



NuAMP™ 1064 30W and 50W Fiber Amplifiers

The NuAMP family of high power, polarization maintaining fiber amplifiers offers the broadest operating wavelength range in the industry. They are specifically designed to operate in conjunction with ultra narrow linewidth (kHz or below), single frequency seed lasers based on distributed feedback (DFB) fiber lasers or solid state technologies. Capable of amplifying low power input signals as low as 1 mW up to 50 W of linearly polarized output power, these monolithic amplifiers use large mode area fiber technology to overcome non-linearities such as stimulated Brillouin scattering (SBS) and maintain critical seed laser characteristics such as narrow line-width and frequency stability. The series includes input isolation (≥ 30 dB at RT) to protect the seed source and various safety interlocks to prevent system failures such as the loss of the input signal or the presence of high back-reflection.

Typical Applications

- Atom cooling & trapping
- Coherent or spectral beam combining
- Frequency conversion
- LIDAR & sensing
- Spectroscopy
- Test and Measurement

Features and Benefits

- Near diffraction limited beam profile with linearly polarized output — Useful for high-precision applications
- Optimized for single frequency seed lasers — Maintains seed line-width, frequency stability and RIN
- Signal input, output power & back-reflection monitoring — Automatic system protection
- Water cooled system equipped with 105-220 VAC universal power supply
- Turnkey system with USB digital interface, E-stop, key switch, and remote interlocks

Optical Specifications

	NUA-1064-PV-0030-D0	NUA-1064-PV-0050-D0
Output Power	30.0 W	50.0 W
Output Power Adjustment	10 – 100 %	10 – 100 %
Power Stability Maximum	± 1.5 %	± 1.5 %
Beam Quality	$M^2 \leq 1.3$	$M^2 \leq 1.3$
Output Beam Diameter	5.0 ± 1.0 mm	5.0 ± 1.0 mm
Output Type	Fiber to Free Space Collimator	Fiber to Free Space Collimator
Mode of Operation	CW	CW
Polarization	Linear	Linear
Input Type	FC/APC Bulkhead	FC/APC Bulkhead
PER at Rated Power	≥ 10 dB	≥ 10 dB
Operating Wavelength	1064 – 1083 nm	1064 – 1083 nm
Signal Input Power	1.0 – 15.0 mW 15.0 - 50.0 mW 50.0 - 200.0 mW	1.0 – 15.0 mW 15.0 - 50.0 mW 50.0 - 200.0 mW
Signal Input Isolation ¹	≥ 30 dB	≥ 30 dB
RIN	-110.0 dB/Hz ^{1/2}	-110.0 dB/Hz ^{1/2}
Signal to Noise Ratio	≥ 50 dB	≥ 50 dB

¹ Measurement taken at 23°C

Naming Conventions:

NUA-1064-PV-XXXX-D0

Signal
Input Power
B = 1.0-15.0 mW
C = 15.0-50.0 mW
D = 50.0-200.0 mW

Output Power
0030 = 30W
0050 = 50W



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Nufern products are manufactured under an ISO 9001:2008 certified quality management system.

Standard specifications and design parameters are listed above. Specifications are subject to change without notice.



NUAMP™ 1064 30W and 50W Fiber Amplifiers

Mechanical Specifications

Water Cooling Interface	3/8" Tube Stubs
Delivery Fiber Length	1 m
Output Cable Minimum Bend Radius	125 mm
Output Cable Type	Armored cable
Output Cable Diameter	6 mm
Output Device Envelope Dimensions	30 x 30 x 50 mm
Dimensions (LxWxH)	554 x 483 x 125 mm
Weight	25.0 kg

Electrical Specifications

AC Supply Voltage	105-220 VAC
Power Consumption	≤ 5.0 A
Digital Interfaces	USB

Environmental Specifications

Operating Ambient Temperature	10-40°C
Cooling	Water cooled
Cooling Temperature	23°C ± 2°C

NUA-1064-PV-0030-D0

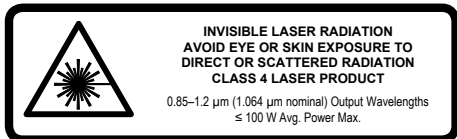
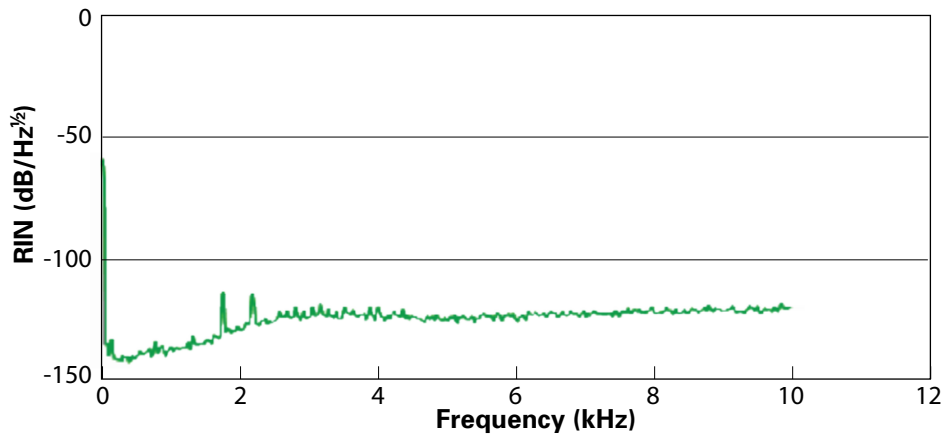
NUA-1064-PV-0050-D0

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Typical Relative Intensity Noise (RIN)
For 50W Output



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