

Key Features

- Pre-amplifier & Booster in one module
- Compact
- High output power
- Low noise figure
- 12 VDC power supply with lowest consumption
- High reliability & Maintenance free



1550nm - CW

Description

Our 2-in-1 EDFA modules, combining pre-amplifier and booster amplifier, are engineered for reliable optical communication in stratospheric environments. Miniaturized to meet strict size and weight constraints, they integrate seamlessly into compact high-altitude systems. Delivering up to 5W output power with optimal efficiency and low noise figure, these modules ensure robust performance for next-generation High-Altitude Platform Stations (HAPS). Designed for durability and precision, they empower advanced communication payloads, enabling dependable connectivity in challenging atmospheric conditions.

Application



- High-Altitude Platform Station (HAPS)
- Free-space optical communication



ISO 9001 : 2015
Certificate No.: CC 5346

Our product is manufactured under a HKQAA ISO 9001 certified quality management system. The ISO 9001:2015 certification applies to the Hong Kong production site only.

Specifications

2-in-1 EDFA for HAPS	Pre-Amplifier	Booster Amplifier
Input Signal Level	-50 to -10 dBm	-6 to +10 dBm
Small Signal Gain	Min. 40 dB @ -50 dBm input power	-
Optical Output Power (under APC mode)	0.1 mW to 1 mW	-
Saturated Output Power (at 0 dBm input power, under ACC mode)	-	Min. 4.0 W, Typ. 5.0 W @ operation case temp. -10 to +65 °C
Operating Wavelength	C band ITU channel (with bandpass filter)	1540 nm to 1565 nm
Noise Figure	Max. 4.5 dB @ -20 dBm input power	Typ. 5.0 dB , Max. 6.5 dB @ 0 dBm input power
Input & Output Isolation	Min. 30 dB	Min. 30 dB
Return Loss	Min. 45 dB	Min. 45 dB
Polarization Dependent Gain	Typ. 0.3 dB, Max. 0.5 dB	Typ. 0.3 dB, Max. 0.5 dB
Control Mode	APC	ACC

General Parameters

	Value
Operation Case Temperature	-10 to +65 °C
Storage Temperature	-20 to +70 °C
Power Consumption	Max. 55.2 W @ 12 ± 0.25 VDC
Dimensions	90(W) x 95(D) x 36(H) mm
Optical Connector	FC/APC
Optical Fiber	SMF-28
Remote Control Port	UART
Electrical Connector	Single row connector (12 pins)

Ordering Information

Product Code	AEDFA-PA-BO-aa-HAPS	aa : Saturated output power in dBm
--------------	---------------------	------------------------------------

Amonics undertakes continuous and intensive product development to ensure its product performance at the highest technical standards. As a result, the specifications in this document are subject to change without notice.

Amonics Limited (Hong Kong)

14/F, Lee King Industrial Building, 12 Ng Fong Street,
San Po Kong, Kowloon, Hong Kong
Tel :+852 2428 9723 Fax :+852 2428 9704

Beijing Amonics Co. Ltd. (Beijing)

Room 902, Unit 1 Joy Mansion, NO.99 Chaoyang North Road, Beijing China 100123
Tel :+86 10 8478 3386 Fax :+86 10 8478 3396
Email: contact@amonics.com Website: www.amonics.com

