

# IQS-2300

R&D AND MANUFACTURING—OPTICAL



- +11 dBm total output power
- Broad, stable spectrum
- 2 dB flatness over a 28 nm range
- Ideal for component testing in the C-band

## Platform compatibility

- IQS-600 Integrated Qualification System
- IQS-500 Intelligent Test System



# A High-Power Source for WDM System and Component Characterization

The IQS-2300 ASE Broadband Source, available in the IQS-600 Integrated Qualification System, is a stable, high-powered, non-polarized fiber-optic source ideal for WDM filter and FBG (fiber Bragg grating) testing in the lab.

The IQS-2300 ASE Broadband Source is based on the principle of amplified spontaneous emission that uses an erbium-doped fiber pumped with a 980 nm laser diode (see Figure 1). This source is perfect for characterizing components such as filters, WDM couplers and Bragg gratings. Its non-polarized output and very short coherence length makes it ideal for stable and repetitive insertion loss and optical return loss (ORL) measurements.



## Key Features

- Loss characterization of DWDM components
- Return loss measurement
- Noise generation for system BER testing
- Polarizer testing
- Fiber Bragg grating monitoring under stress

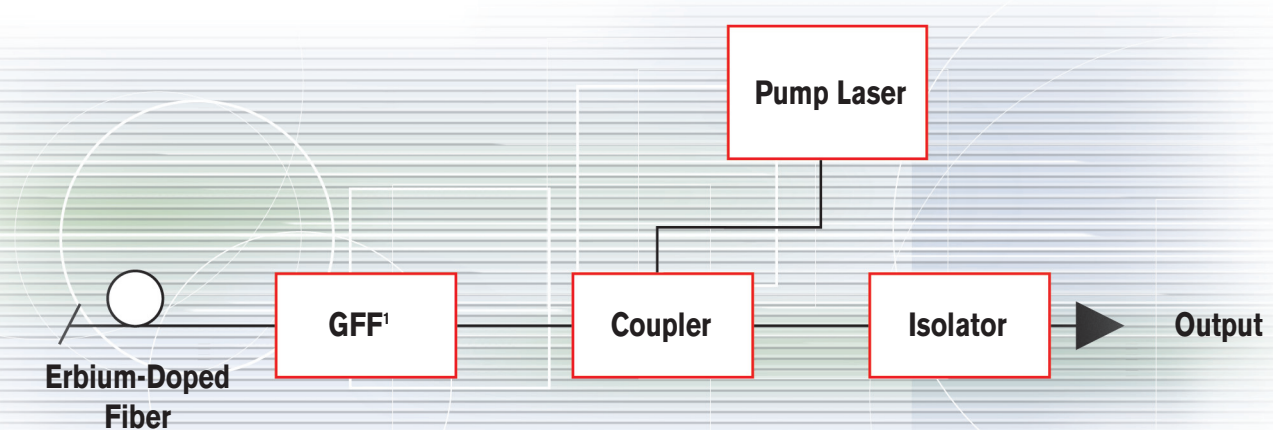
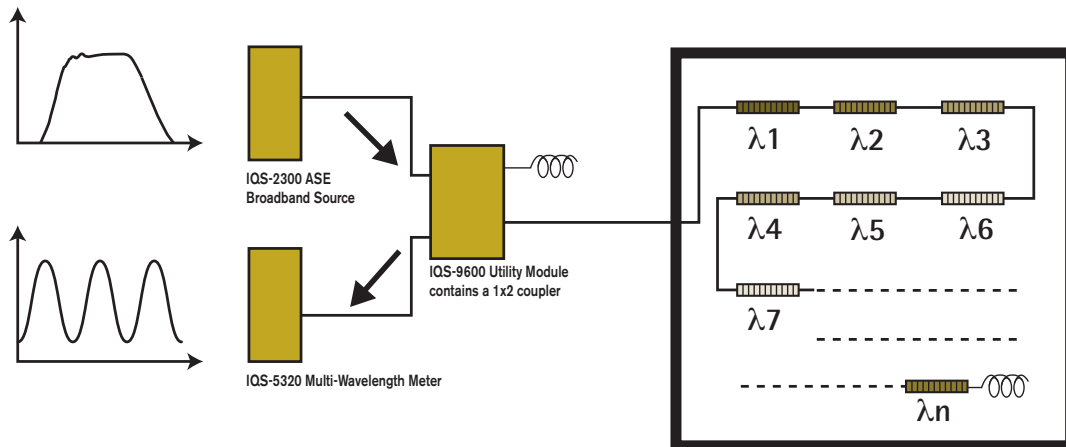


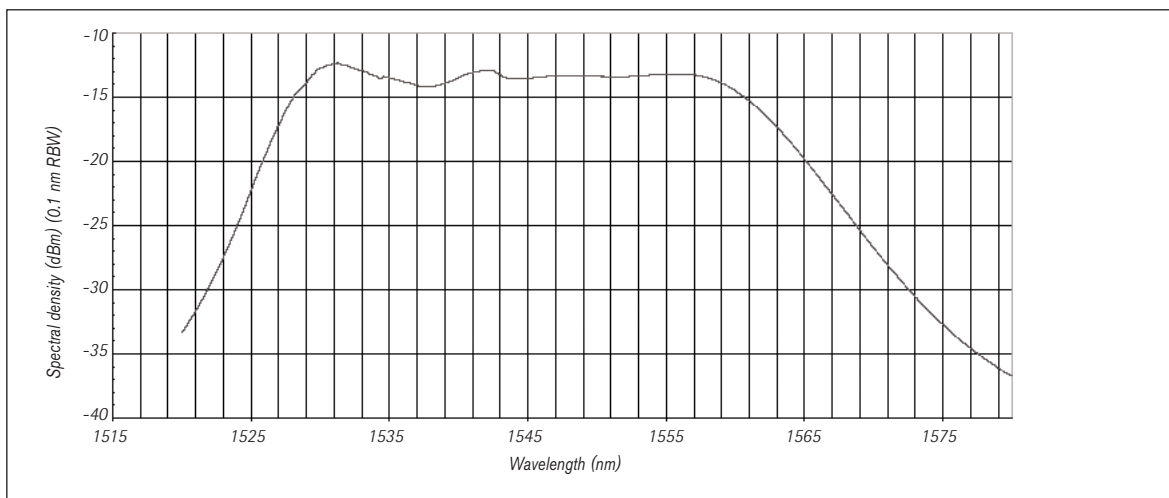
Figure 1: Internal configuration of the IQS-2300  
1. Gain Flattening Filter

# Environmental Testing on Fiber Bragg Gratings and WDM Passive Components

Combine the IQS-2300 ASE Broadband Source with the IQS-5320 Multi-Wavelength Meter or WA-7600/7100 Wavemeter® Optical Channel Analyzers to perform environmental testing. This setup precisely measures drift in the central wavelength of fiber Bragg gratings undergoing temperature changes, strain, or stress-inducing conditions. To analyze the multiplexed reflected signal and obtain a resolution of 1 pm, each Bragg central wavelength should be separated by more than 0.1 nm.



Typical Source Power Distribution



Spectrum of IQS-2300 Broadband Source

## SPECIFICATIONS <sup>a</sup>

Wavelength range (nm)	1532 and 1560
Wavelength span (nm) at -30 dB, typical	73
Wavelength span (nm) at -3 dB, typical	33
Output power (dBm) <sup>b</sup>	≥ 11
Spectral density (dBm/nm), typical	> -4
Spectral flatness (dB) <sup>b</sup>	2
Output power stability over 8 h (dB) <sup>b, c</sup>	±0.05 (Δ = 0.10)

### Notes

- After a warmup of one hour.
- At 23 °C ± 1 °C.
- The stability is expressed as ± half the difference between the maximum and minimum values during the period.

## GENERAL SPECIFICATIONS

Size (H x W x D)	12.5 cm x 3.6 cm x 28.2 cm	(4 <sup>15</sup> / <sub>16</sub> in x 1 <sup>7</sup> / <sub>16</sub> in x 11 <sup>1</sup> / <sub>8</sub> in)
Weight	0.75 kg	(1.65 lb)
Temperature		
operating	0 °C to 40 °C	(32 °F to 104 °F)
storage	-40 °C to 60 °C	(-40 °F to 140 °F)
Relative humidity	0 % to 95 % non condensing	

## SOFTWARE OPTION

OCX controls and LabVIEW drivers

## LASER SAFETY



### LASER SAFETY

21 CFR 1040.10 and 1040.11  
IEC 60825-1:1993+A1:1997

CLASS 3B LASER PRODUCT  
CLASS 3A LASER PRODUCT

## ORDERING INFORMATION

### IQS-2300-96

- All IQS-2300 ASE Broadband Sources are equipped with a standard E-2000/APC connector (code 96). Hybrid test jumpers available upon request.
  - TJ-B58-96 = E-2000-FC/APC
  - TJ-B88-96 = E-2000-SC/APC
  - TJ-B89-96 = E-2000-FC/UPC
  - TJ-B91-96 = E-2000-SC/UPC

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