Adam Tas Corridor Energy

Semiconductor Optical Amplifier Noise Analysis

Overview

We introduce a novel measurement method for the phase noise measurement of optical amplifiers, topologically similar to the Heterodyne Mach-Zehnder Interferometer but governed by different principles, and we report on the measurement of a fibered amplifier at 1. Abstract: In this letter, we address one of the essential processes to consider in long Semiconductor Optical Amplifiers (SOAs) analysis, which is the noise. Particularly, we investigate the impact of noise effects on the SOA behavior by measuring the gain, the optical signal to noise ratio and the.

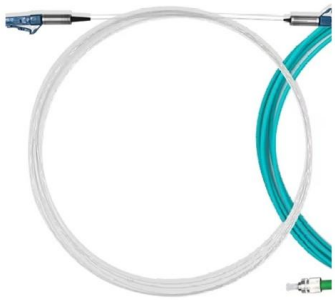
Semiconductor Optical Amplifier Noise Analysis

Noise in semiconductor optical amplifiers (SOA)

Analytical method of noise in the semiconductor optical amplifier (SOA) has not been established yet. The basic problem is how introduce quantized optical field with the Langevin noise sources in the

Investigation of frequency noise and spectrum linewidth

Abstract and Figures The characteristics of FM noise and linewidth of semiconductor optical amplifier without facet mirrors were theoretically analyzed



Analysis of Intensity and Frequency Noises in Semiconductor Optical

We present a theoretical analysis and an experimental study of the statistical properties of the noise accompanying an optical pulse propagating in a nonlinear semiconductor optical amplifier.

Phase noise measurement of semiconductor optical amplifiers

Abstract--We introduce a novel measurement method for the phase noise measurement of

optical amplifiers, topologically similar to the Heterodyne Mach-Zehnder Interferometer but gov-erned by

Analysis of Noise Effects in Long Semiconductor Optical

This work clarifies the analysis of the theoretical study of noise and transmission gain characteristics of semiconductor optical amplifiers (SOAs),

Phase noise measurement of semiconductor optical amplifiers

Abstract We introduce a novel measurement method for the phase noise measurement of optical amplifiers, topologically similar to the Heterodyne Mach-Zehnder Interferometer but governed

Phase noise measurement of semiconductor optical amplifiers

We have discussed in detail a novel method for the phase-noise measurement of optical amplifiers using the delayed self-heterodyne intereferometric technique, and we have measured the

Relative intensity noise in semiconductor optical amplifiers

The spontaneous noise spectrum of high-gain semiconductor optical amplifiers is normally assumed to be dominated by spontaneous-spontaneous and signal-spontaneous beat noise, which is white over

On the amplified spontaneous emission noise modeling of semiconductor

In the present work we provide a comparative analysis of both stochastic time-domain and deterministic frequency-domain ASE noise modeling approaches for semiconductor optical

Characterization of wideband semiconductor optical amplifier

One of the important devices for developing optical networks is the semiconductor optical amplifier (SOA). SOAs are utilized in a wide range to accomplish different purposes. In this paper, a wideband

Numerical Analysis of Gain Saturation, Noise Figure, and Carrier

The gain saturation behaviors and noise figure are numerically analyzed for quantum-dot semiconductor optical amplifiers (QD-SOAs). The carrier and photon distributions in the longitudinal direction as well

Analysis of Noise Effects in Long Semiconductor Optical Amplifiers

Particularly, we investigate the impact of noise effects on the SOA behavior by measuring the gain, the optical signal to noise ratio and the noise figure, referring to numerical simulations.

Semiconductor optical amplifiers with low noise figure

Download Citation , Semiconductor optical amplifiers with low noise figure , In the multilevel phase modulation which is expected to provide the nextgeneration modulation format for

Analysis of Noise Effects in Long Semiconductor Optical Amplifiers

Abstract: In this letter, we address one of the essential processes to consider in long Semiconductor Optical Amplifiers (SOAs) analysis, which is the noise. Particularly, we investigate the impact of noise

Simulation on semiconductor optical amplifier intensity noise reduction

However, spectrum-sliced methods exhibit a large excess intensity noise factor that limits the performance of the system. In this paper, we investigate noise suppression of spectrum-sliced

Noise figure of vertical-cavity semiconductor optical amplifiers

His current research interests include design and analysis of vertical-cavity semiconductor optical amplifiers and their applications in optical communica-tion systems.

High-speed signal processing and wide band optical semiconductor

This work clarifies the analysis of the theoretical study of noise and transmission gain characteristics of semiconductor optical amplifiers (SOAs), which are relevant in the novel local area optical

Analysis of Intensity and Frequency Noises in Semiconductor Optical

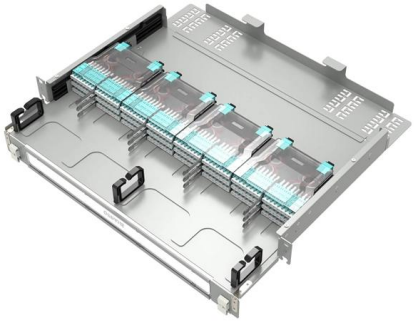
A theoretical analysis of the intensity and the frequency noise in semiconductor optical amplifiers (SOA) is given. Amplification of a traveling optical wave is formulated associating with fluctuations on the

Measurement and analysis of phase noise generated from semiconductor

The phase noise generated from traveling-wave semiconductor optical amplifiers is measured. It is found that the phase noise is strongly correlated with the intensity noise and has bandwidth of 600 MHz.

Noise Analysis In Operational Amplifier Circuits (Rev. B

ABSTRACT This application report uses standard circuit theory and noise models to calculate noise in op amp circuits. Example analysis of the inverting, noninverting, and differential-amplifier circuits



Noise in Semiconductor Optical Amplifiers (SOA)

Abstract--Analytical method of noise in the semiconductor optical amplifier (SOA) has not been established yet.

(PDF) Variation of Relative Intensity Noise With Optical Power in

Amplification characteristics of the signal and the noise in the semiconductor optical amplifier (SOA), without facet mirrors for the intensity modulated light, are theoretically analyzed and

On the amplified spontaneous emission noise modeling of

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Phase noise measurement of semiconductor optical amplifiers

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Noise spectra of semiconductor optical amplifiers: relation between

The paper presents a comparison between a semiclassical and a quantum description of the output noise spectra of semiconductor optical amplifiers. The noise sources are represented by Langevin

Characterization of wideband semiconductor optical amplifier

In this paper, a wideband steady-state model and the corresponding numerical solution are presented for a bulk InP-InGaAsP homogeneous buried ridge stripe SOA. We characterize its gain and noise

Description: Analysis of Intensity and Frequency Noises in

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ken-system: Theoretical Analysis of Intensity and Frequency Noises in

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Abstract One of the important devices for developing optical networks is the semiconductor optical amplifier (SOA). SOAs are utilized in a wide range to accomplish diferent purposes. In this paper, a

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