

# EDFA

## ERBIUM-DOPED FIBER AMPLIFIER

SPECIFICATION SHEET

AVAILABLE IN PXI

AVAILABLE IN MATRIQ

The EDFA is a high-power Erbium-Doped Fiber Amplifier for optical signal amplification in C and L bands.

With three control modes: constant power, constant current and constant gain mode, it is a versatile addition to optical-electrical test systems.



#### Constant power output mode.

With the built-in closed-loop power monitoring, the EDFA can operate in constant power output mode to stabilize fluctuating input power.

#### High gain flatness.

The EDFA 1002 model offers a high gain flatness of less than + 2.5 dB for high quality, low distortion amplification of broadband signals.



#### Simple, intuitive operation with COHESIONUI™.

COHESIONUI makes it simple to control the instrument from your PC or mobile device.

#### High output power.

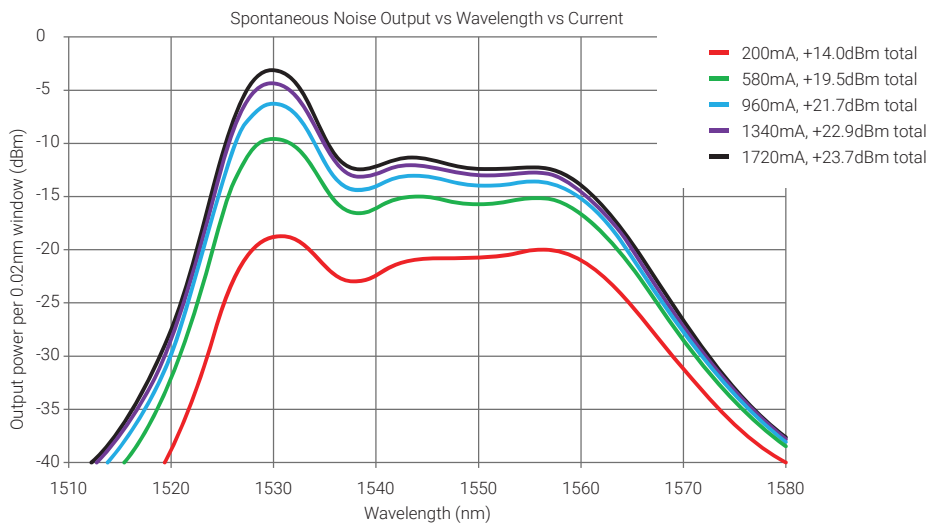
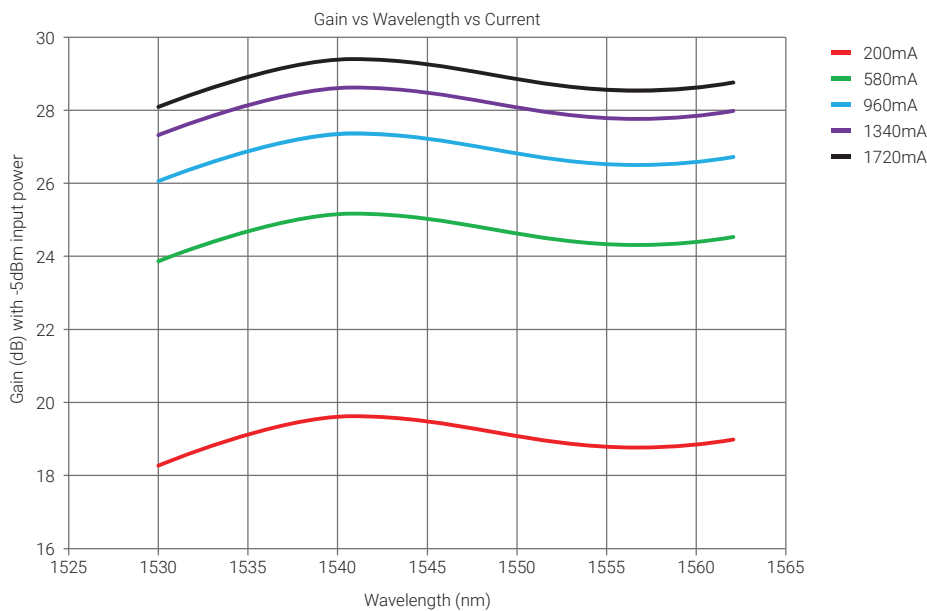
Get up to 24,5 dBm amplified output power for all your high-power requirements.

## TARGET APPLICATIONS

- Fiber optic communications signal power amplification
- OSNR stress test noise loading
- Amplification of high data rate modulated signals.

## PERFORMANCE

Performance graphs of the EDFA-1001 model.



## CHOOSE YOUR FORM FACTOR

### PXIe – MODULAR

Our expanding range of PXIe optical test solutions are used by customers in mixed-signal test and measurement systems, reducing complexity, lowering the cost of test and accelerating time to market.

- Multi vendor, open standard with over 2500 PXI modules available
- Advanced timing and synchronization capabilities across instruments
- Low latency, high performance processing and fast data throughput
- Design and build scalable, high channel count systems
- Small footprint and lower power consumption



### MATRIQ – COMPACT & PORTABLE

The MATRIQ series provides the same high-performance test capabilities of our PXIe modules in an compact benchtop design. MATRIQ instruments are simple to setup and easy to operate, making them the perfect choice for your optical lab or test bench.

- Same performance and control as our PXIe modules
- Plug and play with USB or Ethernet connectivity
- Control via the web-based GUI, COHESIONUI or SCPI commands
- Compact and portable design saves benchtop space

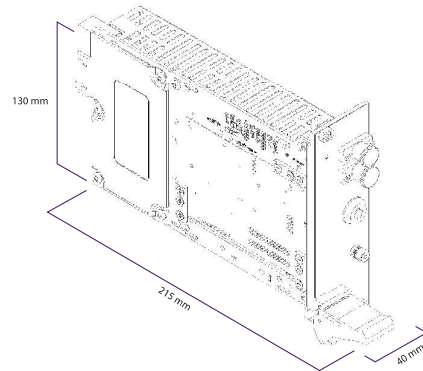


## EDFA TECHNICAL SPECIFICATIONS

### PXI - MODULAR



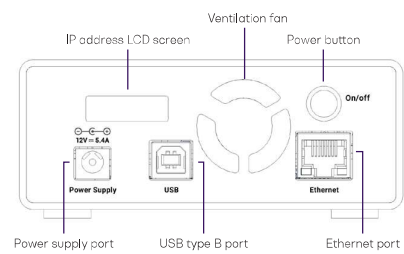
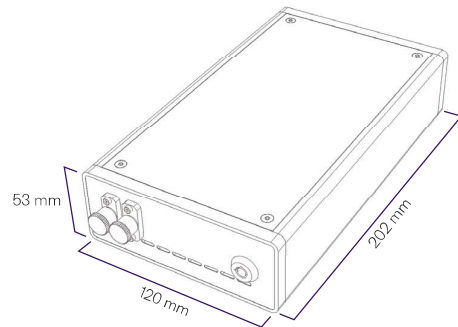
EDFA-1001-1-FC-PXIIE



### MATRIQ - COMPACT & PORTABLE



EDFA-1001-1-FC-MTRQ



## EDFA TECHNICAL SPECIFICATIONS

General Specifications	PXI	MATRIQ
Bus connection	PXle	USB and Ethernet
Number of channels	1	1
Slot count	2	-
Optical connector type	FC/PC,SC/PC,FC/APC or SC/APC	FC/PC,SC/PC,FC/APC or SC/APC
Dimensions (H x W x D)	130 x 40 x 215 mm   5.1 x 1.6 x 8.5 inches	53 x 120 x 202 mm   2.1 x 4.7 x 8.0 inches
Weight	~ 0.64 kg   ~ 1.4 lbs	~ 1.1 kg   ~ 2.4 lbs
Operating temperature range	5 °C to 45 °C   41 °F to 113 °F	5 °C to 45 °C   41 °F to 113 °F
Storage temperature range	-40 °C to 70 °C   -40 °F to 158 °F	-40 °C to 70 °C   -40 °F to 158 °F

Power Specifications	PXI	MATRIQ
AC input voltage range	Please refer to the latest PXI Express Hardware Specifications published by the PXI Systems Alliance.	90 to 264 VAC
AC input current		1.3A (115Vac), 0.9A (230Vac)
AC frequency range		47 to 63 Hz
DC output voltage		12V
DC output current max		5.41A
Dimensions (LxWxH)		4.58 x 2.06 x 1.23" (116.3 x 52.4 x 31.3 mm)

Model Number	1001	1002	1001	1002
Wavelength	1530 to 1562 nm	1530 to 1562 nm	1530 to 1562 nm	1530 to 1562 nm
Fiber type	SMF-28	SMF-28	SMF-28	SMF-28
Total output power (adjustable) <sup>1</sup>	21 to 24.5 dBm	20 to 23 dBm	21 to 24.5 dBm	20 to 23 dBm
PDG	< 0.5 dB	< 0.5 dB	< 0.5 dB	< 0.5 dB
Noise figure	< 5.0 dB (Typical)	< 5.0 dB (Typical)	< 5.0 dB (Typical)	< 5.0 dB (Typical)
Gain flatness	± 8 dB	± 2.5 dBm	+ 8 dB	+ 2.5 dB
Max input power	12 dBm	12 dBm	12 dBm	12 dBm

**Notes**

1. In constant output power mode.

## SAFETY INFORMATION

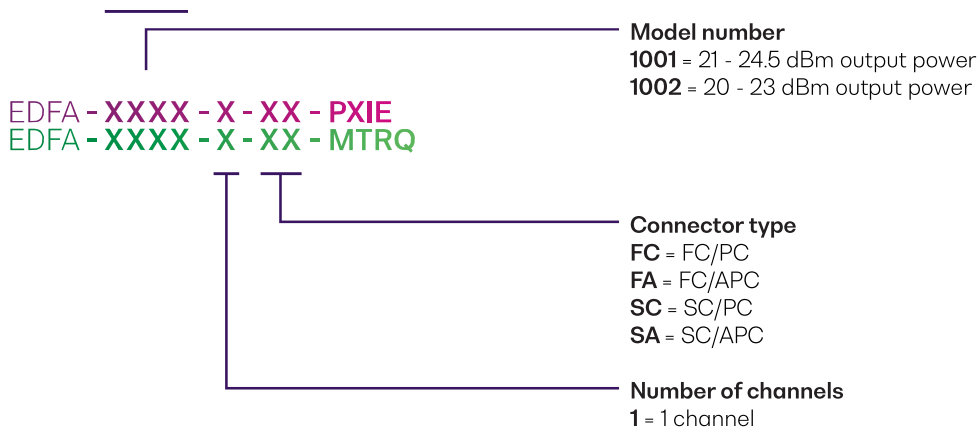
Quantifi Photonics' EDFA instruments are Class 3B laser products.

The use of controls, adjustments, and procedures other than those specified in the EDFA user manual may result in exposure to hazardous situations or impair the protection provided by this unit.

Never look directly into a live fiber; ensure that your eyes are always protected.



## ORDERING INFORMATION



## WARRANTY INFORMATION

This product comes with a standard 1 year warranty.

Our portfolio of optical and electrical test modules is rapidly expanding to meet a wide range of customer requirements and applications.

#### Tunable Laser Sources

Versatile telecom laser sources with full tunability across C or L bands. Narrow 100 kHz linewidth, up to 16.5 dBm of power, optional whisper mode to disable frequency dither.

#### Erbium-Doped Fiber Amplifier (EDFA)

High power Erbium-Doped Fiber Amplifier for signal power amplification in C and L bands with various control modes, including automatic gain control.

#### Fixed Wavelength Laser Sources

Highly customizable DFB or FP laser sources available in a wide range of wavelengths and powers. Models support SMF, MMF and PMF.

#### Variable Optical Attenuator (VOA)

Fast attenuation speed with low insertion loss and built-in power monitoring. Operates in fixed attenuation or constant output power modes. Models support SMF, MMF and PMF.

#### Optical Power Meters

Fast terminating or inline monitoring of optical signal power from -60 to +10 dBm across 750 – 1700 nm wavelengths. Model with logarithmic analog output for applications such as silicon photonics fiber alignment.

#### Optical Spectrum Analyzer (OSA)

Low cost, fast spectral measurement in a compact module with built-in analysis including SMSR, OSNR and spectral width. Targeted wavelengths for specific applications in O band, C band and L band.

#### Optical-to-Electrical Converter

High bandwidth, broadband O-to-E converter. Available in a range of configurations; choose from 1 or 2 channels, AC or DC coupling and various conversion gain and operating wavelength ranges.

#### Bit Error Rate Tester (BERT)

2 or 4-channel Pulse Pattern Generator and Error Detector at rates up to 29 Gbps for the design, characterization and production of optical transceivers and opto-electrical components.

#### Pulse Pattern Generator (PPG)

4 channel Pulse Pattern Generator from 0.3 to 30 Gbps for high-density multichannel applications. With integrated clock synthesizer and programmable de-emphasis and CTLE processor.

#### Optical Switch

Proven reliability and fast switching time. Wide variety of switch configurations: 1x4, 1x16, 16x16 and more. Models support SMF, MMF and PMF.

#### Polarization Controller & Scrambler

High-speed automated polarization control with broad wavelength coverage from 1260nm to 1650nm, low insertion loss and back reflection. Full remote control via intuitive GUI, LabVIEW or SCPI.

#### Photonic Doppler Velocimeter (PDV)

Purpose-built module for Photonic Doppler Velocimetry (PDV). A circulator, two VOAs and a passive coupler all built into one compact module.

#### Passive Component Integration

Integrate passive optical components of your choice such as WDM couplers, splitters, band-pass filters, PM beamsplitters and circulators. Models support SMF, MMF and PMF.

#### Passive Component Storage

Protect and store your own passive fiber optic components such as splitters, connector adaptor patchcords, WDM couplers, and isolators in one handy module.

PXI – TEST MODULES

MATRIQ – TEST MODULES

We provide these products as PXIe modules and compact MATRIQ benchtop instruments.

See our website for more details  
[quantifiphotonics.com/products](https://quantifiphotonics.com/products)



# Test. Measure. Solve.

Quantifi Photonics is transforming the world of photonics test and measurement. Our portfolio of optical and electrical test instruments is rapidly expanding to meet the needs of engineers and scientists around the globe. From enabling ground-breaking experiments to driving highly efficient production testing, you'll find us working with customers to solve complex problems with experience and innovation.

To find out more, get in touch with us today.

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