

Features

- 21 dBm output power level
- User-selectable Constant Current or Constant Gain mode
- Low noise figure
- Optical path isolation (input and output)
- Remote status monitoring and control
- Hot plug in/out

Optical Amplifier



The Aurora FA4521S module is a high-output, extremely compact optical amplifier with an output power limiting function that limits the optical output power to a maximum 21.5 dBm to comply with requirements for Class 1M laser products. This high performance amplifier allows operators to use 1550 nm analog and DWDM transmitters to deliver high-quality broadcast and digital narrowcast content over significant transmission distances.

This optical amplifier enhances the deployment of traditional HFC, passive HFC and fiber to the home (FTTH) networks. The unit is designed as a plug-in module for Aurora's NC4000 series Fiber Node Platforms, including the VH4000 "Virtual Hub," and, when used in the latter, provides a practical alternative to OTN-style cabinets.

FA4521S

Product Specifications

Physical:

- Dimensions: 4.0" L x 2.2" H x 2.3" W (10.2 cm x 5.6 cm x 5.8 cm)
- Weight: 0.6 lbs (0.3 kg)

Environmental:

- Operating temperature range: -40° to +85°C (-40° to 185°F)
- Storage temperature range: -40° to +85°C (-40° to 185°F)
- Humidity: 5% to 95% non-condensing

General:

- Hot plug in/out
- Modes of operation: Constant Current or Constant Gain

Optical Interface:

- Optical connectors: SC/APC

Power Requirements:

- Input voltage: 24 V_{DC}
- Power consumption: 10 W

Status Indicator LEDs:

- CURR MODE = Lighted green when operating in constant current (power) mode
- GAIN MODE = Lighted green when operating in constant gain mode
- EDFA@MAX / RED=FAILURE - Bi-state LED that is yellow if laser operating at maximum output power (21.5 dBm) and red if limit exceeded (for Class 1M protection; pumps shut down at 22 dBm)

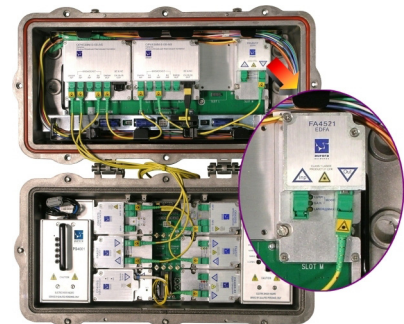
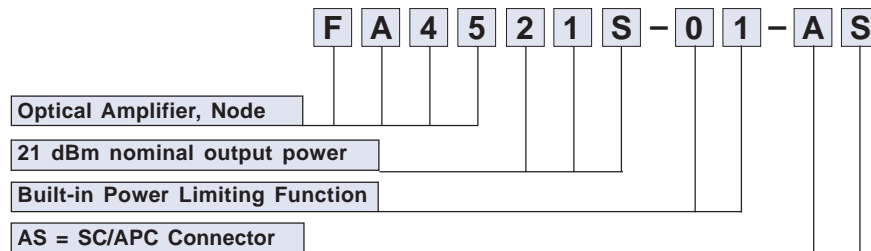
Optical:

- Input signal wavelength: 1530 – 1565 nm (Output power may vary from nominal over this range.)
- Optical signal path isolation, input: < -30 dB (Dual stage isolator is used with 30 dB isolation at -40°C.)
- Composite input power range:
Constant Current Mode: -6 to +10 dBm
Constant Gain Mode: -6 to +11 dBm
Constant Gain Mode range: 11 – 27 dB (Gain step is 0.25 dB over this range.)
- Nominal output power: 21 dBm (with 0 dBm input)
- Output power stability:
Constant Current Mode: ±0.6 dB
Constant Gain Mode: ±0.7 dB
- Output power margin: 0.1 dB min, 0.2 dB max
- Noise figure: 5.8 dB (typ 5.2 dB) (at 0 dBm input, over all wavelengths and temperatures)
- Noise figure, broadcast: 5.0 dB (typ < 4.5 dB) (1545 – 1563nm input)
- Flatness, multiple channels:
±0.6 dBm (for composite input power 0 dBm to 4 dBm)
±1.0 dBm (for composite input power -3 dBm to 7 dBm)

Remote Monitoring / Control Parameters:

Optical input power, laser current, optical output power, laser temperature, operational mode

Ordering Information



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