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Table of Contents

Amplifier

- Pre-Amp,Booster and In-line Amplifier
- Standard EDFA
- High Power L-Band EDFA
- High Power C-Band EDFA
- C-Band DWDM EDFA
- · L-Band DWDM EDFA
- C+L Band EDFA
- Raman Amplifier
- YDFA

Laser

- High Power Narrow Linewidth Laser
- High Power Fiber Laser
- 1064nm Pulse Laser
- C+L Band ASE Broadband Light Source
- 1050nm ASE Broadband Light Source
- CWDM Super-Wideband Light Source



## **Applications**

- SONET/SDH Systems
- Optical Communication
- Pre-amp, Booster & In-line emulation
- CATV
- Laboratory

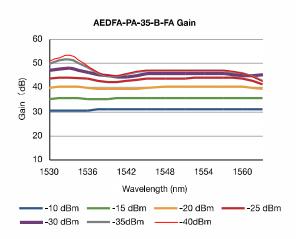


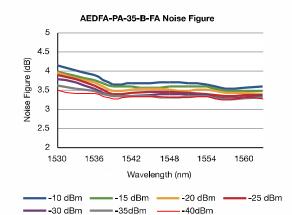


## Description

Amonics 'EDFA range adopts unique design to produce maximum signal gain and saturated output power while maintaining low noise figure, enabling test capabilities in system or component level manufacturing and characterizing processes, as well as facilitating highly demanding R&D applications.

The compact turnkey benchtop or 19" rackmount unit incorporates a user-friendly front panel housing with a LCD monitor display, key switch, power control knob and optical connectors. An integrated RS232 computer interface enables easy control, diagnostic functions and data acquisition.





## **Key Features**

- Turnkey device
- RS232/Ethernet computer interface
- · High output power
- High gain
- Low noise figure
- Long operating life

Pre-Amp, Booster and In-line Amplifie

## Pre-amp Specifications

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	A-PA-30 A	EDFA-PA-	General Parameters	
<b>35</b> Input Signal Level			Operation Temperature : 0 to 40 °C	
Optical Gain @ -40dBm >3	30dB >35dB		Storage Temperature: -10 to 70 °C Power Supply (VAC): 90 – 240, 47 – 63Hz	
Optical Gain @ -10dBm >2	0dB	>30dB	Dimensions(mm): Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x	
Noise Figure @ -20dBm	< 4.3dB		45(H)	
Operation Wavelength	1530nm to 15	563nm	Other standard rackmount sizes are also available Safety Control: Key-lock switch, BNC interlock key	
Input / Output Isolation	> 30dB		Power Monitoring: Output power, Input power (optional) Remote Control Port: DB-9 female (RS232)	
Polarization Dependent Gain Typ. 0.3dB, Max. 0.5dB		RJ-45 (TCPIP/Ethernet) (optional)		
Polarization Mode Dispersion	< 0.3ps		Protection: Pump laser (TEC) overheat Optical Fiber: SMF-28	
Booster Specifications				
	AEDFA-BO-13	B AEDF	A-BO-18 AEDFA-BO-23	
Input Signal Level		-6 to	+3dBm	
Saturated Output Power @-3dBm input Signal	> +13dBm	> +1	8dBm > +23dBm	
Noise Figure@-3dBm Input Signal	< 5.0dB	< 5	.5dB < 6.0dB	
Optical Gain@-6dBm Input Signal	> 19dB	> 24	4dB > 29dB	
Operation Wavelength		1530 nm	n to 1563nm	
Input / Output Isolation		>	30dB	
Polarization Dependent Gain		Typ. 0.3d	B, Max. 0.5dB	
Polarization Mode Dispersion		< (	D.3ps	

#### **In-line Specifications**

	AEDFA-IL-13	AEDFA-IL-18	AEDFA-IL-23
Input Signal Level		-25 to -3dBm	
Saturated Output Power @-3dBm input Signal	> +13dBm	> +18dBm	> +23dBm
Noise Figure@-20dBm Input Signal	< 5.0dB	< 5.5dB	< 6.0dB
Optical Gain@-25dBm Input Signal	> 25dB	> 30dB	> 35dB
Operation Wavelength		1530nm to 1563nm	
Input / Output Isolation		> 30dB	
Polarization Dependent Gain		Typ. 0.3dB, Max. 0.5d	В
Polarization Mode Dispersion		< 0.3ps	



## **Ordering Information**

Product Code	AEDFA-aa-bb-c-dd	aa: PA for Pre-amp, BO for Booster, IL for In-line
		bb: Saturated output power in dBm
		c: B for Benchtop case, R for 1U 19"Rackmount case
		dd: FA for FC/APC, FC for FC/UPC
		SA for SC/APC, SC for SC/UPC

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

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- SONET/SDH Systems
- **Optical Communication**
- Fiber Optic Sensing
- CATV
- Laboratory

## Description

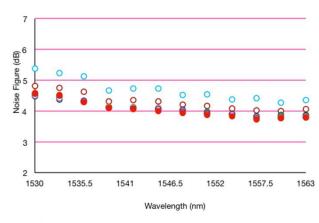
Standard Erbium Doped Fiber Amplifier (EDFA

Erbium-doped Fiber Amplifiers (EDFAs) are our core products. With years of experience on design and products, our EDFAs excel in stability, reliability and robustness. They have excellent track records with happy users around the world and enjoy huge success in various applications. The EDFAs feature high output power, high gain with very low noise, and they can be customized to accommodate a wide range of input signal levels.

The turnkey microprocessor-controlled EDFAs provide illustrative alarms and status indicators. An integrated RS232 computer interface enables easy control, diagnostic functions and data acquisition. All EDFAs are available in both benchtop and rackmount casings.

## **Key Features**

- Turnkey device
- RS232/Ethernet computer interface
- High output power
- High gain
- Low noise figure
- Highly reliable and durable



AEDFA-23-B-FA Noise Figure

OdBm O-5dBm O-10dBm O-15dBm O-20dBm O-25dBm ●-30dBm

The product is manufactured under a HKQAA ISO 9001 certified quality management system The ISO 9001:2008 certification applies to the Hong Kong production site only

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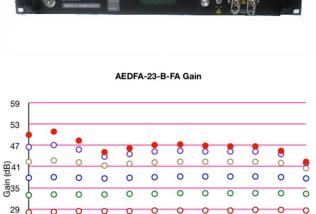
17

11

1530

1535.5

1541



1546.5

Wavelength (nm)

OdBm O-5dBm O-10dBm O-15dBm O-20dBm O-25dBm ●-30dBm

1552

1557.5

1563



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#### Specifications

	AEDFA-13	AEDFA-18	AEDFA-23	
Saturation Output Power (at -3dBm input signal)	> +13dBm	> +18dBm	> +23dBm	
Small-Signal gain at 1550nm (at -30dBm input signal)	> 30dBm	> 32dBm	> 37dBm	
Noise Figure (typ.) (at -3dBm input signal)	5.0dB	5.5dB	6.0dB	
Operating Wavelength	1528nm – 1565nm			
Input Isolation	> 30dB			
Output Isolation	> 30dB			
Polarization Dependent Gain	Typ. 0.3dB, Max. 0.5dB			
Control Mode	ACC, APC, AGC(optional)			

\* Other output power models available upon request

#### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	۰C	0 to +40
Storage Temperature	۰C	-10 to +70
Power Supply	VAC	90 – 240, 47 – 63Hz
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available
Mechanical Safety Control	-	Key-lock switch, BNC interlock key
Optical Power Monitoring	-	Output power, Input power (optional)
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

#### Option

Gain flattening filtering



## **Ordering Information**

Product Code	AEDFA-xx-y-zz	xx : Saturation output power in dBm y : B for Benchtop, R for 19" Rackmount zz : FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC
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## Applications

- · SONET/SDH Systems
- · Optical Communications
- · Fiber Optic Sensing
- · Booster, In-line & Pre-amp
- · Scientific applications



## Description

High Power L-Band EDFA

Amonics' specialist products – L Band EDFA enable a wide bandwidth, high capacity data communication). Which can provide a fully integrated optical communication solution. High Gain, Very Low Noise and High OSNR. These can fulfil to desired requirements for long-distance communication applications.

The turnkey microprocessor-controlled EDFAs provide illustrative alarms and status indicators. An integrated RS232 computer interface enables easy control, diagnostic functions and data acquisition. The EDFAs are available in both benchtop and rackmount casings.

## Key Features

- High Output Power
- High gain
- Low noise figure
- Turnkey device
- RS232/Ethernet computer interface

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#### Specifications

	AEDFA-L-27	AEDFA-L-30	AEDFA-L-33
Saturation Output Power (at 0dBm input signal)	> +27dBm	> +30dBm	> +33dBm
Input Signal Level	-6 to +6dBm	-6 to +6dBm	-6 to +6dBm
Noise Figure (typ.) (at 0dBm input signal)	6.0dB	6.0dB	6.5dB
Operating Wavelength	1570nm – 1603nm	1570nm – 1603nm	1570nm – 1603nm
Input Isolation	> 30dB		
Output Isolation	> 30dB		
Polarization Dependent Gain	< 0.3dB		
Control Mode	ACC, APC, AGC(optional)		

\* Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Specifications	
Operation Temperature	°C	0 to +40	
Storage Temperature	°C	-10 to +70	
Power Supply	VAC	90 – 240, 47 – 63Hz	
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) Other standard rackmount sizes are also available	
Mechanical Safety Control	-	Key-lock switch, BNC interlock key	
Optical Power Monitoring	-	Output power, Input power (optional)	
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)	
Protection	-	Pump laser (TEC) overheat	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	SMF-28	

#### Option

## INVISIBLE LASER RADIATION AVOID EXPOSURE TO BEAM CLASS 3B LASER PRODUCT

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## **Ordering Information**

Product Code	AEDFA-L-bb-c-dd	bb : Saturated output power in dBm c : B for Benchtop, R for 19" Rackmount dd: FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC

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## **Applications**

- SONET/SDH Systems
- Optical Communication
- Fiber Optic Sensing
- CATV
- Laboratory



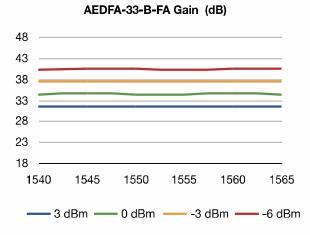


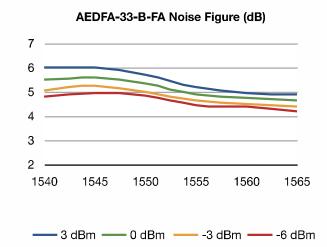


## Description

Amonics' High Power EDFA series offer saturated output power from 0.5W to 20W. It is a standalone turnkey device, available in benchtop or rackmount casing.

The front panel includes a LCD monitor display, key switch, power adjust control knob, and fiber input and output adaptors. A RS232 computer interface is provided for control and monitoring. This EDFA is well suited for R&D in the fields of telecommunications, fiber optic sensing, and CATV applications.





## **Key Features**

- Turnkey device
- RS232/Ethernet interface
- High output power, up to 20W
- High gain
- Low noise figure
- Highly reliable and durable

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### Specifications

	AEDFA-27-B	AEDFA-30-B	AEDFA-33-B	
Saturation Output Power (at 0dBm input signal)	> +27dBm	> +30dBm	> +33dBm	
Input Signal Level	-6 to +3dBm	-6 to +3dBm	-6 to +3dBm	
Noise Figure (typ.) (at 0dBm input signal)	5.5dB	6.0dB	6.0dB	
Operating Wavelength	1535nm – 1565nm	1540nm – 1565nm	1540nm – 1565nm	
Input Isolation	> 30dB			
Output Isolation	> 30dB			
Polarization Dependent Gain	Typ. 0.3dB, Max. 0.5dB			
Control Mode	ACC, APC, AGC (optional)			

Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	°C	0 to +40
Storage Temperature	°C	-10 to +70
Power Supply	VAC	90 – 240, 47 – 63Hz
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) Rackmount: 485(W) x 360(D) x 90(H)
Mechanical Safety Control	-	Key-lock switch, BNC interlock key
Optical Power Monitoring	-	Output power, Input power (optional)
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

#### **Other Option**

Gain flattening filtering

**Ordering Information** 



Product Code	AEDFA-xx-y-zz	xx : Saturation output power in dBm
		y: B for Benchtop, R for 19" Rackmount zz: FA for FC/APC, FC for FC/UPC
		SA for SC/APC, SC for SC/UPC

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## **Applications**

- **DWDM** Applications
- SONET/SDH Systems
- **Optical Communication**
- Fiber Optic Sensing



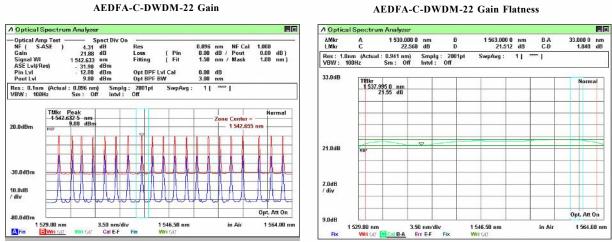
## **Description**

C-band DWDM Erbium-doped Fiber Amplifiers (EDFA) are among the Amonics' specialist products. They are designed with high-power pump laser and highstability pump combiners, renowned for robustness in high power boosting. The EDFAs feature high output power, high gain with very low noise, and they can be customized to accommodate a wide range of input signal levels. They are thus ideal for various demanding applications.

An integrated RS232 computer interface is optional, providing illustrative alarms and status indicators and thus enabling easy control, diagnostic functions and data acquisition. This module version is particularly suitable for system integration for a wide range of applications.

## **Key Features**

- High output power
- High gain
- Low noise figure
- · Highly reliable and durable
- Optional RS232 computer interface



#### AEDFA-C-DWDM-22 Gain Flatness



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		AEDFA-C-DWDM								
Saturation Output Power		+13dBm			+18dBm			+22dBm		
Wavelength		1529 - 1563nm								
Gain (dB)	21	25	30	21	25	30	21	25	30	
Input Power (dBm)	-8	-12	-17	-3	-7	-12	+1	-3	-8	
Noise Figure (typ.)		5.0dB			5.3dB			5.5dB		
Gain Flatness (peak to peak)		Typ. 1.0dB, Max. 2.0dB								
Input Isolation		> 30dB								
Output Isolation		> 30dB								
Polarization Dependent Gain		Typ. 0.3dB, Max. 0.5dB								
Control Mode	ACC, APC, AGC (optional)									

\* Other output power models are available upon request

### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	°C	0 to +40
Storage Temperature	°C	-10 to +70
Power Supply	VDC	5.0 ± 0.1
Dimensions	mm	120(W) x 200(D) x 25(H) for +13dBm output power 120(W) x 200(D) x 33(H) for +18 & +22dBm output power
Optical Power Monitoring	-	Output power, Input power (optional)
Electrical Connector Interface (Optional for modules with RS232 interface)	-	DB9 female
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	Min. 0.5m long SMF-28

#### Option

• RS232 interface

Gain flattening filtering



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## **Ordering Information**

Product Code AEDFA-C-DWDM-aa-M-cc	aa : Saturated output power in dBm cc : FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC
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## Applications

- DWDM Applications
- SONET/SDH Systems
- Optical Communication
- Fiber Optic Sensing

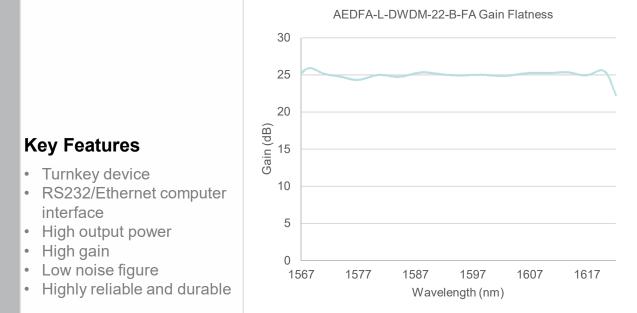




## Description

L-band and Extended L-band DWDM Erbium-doped Fiber Amplifiers (EDFA) are among the Amonics' specialist products. They are designed with high-power pump laser and high-stability pump combiners, renowned for robustness in high power boosting. The EDFAs feature high output power, high gain with very low noise, and they can be customized to accommodate a wide range of input signal levels. They are thus ideal for various demanding applications.

The turnkey microprocessor-controlled EDFAs provide illustrative alarms and status indicators. An integrated RS232 computer interface enables easy control, diagnostic functions and data acquisition. The EDFAs are available in both benchtop and rackmount casings.





	AEDFA-L-DWDM			AEDFA-L-EX1-DWDM		AEDFA-L-EX2-DWDM		Remark		ĸ		
Saturation Output Power	+22dBm			+22dBm			+22dBm			-		
Wavelength	1570 - 1603nm			15	1570 - 1610nm		1570 - 1620nm		-			
Gain (dB)	21	25	30	21	25	30	21	25		Inp	Input Power	
Gain (dB)	21	25	30	21			21	25	-	+1	-3	-8
Noise Figure (typ.)	6.0dB			6.0dB			6.5dB					
Gain Flatness (peak to peak)	Typ. 1.0dB, Max. 2.0dB			Typ. 1.0dB, Max. 2.0dB			Typ. 1.0dB, Max. 2.0dB					
Input Isolation		> 30dB							-			
Output Isolation		> 30dB							-			
Polarization Dependent Gain		Typ. 0.3dB, Max. 0.5dB							-			
Control Mode		ACC, APC, AGC(optional)								-		

Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	۰C	0 to +40
Storage Temperature	°C	-10 to +70
Power Supply	VAC	90 – 240, 47 – 63Hz
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available
Mechanical Safety Control	-	Key-lock switch, BNC interlock key
Optical Power Monitoring	-	Output power, Input power (optional)
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

#### Option

Product Code

Gain flattening filtering

#### **Ordering Information**



SA for SC/APC, SC for SC/UPC

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## Applications

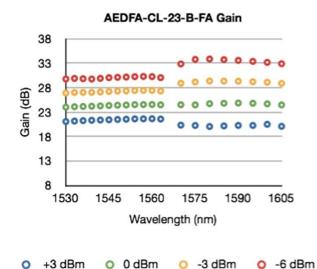
- SONET/SDH Systems
- Optical Communication
- Fiber Optic Sensing
- CATV
- Laboratory

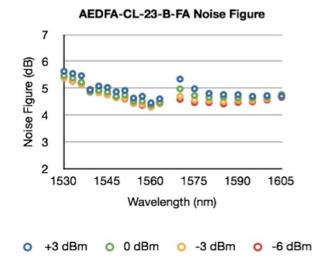




## Description

Amonics offers C+L band EDFAs which are commonly used in a wide range of applications including free space communications, coherent beam combining and detection systems. The compact turnkey benchtop or 19" rackmount unit incorporates a user-friendly front panel housing with a LCD monitor display, key switch, power adjust control knob and optical connectors. Computer interface through RS232 or Ethernet is possible.





## **Key Features**

- Turnkey device
- RS232/Ethernet interface
- High output power
- High gain
- Low noise figure
- Highly reliable and durable

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### Specifications

opecifications						
	AEDFA-CL-17	AEDFA-CL-20	AEDFA-CL-23			
Saturation Output Power (at 0dBm input signal)	> +17dBm	> +20dBm	> +23dBm			
Input Signal Level	-6 to +3dBm	-6 to +3dBm	-6 to +3dBm			
Small Signal Gain @ -6dBm Input Signal	> 19dB	> 24dB	> 29dB			
Operation Wavelength	1528nm to 1562nm + 1570nm to 1603nm	1528nm to 1562nm + 1570nm to 1603nm	1528nm to 1562nm + 1570nm to 1603nm			
Noise Figure (typ.) (at 0dBm input signal)	< 6dB	< 6dB	< 6.5dB			
Input / Output Isolation	> 30dB					
Control Mode	ACC, APC					

\* Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	۰C	0 to +40
Storage Temperature	°C	-10 to +70
Power Supply	VAC	90 – 240, 47 – 63Hz
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available
Mechanical Safety Control	-	Key-lock switch, BNC interlock key
Optical Power Monitoring	-	Output power, Input power (optional)
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

### **Other Option**

Gain flattening filtering



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## **Ordering Information**

Product Code AEDFA-CL-aa-b-cc	<ul> <li>aa: Saturated output power in dBm</li> <li>b: B for Benchtop, R for 19" Rackmount</li> <li>cc: FA for FC/APC, FC for FC/UPC</li> <li>SA for SC/APC, SC for SC/UPC</li> </ul>

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## **Applications**

- SONET/SDH Systems
- Optical Communication
- Fiber Optical Sensing
- CATV
- Laboratory



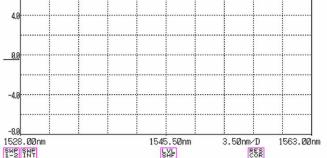
## Description

Amonics Raman Amplifier is a highpower laser light source for distributed optical amplification of optical signals in the C or L band.

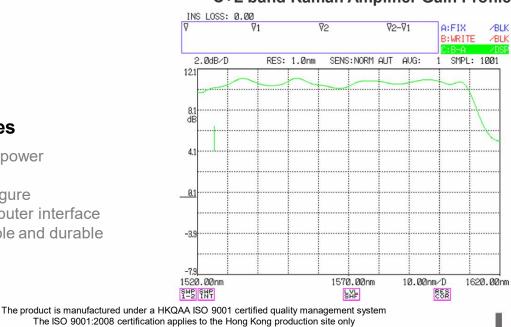
The Raman Amplifier features 2 or 4 pumping wavelengths for gain flattened amplification. It is a ready-touse optical amplifier equipped with a broadband pump/signal combiner and individual power monitoring for each channel. The Raman Amplifier is available in both benchtop and rackmount casings, well as as customized modules.

#### INS LOSS: 0.00 7 -∇1 28.193nm 72 A:FIX , 1563.000nm 1534.807nm B:WRITE /BLK 10.04dB 10.97dB -0.94dB 2.0dB/D RES: 1.0nm SENS: NORM AUT AUG: SMPL: 2001 1 12.0 8.0 dB

C-band Raman Amplifier Gain Profile



## C+L band Raman Amplifier Gain Profile



## **Key Features**

- High output power
- High gain
- · Low noise figure
- RS232 computer interface
- · Highly reliable and durable

Raman Amplifie

**D** monics

	C band	C+L band		
Operating Wavelength	1525 – 1563nm	1528 – 1605nm		
Optical Gain	Typ. 10dB	Typ. 10dB		
Gain Flatness	< 2dB	< 2dB		
Total Pump Power	Typ. 500mW	Тур. 800mW		
Effective Noise Figure	Typ1.0dB	Typ1.0dB		
Signal Insertion Loss	Typ. 0.7dB			
Degree of Polarization	Тур. 5%, Мах. 10%			
Control Mode	ACC, APC	, AGC (optional)		

### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	°C	0 to +40
Storage Temperature	°C	-10 to +70
Power Supply	-	90 – 240VAC, 47 – 63Hz for benchtop and rackmount 5.0 $\pm$ 0.1VDC for module
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) (for C band amplifiers only) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available Module: C band – 156(W) x 210(D) x 33(H) C+L band: Customization on request
Mechanical Safety Control (for Benchtop and Rackmount)	-	Key-lock switch, BNC interlock key
Optical Power Monitoring	-	Output power, Total pump power
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional for benchtop and rackmount)
Protection	-	Pump laser (TEC) overheat
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

Product Code	ARA-a-bbb-c-dd	<ul> <li>a : C for C-band, CL for C+L band</li> <li>bbb : Pump power, 500 for 500mW, 800 for 800mW</li> <li>c : B for Benchtop case, R for 19" Rackmount case M for module</li> <li>dd: FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC</li> </ul>

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**Ordering Information** 







## **Applications**

- SHG Applications
- Medical Systems
- Industrial Lasers
- Fiber Optic Sensing
- · Phased and Interferometric Array Antenna





## Description

Ytterbium-doped Fiber Amplifier (YDFA) is another Amonics specialised product line. Like our highly recognized optical amplifiers, the YDFA offers high output power and high gain with exceptional reliability. ideal for high power YDFA applications.

The turnkey microprocessor controlled benchtop YDFAs manage alarms and status indicators. An integrated RS232 or Ethernet computer interface enables easy control, diagnostic functions and data acquisition. Available options include single frequency operation, linearly polarized operation.

## **Key Features**

- Turnkey device
- RS232 computer interface
- High output power
- Single mode fiber delivery
- High reliability
- Long operating life



#### Specifications

				-	
	AYDFA-20	AYDFA-23	AYDFA-27	AYDFA-30	AYDFA-33
Saturation Output Power (at 0dBm input signal)	> +20dBm	> +23dBm	> +27dBm	> +30dBm	> +33dBm
Operating Wavelength	10	1054nm – 1074nm (extension to 1090nm is available)			
Input Isolation	> 30dB				
Output Isolation	> 30dB				
Polarization Dependent Gain	Typ. 0.3dB, Max. 0.5dB				
Control Mode	ACC, APC, AGC (optional)				

#### **General Parameters**

Parameters	Unit	Specifications	
Operation Temperature	°C	0 to +40	
Storage Temperature	۰C	-10 to +70	
Power Supply	VAC	90 – 240, 47 – 63Hz	
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available	
Mechanical Safety Control	-	Key-lock switch, BNC interlock key	
Optical Power Monitoring	-	Output power, Input power (optional)	
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)	
Protection	-	Pump laser (TEC) overheat	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	H1 1060	

#### Option

Linear polarization



Class 4 for AYDFA-27, 30, 33 Class 3B for AYDFA-20, 23

#### **Ordering Information**

Product Code AYDFA-xx-y-zz	<ul> <li>xx : Saturation output power in dBm</li> <li>y : B for Benchtop case, R for 19" Rackmount case</li> <li>zz : FA for FC/ APC, FC for FC/UPC</li> <li>SA for SC/APC, SC for SC/UPC</li> </ul>
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## Applications

- Brillouin Distributed Sensing
- Interferometric Fiber Optics Sensing
- LIDAR
- Test & Measurement
- Seed Laser Sources



## Description

Amonics' high power narrow linewidth laser (AULLD series) is integrated with Redfern Integrated Optics (RIO) PLANEX<sup>TM</sup> high performance external cavity laser. It features narrow linewidth, low phase noise, ultra low RIN, high output power with exceptionally reliable performance.

The turnkey microprocessor controlled benchtop AULLD provides alarms and status indicators. An integrated RS232 or Ethernet computer interface provides easy control, diagnostic functions and data acquisition.

It is particularly suitable for commercial fiber optic sensing applications, such as interferometric and Brillouin DTSS sensing systems for oil & gas, security, metrology and smart infrastructure.

## **Key Features**

- Narrow linewidth
- · Low phase noise
- Ultra low RIN
- High output power, up to 2W
- · Linear polarized output
- · Wavelength tunability
- Turnkey operation
- RS232, TCP/IP remote control
- Ultra stable



#### Specifications

1			
		AULLD series	
Laser Wavelength	nm	ITU DWDM or custom, <u>+</u> 0.04, CW @ rated power	
Optical Output Power	mW	25, 50, 100, 200, 500, 1000, 2000	
Linewidth FWHM, Lorentzian	kHz	5, 10, 15 CW @rated power	
Optical Isolation	dB	Min. 30, under operation temp.	
Side-mode Suppression Ratio	dB	Min. 35, Typ. 45, CW @rated power	
Relative Intensity Noise	dB/Hz	Shot noise limited @ frequency > 100kHz	
Wavelength Tunability	nm	Min. <u>+</u> 0.02	
Output Power Stability	dB	Max. $\pm$ 0.2 (within 8 hrs), Max. $\pm$ 0.03 (within 10 mins) CW @ rated power and constant environment temperature	
Wavelength Stability	nm	Max. $\pm$ 0.005 (within 8 hrs), Max. $\pm$ 0.001 (within 10 mins) CW @rated power and constant environment temperature	

#### **General Parameters**

Parameters	Unit	Specifications	
Operation Temperature	°C	0 to +40	
Storage Temperature	°C	-10 to +70	
Power Supply	VAC	90 – 240, 47 – 63Hz	
Dimensions	mm	260(W) x 330(D) x 120(H)	
Mechanical Safety Control	-	Key-lock switch, BNC interlock key	
Optical Power Monitoring	-	Output power	
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)	
Protection	-	Pump laser (TEC) overheat	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	PM fiber, SMF-28e (optional)	

Ordering Info	rmation	
Product Code	AULLD-vv-wwww-xx-yyyy-B-zz	<ul> <li>vv: Default (or unspecified) for single mode, PM for polarization maintaining</li> <li>wwww: Wavelength in nm</li> <li>xx: Laser linewidth</li> <li>yyyy: Output power in mW</li> <li>zz: FA for FC/APC, FC for FC/UPC, CL for collimator SA for SC/APC, SC for SC/UPC</li> </ul>

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## Applications

- Micro-machining
- Marking
- Scribing
- Fiber Optic Sensing
- Laboratory



## Description

Amonics' Fiber Laser (AFL) is a compact standalone turnkey equipment to deliver up to 50W output power and 1mJ pulse energy in 1064nm and 1550nm range under CW or pulse operation. Based on proprietary all fiber design, Amonics fiber laser is maintenance free. No post-installation service is required.

In pulse operation, the laser delivers up to 20kW peak power and adjustable pulse width from 10ns to 1000ns. The pulse repetition rate is triggered by external TTL signal.

Amonics fiber lasers are the ideal candidate for a wide range of industrial applications.

## **Key Features**

- CW and pulse operation
- Up to 1mJ pulse energy
- 10 to 20ns tunable pulse width
- Up to 50W output power
- Optical feedback protection
- Back reflection monitoring
- Turnkey operation
- Maintenance free
- Linear or random polarization
- Highly reliable and durable

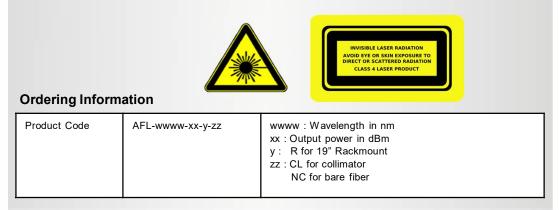


#### Specifications

Parameters	Unit	Specifications		
Mode of Operation		Pulse or CW		
Average Output Power	W	5, 10, 20, 30, 50		
Pulse Energy	mJ	0.25, 0.5, 1		
Pulse Width	ns	10 to 1000		
Repetition Rate	kHz	10 to 100 (external TTL trigger)		
Wavelength	nm	1064, 1550 range		
Laser Linewidth	nm	Тур. 0.2, Мах. 0.5		
Polarization	-	Linear or random		
Beam Quality M <sup>2</sup>		Тур. 1.1, Мах. 1.2		
Isolation	-	Inter-stage and output		

#### **General Parameters**

Parameters	Unit	Specifications		
Operation Temperature	°C	0 to +40		
Storage Temperature	°C	-10 to +70		
Power Supply	VAC	90 – 240, 47 – 63Hz		
Dimensions	mm	3U Rackmount, 450(W) x 615(D) x 150(H)		
Control	-	Keylock switch, optical output power		
Optical Power Monitoring	-	Output power, Seed power		
Remote Control Port	-	RS232, TCP/IP ethernet (optional)		
Protection		Pump laser (TEC) overheat		
Optical Port		Main output, Seed laser, Output tap		
Output Termination		Collimator, Bare fiber		



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## **Applications**

- SHG Applications
- Medical Systems
- Industrial Lasers
- Fiber Optic Sensing
- Laboratory





## Description

Amonics offers Pulse Laser at 1064nm with high pulse peak power. The laser features tunable pulse width from 10ns to 1us and no short pulse driving source is required. It is ideal for applications demanding laser emission with high pulse peak power.

The turnkey microprocessor controlled Pulse Laser comes in both benchtop and rackmount casings. It is equipped with alarms and status indicators. An integrated RS232 computer interface provides easy control, diagnostic functions and data acquisition. Available options include single frequency operation and linearly polarized operation.

## **Key Features**

- Turnkey device
- RS232 computer interface
- High output power
- Single mode fiber delivery
- · Highly reliable and durable



#### Specifications

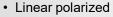
	APLS-1
Pulse Peak Power	Min. 700mW, Typ. 1W
Center Wavelength	1064nm
Pulse Width	5 ns to 100 us (duty cycle < 2%, repetition rate < 500kHz)
On/Off Extinction ratio	> 25dB
Trigger voltage	TTL (standard)

## \* Other output power models are available upon request

#### **General Parameters**

Parameters		Specifications	
Operation Temperature	۰C	0 to +40	
Storage Temperature	°C	-10 to +70	
Power Supply	VAC	90 – 240, 47 – 63Hz	
Dimensions	mm	Benchtop: 260(W) x 330(D) x 120(H) 1U Rackmount: 485(W) x 360(D) x 45(H) Other standard rackmount sizes are also available	
Mechanical Safety Control	-	Key-lock switch, BNC interlock key	
Optical Power Monitoring	-	Output power	
Remote Control Port	-	DB-9 female (RS232), LabView control software included RJ-45 (TCP/IP Ethernet) (optional)	
RF Port		SMA or BNC	
Protection	-	Pump laser (TEC) overheat	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	H1 1060 / PM 980	
Other Option			

#### **Other Option**







#### **Ordering Information**

Product Code	APLS-wwww-xx-y-zz	wwww : Wavelength in nm xx : Output power in W y : B for Benchtop, R for 19″ Rackmount zz : FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC
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## **Applications**

- · Fiber Optic Sensing
- Optical Tomography
- DWDM Component Characterization
- Optical Gyroscope





## Description

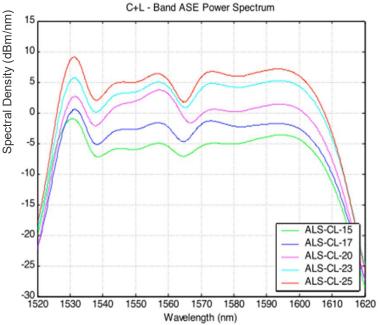
Amonics C+L band ASE light source features high output power, very wide spectral range and high stability against temperature change. It is available in both benchtop and module casings.

The benchtop version incorporates a user-friendly front panel housing with a LCD monitor display, key switch, power control knob and optical connectors. RS232 or Ethernet computer interface is also equipped.

The OEM module version is an ideal building block for OEM system integration, especially in fiber optic sensing and optical tomography applications. It requires a single +5V power supply only.

## **Key Features**

- Wide spectral range
- High output power
- · Good spectral stability
- Compact
- Good performance cost ratio
- Highly reliable and durable



# **monics**

#### Specifications

	ALS-CL-15	ALS-CL-17	ALS-CL-20	ALS-CL-23	ALS-CL-25
Output Power	Typ.15dBm Min.14dBm	Typ.17dBm Min.16dBm	Typ.20dBm Min.19dBm	Typ. 23dBm Min.20dBm	Typ.25dBm Min.24dBm
Min.Spectral Density	-12dBm/nm	-10dBm/nm	-8dBm/nm	-5dBm/nm	-4dBm/nm
Spectral Range	1528nm to 1608nm				
Output Stability	< + / -0.02dB (over 8 hrs), < + / -0.005dB (over 5 mins)				
Output Isolation	> 40dB				
Output Polarization	< 5%				

\* Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Benchtop	Module
Operation Temperature	°C	0 to 40	
Storage Temperature	°C	-10 to 70	
Power Supply	V	90 – 240VAC, 47 – 63Hz	5.0 VDC $\pm$ 0.1 VDC
Dimensions	mm	260(W) x 330(D) x 120(H)	120(W) x 200(D) x 25(H) for ALS-CL-15, 17, 20 Customized on request for ALS-CL-23, 25
Electrical Connector	-	NA 14-pin MIL So	
Protection	-	Pump laser (TEC) overheat	
Optical Power Monitoring	-	Output power	
Mechanical Safety Control	-	Key-lock switch, NA BNC interlock key	
Remote Control Port	-	RS232 / Ethernet NA	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	SMF-28	



#### **Ordering Information**

Product Code ALS-CL-xx-y-zz	xx: Output power in dBm y: M for Module, B for Benchtop zz: FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC	
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## Applications

- Fiber Optic Sensing
- Optical Tomography
- Component Characterization



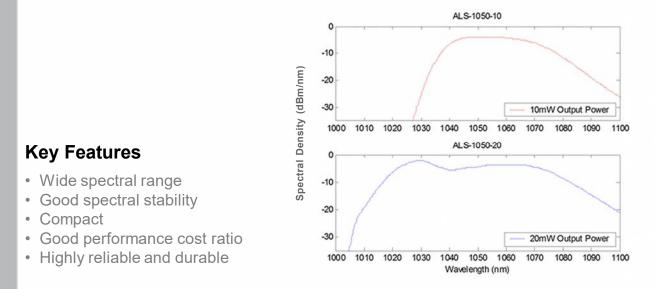


## Description

Amonics' ALS-1050 series offers a Ytterbium-doped fiber ASE broadband light source in the wavelength range of 1000nm to 1100nm, offering 10mW and 20mW output power. It is particularly useful for 1060nm fiber laser component characterization.

The benchtop version incorporates a user-friendly front panel housing a LCD monitor display, key switch, power control knob and optical connectors. RS232 or Ethernet computer interface is also equipped

The OEM module version is an ideal building block for OEM system integration, especially for fiber optical sensing and optical tomography applications. It requires a single +5V power supply only.





## Specifications

	ALS-1050-10	ALS-1050-20
Output Power	Min.10mW	Min.20mW
Spectral Range	1040nm to 1075nm	1020nm to 1080nm
Min.Spectral Density	-12dBm/nm	
Output Stability	< + / - 0.03dB ( over 8 hrs), < + / -0.005dB (over 5 mins)	
Output Isolation	> 40dB	
Output Polarization	< 5%	

\* Other output power models are available upon request

#### **General Parameters**

Parameters	Unit	Benchtop	Module
Operation Temperature	°C	0 to 40	
Storage Temperature	°C	-10 to 70	
Power Supply	V	90 – 240VAC, 47 – 63Hz	5.0 VDC± 0.1 VDC
Dimensions	mm	260(W) x 330(D) x 120(H)	100(W) x 120(D) x 18(H)
Electrical Connector	-	NA 14-pin MIL Soc	
Protection	-	Pump laser (TEC) overheat	
Optical Power Monitoring	-	Output power	
Mechanical Safety Control	-	Key-lock switch, NA BNC interlock key	
Remote Control Port	-	RS232 / Ethernet NA	
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC	
Optical Fiber	-	HI 1060	



#### **Ordering Information**

Product Code ALS-1050-xx-y-zz x: Output power in mW y: M for Module, B for Benchtop zz: FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC
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## **Applications**

- Fiber Optical Sensing
- Optical Tomography
- DWDM Component Characterization
- Optical Gyroscope

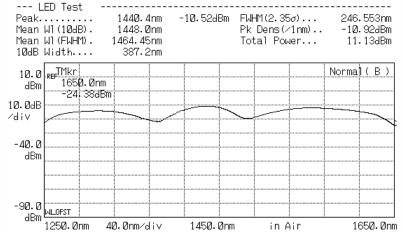




## Description

Amonics ALS-CWDM super-wideband light source provides high spectral density, at above -30dBm/nm, across 1250nm to 1650nm. It is an ideal tool for simple characterization of CWDM components and communication links. This broadband source is also extremely effective in high resolution optical coherent tomography (OCT) applications.

The benchtop super-wideband light source incorporates a user-friendly front panel housing with a LCD monitor display, key switch, power control knob and optical connectors. RS232 or Ethernet computer interface is also equipped.



## Key Features

- Wide spectral range, 400nm
- High output power
- Good spectral stability
- Compact
- Good performance cost ratio
- Highly reliable and durable



#### Specifications

	ALS-CWDM
Output Power	Min. 10mW
Spectral Range	1250nm to 1650nm
Min. Spectral Density	-30dBm/nm
Output Stability	< + / -0.02dB (over 8hrs), < + / -0.005dB (over 5mins)

#### **General Parameters**

Parameters	Unit	Specifications
Operation Temperature	°C	0 to 40
Storage Temperature	°C	-10 to 70
Power Supply	VAC	90 – 240V, 47 – 63Hz
Dimensions	mm	260(W) x 330(D) x 120(H)
Electrical Connector	-	NA
Protection	-	Pump laser (TEC) overheat
Optical Power Monitoring	-	Output power
Mechanical Safety Control	-	Key-lock switch, BNC interlock key
Remote Control Port	-	RS232 / Ethernet
Optical Connector	-	FC/APC, FC/UPC, SC/APC, SC/UPC
Optical Fiber	-	SMF-28

#### Option

Output Isolation



## **Ordering Information**

Product Code ASLD-CWDM-5-a-bb	a: M for Module, B for Benchtop bb: FA for FC/APC, FC for FC/UPC SA for SC/APC, SC for SC/UPC
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