



OFA

Optical Fiber Amplifiers

Optelian's Optical Fiber Amplifiers (OFA) deliver optimized reach extension in metro, regional and long-haul applications. Optical amplifiers, with flexible gain and power options, enable a cost-effective optical infrastructure.

Features

- C-band amplifier
- 17dBm or 20dBm output
- Transient control
- Low noise, 4.6 dB typical NF
- Preamp, postamp, or lineamp
- Optional variable optical attenuator (VOA)
- Only requires a single universal service slot for operation
- Quick and easy installation

Applications

- DWDM Reach extension
- Metro and long-haul networks
- (R)OADMs

Adding amplification allows telecom and multi-service operators to use power-saving Optelian systems in more applications such as long-haul DWDM, interconnecting rings in regional applications, and higher-loss metro OADM applications.

Optelian's OFAs are gain-flattened, low-noise, C-Band amplifiers with either 17 dBm or 20 dBm output power. They can be used in preamp, postamp (booster), or lineamp configurations. Their power consumption is as low as 9.5 watts.

The OFAs can be managed remotely through Optelian's ONM network management software or they can be configured stand-alone at the shelf with the easy-to-use, card-level, graphical user interface.

Their small size, each at 1 slot wide, makes them easy to fit into crowded racks and remote terminals.

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Specifications

Parameter		Minimum	Typical	Maximum
Operating Wavelength		1529nm	-	1563nm
Input Power Range	OFA-210/230	-35 dBm (preamp) -28 dBm (booster)	- -	-3 dBm (preamp) +2 dBm (booster)
	OFA-310	-32 dBm (preamp) -25 dBm (booster)	- -	0 dBm (preamp) +5 dBm (booster)
Output Power (Booster/Pre)	OFA-210/230	-17 dBm	-	17 dBm
	OFA-310	-17 dBm	-	20 dBm
Variable Gain Range	Booster	10 dB	15 dB	20 dB
	Preamp	13 dB		25 dB
Polarization Dependant Gain			0.3 dB	0.5 dB
Gain Setting Accuracy		-0.5 dB	-	-0.5 dB
Gain Flatness Over Operating Wavelength Range			±0.5 dB	±0.6 dB
Noise Figure		-	4.6 dB	-
Polarization Mode Dispersion		-	-	0.3 ps
VOA Setting		0 dB	-	20 dB

Electrical, Mechanical and Environmental Specifications

Parameter		Minimum	Maximum
Operating Temperature Range	OFA-210/230 ¹	-5 °C (23°F)	50 °C (122°F)
	OFA-210/230/310 ²		55 °C (131°F)
Storage Temperature		-40 °C (-40°F)	85 °C (185°F)
Relative Humidity		5%	85%
Power Dissipation	OFA-210/230	-	9.5 W
	OFA-310	-	11 W
DC Power Supply		-48 V nominal	
Dimensions (H x W x D)		6.9" x 1.2" x 9.2"	
Optical Connectors		LC/PC	

¹ In OMS-519 shelf.

² In OMS-7190/OMS-2190 and OMS-219 shelves.

Interface

Parameter	Description
Optical	LC/PC Connectors, SMF
Electrical	Communicates via the shelf backplane to an optional network management interface. Mounts into any of Optelion's active shelves.
Front Panel	The tri-color power, alarm, and port LEDs indicate the status of the OFA and of the 2 ports (P1 and P2). The keypad and LED Matrix Display combination allows the user to view and change card configuration.

UNITED STATES

1700 Enterprise Way, SE, Ste. 101
Marietta, GA 30067-9219
T: +1 877 225 9428
T: +1 770 690 9575

CANADA

1 Brewer Hunt Way
Ottawa, Ontario K2K 2B5
T: +1 613 287 2000
sales@optelion.com



optelion.com