

### Features

- \* Energy per pulse up to 0.35mJ
- \* High peak power up to 30kW
- \* Build-in isolator
- \* Maintenance free
- \* Random or linear polarization
- \* RS-232 interface for local supervision

### Applications

- \* LIDAR
- \* Airborne survey
- \* Mapping/3D scanning
- \* Harmonic generation

### Description

**GIP Technology** High Energy Nanosecond Erbium Fiber Amplifier Unit (AMP-EFA-NS-HE-U) is the 1.5 $\mu$ m band pulsed fiber amplifier, that provides pulsed power amplification with high peak power (up to 30kW) and high energy per pulse (up to 0.35mJ) in standalone size for long-range applications.

The AMP-EFA-NS-HE-U series provides a variety of models that can operate under various



operating conditions, such as pulse duration, pulse repetition frequency and energy, suitable for airborne 3D scanning and mapping, telemetry, harmonic, development (R&D) environments, and supercontinuum generation applications

The AMP-EFA-NS-HE-U does not need water cooling or replacement parts, only 110/220V AC power supply is needed to obtain high energy and high peak power pulsed laser. The amplifier can also be made into OEM module version, using DC +12/+24V working voltage.

In addition, these units also provide a user-friendly status monitoring via an LCD display, LED indicators, and various communication interfaces (RS232).



### GIP Technology Corporation

6F., No. 112, Xinmin St., Zhonghe Dist.,  
New Taipei City 235, Taiwan (R.O.C.)  
T:+886-2-8226-7855 [www.giptek.com](http://www.giptek.com)  
F:+886-2-8226-7955 [sales@giptek.com](mailto:sales@giptek.com)

# High Energy Nanosecond Erbium Fiber Amplifier Unit

## AMP-EFA-NS-HE-U

### Specifications

| Optical Information                         |      | Unit           | Description           |         |
|---|------|----------------|-----------------------|---------|
| Saturated output power                      | Max. | Watt           | 2                     | 10      |
| Mode of operation                           |      |                | Pulsed                |         |
| Center wavelength* <sup>1</sup>             |      | nm             | 1550±5                |         |
| Input average power                         |      | μW             | 10 ~ 30               |         |
| Pulse repetition rate* <sup>2</sup>         |      | kHz            | 5 ~ 1000              |         |
| Pulse duration* <sup>3</sup>                |      |                | 3 ~ 200               |         |
| Pulse energy                                | Max. | μJ             | 80                    | 350     |
| Peak power                                  | Max. | kW             | 10                    | 30      |
| Beam quality                                | Max. | M <sup>2</sup> | 1.1                   | 1.6     |
| Polarization                                |      |                | Random or Linear      |         |
| Polarization extinction ratio* <sup>4</sup> | Min. | dB             | 20                    | 17      |
| Power tunability                            |      | %              | 10 ~ 100              |         |
| Output fiber length                         | Min. | M              | 0.5                   |         |
| Connector                                   |      |                | FC/APC or Collimator  |         |
| Electrical Information                      |      |                |                       |         |
| Operating voltage                           |      | Volt           | 100 ~ 240VAC, 50/60Hz |         |
| Control mode                                |      |                | ACC                   |         |
| Control interface                           |      |                | RS-232                |         |
| Pulse timing                                |      |                | External trigger, TTL |         |
| Environmental Information                   |      |                |                       |         |
| Operating ambient temperature               |      | °C             | 0 ~ 60                | 15 ~ 35 |
| Storage temperature                         |      | °C             | 0 ~ 60                |         |
| Relative humidity (non-condense)            |      | %              | 5 ~ 85 (operating)    |         |
| Cooling                                     |      |                | Air cooling           |         |
| Mechanical Information                      |      |                |                       |         |
| Dimension (W x L x H)* <sup>5</sup>         |      | mm             | Benchtop              | 19" 2U  |

\*1. Available in other wavelengths

\*2. Low repetition rate operation on request.

\*3. Calculated by full width at half maximum (FWHM).

\*4. For PM version only

\*5. OEM module versions available with DC +12/+24V operating voltage.