    | Single Stage<br>Power Amplifier | 27           | 27dBm(0.5W) | FA        | FC/APC     | 1U       | 1U Stander  | 22           | 220VAC |
|                                |                 |                         |      |                                 | 30           | 30dBm(1W)   |           |            | 2U       | 2U Stander  | 48           | -48VDC |
|                                | 1               | 1050~1080nm<br>PM-YDFA  | 2    | Double Stage<br>Power Amplifier | 33           | 33dBm(2W)   | 2D        | 2U Desktop | 05       | 5~7VDC      |              |        |
|                                |                 |                         |      |                                 | 36           | 36dBm(4W)   | 3D        | 3U Desktop |          |             |              |        |
|                                | 4               | 1528~1563nm<br>PM-EDFA  |      |                                 | 37           | 37dBm(5W)   |           |            | MD       | Modular OEM |              |        |
|                                |                 |                         |      |                                 |              |             |           |            |          |             |              |        |