

Optical Node Series (NC)

FA4527E-02

Gain-Flattened, 8-port Optical Amplifier with ASE Muting Function

FEATURES

- High output power 18 dBm on each of eight outputs
- Ideal for externally modulated and directly modulated (AT3520, AT3535M, and AT3545) DFB transmitters
- Gain flattened for full C-band operation
- ASE muting function
- Low noise figure
- Optical path isolation (input and output)
- Remote status monitoring and control
- Hot plug in/out
- User-selectable constant current or constant gain modes
- Optimized for RFoG



PRODUCT OVERVIEW

ARRIS' FA4527E-02 is a high-output, gain-flattened, compact optical amplifier with an output power limiting function optimized for RFoG deployments. This high performance amplifier enables operators to use externally and directly modulated DFB transmitters to deliver high-quality broadcast and narrowcast content over significant transmission distances. This EDFA module features eight high level outputs (18 dBm per output).

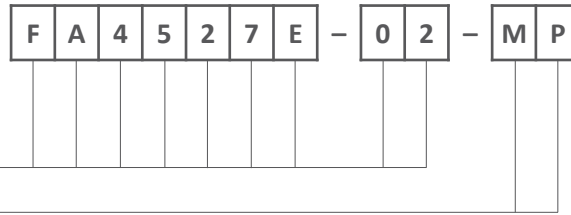
The FA4527E-02 optical amplifier enables the deployment of multiple architectures. When combined with ARRIS's OR4148 or OR4168 Diplexer/Return Receiver (for RFoG or RFPON applications, respectively), extended reach fiber-to-the-premises networks can be deployed. The unit is designed as a plug-in module for ARRIS'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.

This EDFA model provides two operating modes: a non-adjustable constant-current mode and a user-adjustable constant-gain mode.

The FA4527E-02 also features an ASE muting function that will prevent the amplification of spontaneous emission in the absence of an acceptable input signal level. The threshold at which the function is activated (to shut down the pump laser) can be set by remote management software. (An automatic recovery to normal operation occurs once input power has returned to a level approximately 0.8 dB above the threshold.)

SPECIFICATIONS	
Characteristics	Specification
Physical	
Dimensions	4.0" L x 2.3" H x 6.8" W (10.2 cm x 5.8 cm x 17.3 cm)
Weight	2.0 lbs (0.9 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	
Mode of operation	Constant Current or Constant Gain
ASE Muting	user selectable thresholds: <ul style="list-style-type: none"> -29 to 14 dBm range -29 dBm default
Power Requirements	
Input voltage	24 V _{DC} (1.5 A)
Power consumption	36 W (max)
Status Indicator LEDs	
	CC - unit is in constant current mode
	CG - unit is in constant gain mode
	POWER - green when unit has electrical power
	MUTE - red; ASE muting is activated, input is below threshold
	LIMIT - yellow; output power is limited to 21.8 dBm (eye safety)
	FAIL - red; output power is below user-set threshold or laser switch is off
	INTERLOCK - red; MPO connector is open, laser safety activated (pumps are turned off)
Laser Switch	
	<ul style="list-style-type: none"> Turns the pump laser bias current on and off
Optical Interface	
Optical connectors	SC/APC (input) and MPO with safety interlock (output) Note: Use jumper cable JC1443-12 (MPO-to-MPO jumper) with this EDFA.
Optical	
Input signal wavelength	1530 – 1561 nm (Gain flatness is specified over this entire wavelength range.)
Optical signal path isolation	< -30 dB
Gain flatness (peak to valley)	< 2.5 dB
Constant Gain Mode	User settable from 10 to 22 dB. Full gain range may not be accessible depending upon input conditions. For the specified gain flatness, gain must be between 14 to 18 dB with composite input power between -9 and 4 dBm. Note 1: Output power will be clamped by max pump current limit in constant gain mode if targeted output power is above 18 dBm. Note 2: Gain can be set at 0.25 dB per step.
Constant Current Mode	Composite input power range for specified gain flatness is 0 dBm to 4 dBm. Nominal output power of 18 dBm per port with composite input power 2 dBm or above under constant current mode.
Output power stability	± 0.6 dB
Output power margin	0 dB to 0.4 dB
Noise figure	5.0 dB typical, 5.5 dB max over the specified input wavelength range under constant current mode, within composite power range from 0 dBm to 4 dBm.
Remote Monitoring/Control Parameters	
Status displayed	Optical input power, optical output power, laser current; Alarms (interlock, ASE muting, TEC current limit, laser temperature limit, output power, hardware failure).
Control Parameter	Output power threshold for alarm, operational mode and gain value in constant gain, ASE muting threshold.

ORDERING INFORMATION



Optical Amplifier, Node, Eight 18 dBm Outputs

MP = MPO Connector

RELATED PRODUCTS

NC4000 Optical Node	Optical Patch Cords
VH4000 VHub	Optical Passives
Fiber Service Cable	Installation Services

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

Note: Specifications are subject to change without notice.

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