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## Test & Measurement

- > sales
- > rentals
- > calibration
- > repair
- > disposal

## Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

If you click on the "Click-to-Call" logo below, you can call us for FREE!

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Product Lifecycle Management System

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# Erbium-Doped Fiber Amplifier

IQ-6100



Up to +15 dBm output power

Amplification of multiple WDM channels  
within the C-band

Stable output power

Ideal for non-linear optical effect  
characterization



Fiber-optic test, measurement  
and monitoring instruments

**EXFO**

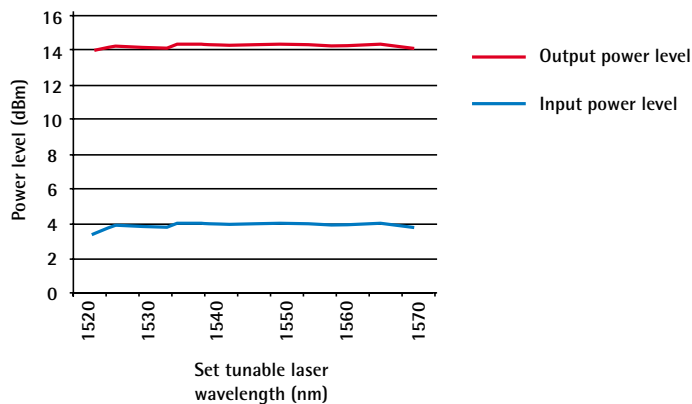
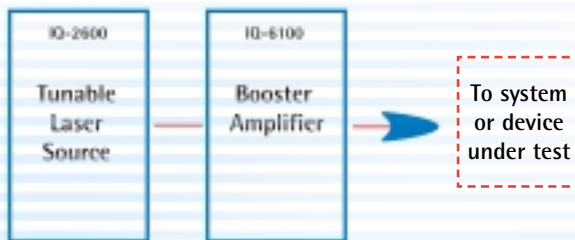
# Investigate, Calibrate and Verify

The IQ-6100 Erbium-Doped Fiber Amplifier (EDFA) is part of the IQ-200 Optical Test System, EXFO's unmatched modular-concept test unit. The addition of an optical amplifier offers considerable flexibility to a WDM active component test setup. Use the EDFA to investigate non-linear effects such as four-wave mixing, or to calibrate and verify power meters, photodetectors and attenuators at high power levels.

## Key Features

- User-friendly operation
- Easy one-slot IQ-200 module insertion
- Compatible with EXFO tunable laser sources

## Boost the tunable laser source and obtain high power over the entire C-band.



## Stability

The IQ-6100 attains a maximum drift of  $\pm 0.01$  dB, preserving input signal stability. Combine this EDFA with the EXFO IQ-2600 Tunable Light Source or the IQ-2400 WDM Laser Source to evaluate non-linear properties of optical materials in the 1550 nm band.



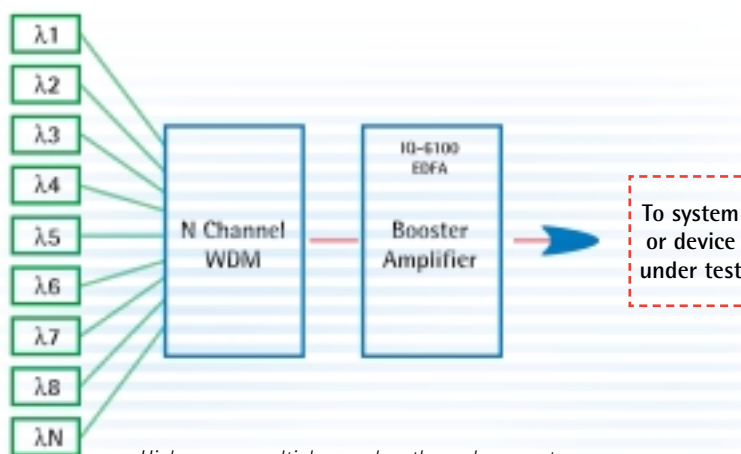
*IQ-2600 Tunable Light Source, IQ-2400 WDM Laser Source*

## Powerful Versatility

For use with single or multiple wavelength signals, this optical amplifier increases output power from 0 dBm up to 15 dBm. Ideal for integration in WDM active component test setups, it enables the adjustment of WDM signals to the total input power level required for system or booster-amplifier modules. Achieve adequate power levels conveniently with this C-band amplifier.

### High power

Add an EDFA booster to increase the flexibility of your WDM active component testing platform. Easily adjust multiple signals to the total input power level required for higher power subsystem characterization.



### An active component testing solution

The IQ-6100 EDFA booster is the perfect instrument for attaining higher power levels and minimizing insertion loss in linearity evaluations of photosensitive devices. Here's how it works:

#### STEP 1

- Use a stable, optically isolated DFB laser source to reduce sensitivity to reflection.

#### STEP 2

- Split the power into two branches. Use a coupler of different lengths to avoid Mach-Zehnder interference fluctuations, then recombine the branches.

#### STEP 3

- Use inserted variable optical attenuators (VOA) to obtain identical power from both branches at the testing point.

#### STEP 4

- Use the superposition method to characterize DUT linearity.



*Typical setup for measuring the optical linearity of power meters with the superposition method. The IQ-6100 compensates for the insertion loss introduced by the coupler.*

## Specifications

Wavelength range (nm)		1530 to 1560
Saturated output power (dBm) at 3 dBm input power	typical	> 14
	minimum	13
	maximum	15
Noise figure (dB)	typical	8
Output power stability <sup>1</sup> (dB)		± 0.01 (Δ = 0.02)
Polarization dependent gain (dB)		< 0.2
Optical return loss (dB)	typical	35
Small signal gain (dB) <sup>2</sup>	minimum	29

### NOTES

- Over 15 minutes after a 1-hour warm-up with a stable input source.
- At input power of -20 dBm

## General Specifications

Operating Temperature	0 °C to 40 °C	(32 °F to 104 °F)
Storage Temperature	-40 °C to 60 °C	(-40 °F to 140 °F)
Humidity	0 to 95 %	
Weight	0.75 kg	(1.65 lb)
Dimensions	Height	12.1 cm (4 3/4 in)
	Width	3.8 cm (1 1/2 in)
	Depth	26.2 cm (10 5/16 in)

## Remote Control

- With IQ-203: GPIB (IEEE-488.1, IEEE-488.2) and RS-232.
- With IQ-206: Control using external PC and expansion card.

## Instrument Drivers

LabVIEW® drivers, OCX controls and ActiveX.

## Ordering Information

**IQ-6100-XX**

Connector code

**58** = FC/APC narrow key

**89** = FC/UPC

## Laser Safety



21 CFR 1040.10 and 1040.11 CLASS 3B LASER PRODUCT  
IEC 60825-1:1993+A1:1997 CLASS 3A LASER PRODUCT

## Standard Accessories

Instruction Manual and Certificate of Compliance

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