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ASE Broadband Source



A high-power source for WDM system and component characterization

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

The IQ-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 IQ-2300 1. Gain Flattening Filter

Environmental testing on fiber Bragg gratings and WDM passive components

Combine the IQ-2300 ASE Broadband Source with the IQ-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.





Spectrum of IQ-2300 Broadband Source

Specifications^{1,2}

Wavelength range (nm)	1530-1560
Wavelength span (nm) at -30 dB, typical	73
Wavelength span (nm) at -3 dB, typical	33
Output power (dBm) ³	≥ 11 dBm
Spectral density (dBm/nm), typical	> -4
Spectral flatness (dB) ^{2,3}	2
Output power stability over 8 h (dB) ^{2, 3, 4}	$\pm 0.05 (\Delta = 0.10)$

NOTE

1. Guaranteed within a range of 1532 to 1560 nm

2. After a warm-up of one hour

3. At 23 °C ± 1 °C.

4. The stability is expressed as \pm half the difference between the maximum and minimum values during the period

General Specifications

Size (H x W x D)		12.1 cm x 3.8 cm x 26.2 cm	(4 ³ / ₄ in x 1 ¹ / ₂ in x 10 ⁵ / ₁₆ 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 Options

OCX controls and LabVIEW drivers

Ordering Information

IQ-2300-96

Hybrid* test jumpers available upon request

* Refers to the choice of hybrid patchcord; all IQ-2300 ASE Broadband Sources are equipped with a standard E-2000/APC connector.

Safety



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

CLASS 3B LASER PRODUCT CLASS 3A LASER PRODUCT

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