



517 Fairview Way  
 Milpitas, CA 95035, USA  
 Phone: +1 (408) 649 3992  
 E\_mail: sales@goumax.com  
 Web: www.goumax.com

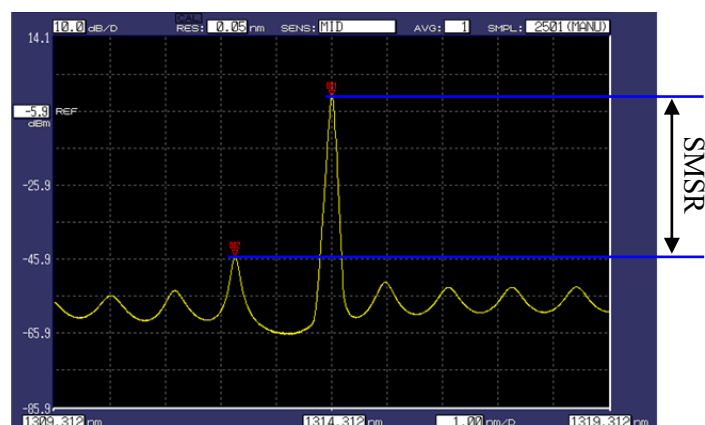
## SMSR Analyzer Modules



GouMax's SMSR Analyzer (Also known as Side-Mode Analyzer: SMA) is an advanced OSA module with SMSR measurement, which can be used to measure SMSR parameters of semiconductor DFB laser sources in device level production or transmitters in optical communication. It is designed and produced using GouMax's proprietary micro-optics and voltage-controlled tunable technology with no moving parts, enabling high-speed wavelength scanning and quick spectrum measurements. The product is the innovative expansion of our OSA platform to meet customer's dedicate requirements. It not only works as SMSR analyzer but also functions as an OSA module to measure the wavelength and laser power.

GouMax's SMA module is a high-speed hand-held optical spectrum analyzer, providing a cost-effective solution to measure SMSR in volume production and product testing, in replacement of setups based on desktop OSA instruments. The portable SMSR Analyzer can be integrated into user's existing testing setups for automation.

GouMax SMA-family products support any single wavelength band from 1250 to 1650 nm, such as O-band, E-band, S-band, C-band, L-band, and any other customer specified wavelength range. Communication is provided through the RS232/UART interface, which allows users to control SMA module, and collect data and spectrum for further analysis with ease.



## SMSR Analyzer Modules

### Key Features

- Cost effective
- Rapid and accurate measurements
- No moving parts
- Integration to automation

### Key Applications

- SMSR measurements
- Transmitter analyzer
- Hand-held/portable OSA
- Optical network monitoring
- Test and measurement instruments

### Product Specifications and Key Parameters

Parameters	Unit	Specification
Operating Wavelength Range	nm	1260 ~ 1350
Input Power Range <sup>1)</sup>	dBm	-45 ~ 15
Maximum Input Power	dBm	30
Wavelength Resolution (FWHM)	nm	0.2
Absolute Wavelength Accuracy <sup>2), 3)</sup>	pm	± 50
Wavelength Repeatability <sup>2)</sup>	pm	± 10
Absolute Power Accuracy <sup>2), 3), 4)</sup>	dB	± 0.8
Power Repeatability <sup>2), 4)</sup>	dB	± 0.15
SMSR Measurement Range <sup>5)</sup>	dB	50
SMSR Accuracy <sup>4), 6), 7)</sup>	SMSR ≤ 40 dB	± 1.0
	SMSR > 40 dB	± 1.5
PDL	dB	< 0.3
Noise Floor	dBm	< -60
Optical Return Loss	dB	> 30
Response Time	s	< 1
Operating Temperature Range	°C	15 ~ 40

#### Notes:

- 1) When used as optical spectrum analyzer.
- 2) Specs guarantee for input power range only from -40 ~ -10 dBm.
- 3) When used as OSA with the input power between -45 ~ -40 dBm, absolute wavelength accuracy is ± 90 pm and absolute power accuracy is ± 1 dB.
- 4) Do not include PDL.
- 5) Peak power of the side mode is required to be ≥ -45 dBm.
- 6) Wavelength separation between the main and side modes is ≥ 0.8 nm.
- 7) Configure to SMSR1 with Yokogawa OSA Resolution setting between 0.02~0.1 nm.