aurora NETWORKS

FA3500

Features

- High output power level, from 14 to 21 dBm
- Low noise figure
- Single and dual amplifier configurations
- Gain flattened versions available
- Optical path isolation (input and output)
- Output power alignment
- Constant current and constant gain modes of operation
- Front panel laser On/Off interlock switch
- Hot plug-in/out
- Local and remote status monitoring and control
- Occupies one full-depth slot

Optical Amplifier

The Aurora FA3500 series is a family of high-output, extremely compact 1550 nm optical amplifiers. Output powers ranging from 14 to 21 dBm are available in a single-width module designed for use in the CH3000 3RU chassis. Dual amplifier versions, which provide two optically independent amplifiers in a single-width module, are also available. These high performance amplifiers allow operators to use 1550 nm analog and DWDM transmitters to deliver high-quality broadcast and digital narrowcast content over significant transmission distances.

The compact design makes these amplifiers the highest density EDFAs in the market, dramatically reducing rack space requirements in the headend and hubs. This design enhances the deployment of traditional HFC, passive HFC and fiber to the home (FTTH) networks.

FA3500 Product Specifications

Physical:

- Dimensions:
  13.0" D x 5.25" H x 1.0" W (3RU)
  (33 cm x 13.3 cm x 2.5 cm)
- Weight: 2.0 lbs (0.9 kg)

Environmental:

- Operating temperature range:
  All models except FA3524S:
  –20º to +65ºC (–4º to 149ºF)
  Model FA3524S:
  0º to +50ºC (32º to 122ºF)
- Storage temperature range:
  –40º to +85ºC (–40º to 185ºF)
- Humidity: 5% to 95% non-condensing

General:

- Hot plug-in/out
- Modes of operation:
  constant current or constant gain
- Output power alignment:
  Manual in constant current mode
  Automatic in constant gain mode

Optical Interface:

- Optical connector: SC/APC
  (at Back Plate BP-F2, BP-F3 or BP-F4)

Optical:

- Input signal wavelength: 1530–1565 nm
- Input power range: –10 to +10 dBm
- Optical signal path isolation: >30 dB
- Output power stability: ±0.1 dB
- Output power margin: 0.3 dB (at 0 dBm input)
- Output power adjustment range: –3.0 dB
  (from nominal output power, minimum)

Performance Parameters:

Model Number[1]	Output Power, nominal (dBm)	Power Consumption, max (Watts)	Noise Figure, typical[2] (dB)	Noise Figure, max[2] (dB)
FA3514S	14	6	4.5	5.0
FA3514D	2 x 14	9	4.5	5.0
FA3517S	17	6	4.5	5.0
FA3517D	2 x 17	12	4.5	5.0
FA3517F	17	7	*N/A*	*N/A*
FA3517G	2 x 17	14	*N/A*	*N/A*
FA3519F	19	13	*N/A*	*N/A*
FA3520S	20	13	4.5	5.0
FA3521S	21	13	4.7	5.2
FA3524S	2 x 21	25	4.7	5.2

[1] The final alphanumeric characters of model numbers in this table, with the exception of Model FA3524S, have the following meaning:
S = single-amplifier module D = dual-amplifier module
F = single-amplifier module with gain flattening G = dual-amplilfier module with gain flattening
Model FA3524S is a 24 dBm amplifier with two optical output ports, each with 21 dBm (nominal) optical output power.

[2] Measured optically at 0 dBm input, λ = 1550 nm in vacuum, T_A = 25ºC.

Ordering Information

F A 3 5 * * * – A S

- F A 3 5 = Fiber Amplifier (EDFA)
- * * * = Optical output power and module configuration *(See Note 1.)*
- A S = AS = SC/APC Connector

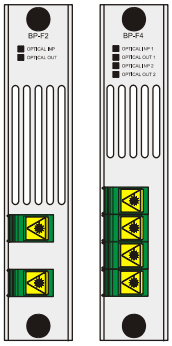
Note 1: Reference the Performance Parameters table, above, for available model numbers and their associated configurations (nominal output power, single or dual amplifiers, with or without gain flattening).

Required Module Back Plates

B P – F 2
Single Output EDFA

B P – F 4
Dual Output EDFA

Back Plate is included with ordered module.



Note 2: Model FA3524S, with dual 21 dBm outputs, requires a special back plate, BP-F3, that is also provided with this module. The FA3524S is a single-width chassis module but, because of operating temperature factors, is supplied with the double-wide BP-F3 back plate that forces an extra unoccupied adjacent slot in the CH3000 chassis when installed to provide additional cooling. Because of this, a BP3000 blank face plate is also included with this module to use on the front of the chassis. Special installation instructions for the FA3524S and these plates are included with the shipped unit.

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