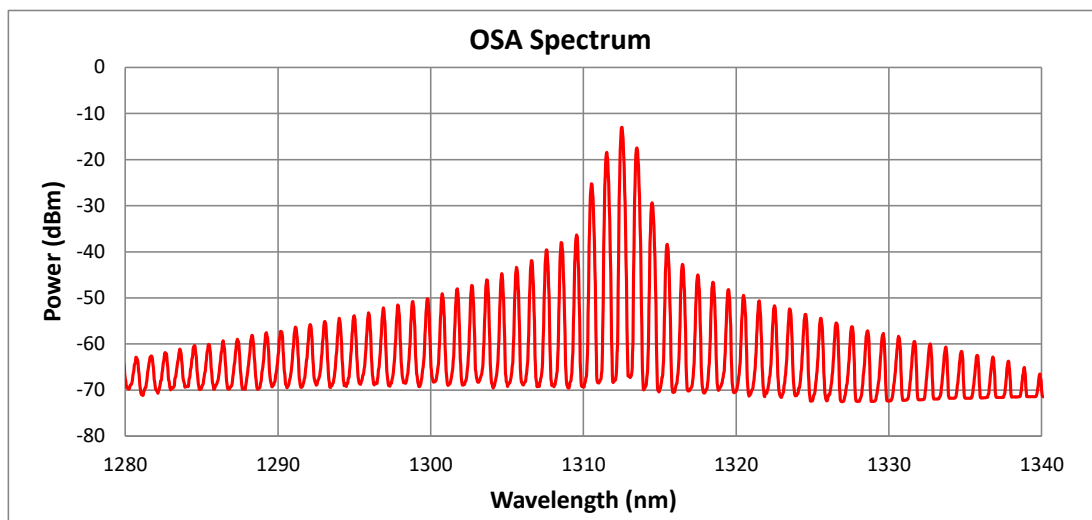


Optical Spectrum Analyzer Modules



GouMax's portable OSA-100 modules are developed for applications to test and measurement equipment. The OSA product is designed and produced using GouMax's proprietary micro-optics and voltage-controlled tunable technology. It measures spectrum of optical signals injected into the OSA device over the defined operating wavelength range. From the measured spectrum, critical channel parameters, such as channel power, wavelength, or OSNR, can be analyzed. GouMax OSA-family products support various zones of wavelength range, such as O-band, E-band, S-band, C-band, L-band, C+L-band, full band from 1250 nm to 1650 nm and any other customer specified wavelength range.

GouMax's OSA-100 OSA module consists of a bandpass tunable optical filter, a photodetector and low noise, high-dynamic range electronics. When a wide band spectrum is incident to the tunable filter, it allows a narrow band of input light centered at a given wavelength to pass through the filter. By altering the central wavelength of pass band of the tunable filter, the whole input spectrum can be scanned and spectrum information of incident signal is detected sequentially. The photodetector converts the light passing through the filter into electrical current that is then digitized. The data processing unit analyzes the data and then outputs the spectrum and results to the customers.



Single/Dual/Full-Band OSA Modules

Key Features

- Wide wavelength coverage from 1050 nm to 1670 nm
- Accurate power and wavelength measurements
- No moving parts, long lifetime
- Single and multi-mode fiber input

Key Applications

- Hand-held/portable OSA
- Optical network monitoring
- Transmitter analyzer (SMSR, power, wavelength)
- Test and measurement instruments

Product Specifications and Key Parameters

Parameters	Unit	Specification			
		Single Band	Dual Band	Full Band	
Operating Wavelength Range	nm	Up to 45	Up to 90	1250 ~ 1650	
Input Power Range	dBm	-50 ~ 15			
Maximum Input Power	dBm	30			
Wavelength Resolution (FWHM)	Type A	nm	0.18	0.35	3.0
	Type B	nm	0.10	0.20	1.0
Absolute Wavelength Accuracy ¹⁾	nm	± 0.05	± 0.07	± 0.3	
Wavelength Repeatability ¹⁾	nm	± 0.01	± 0.015	± 0.1	
Absolute Power Accuracy ^{1), 2)}	dB	± 0.5	± 0.6	± 0.8	
Relative Power Accuracy ^{1), 2)}	dB	± 0.4	± 0.5	± 0.6	
Power Repeatability ^{1), 2)}	dB	± 0.1			
PDL	dB	< 0.3		< 0.5	
Noise Floor	dBm	-60			
Optical Rejection Ratio	At 0.4 nm offset	dB	> 30	> 15 ³⁾ , >30 ⁴⁾	> 40 ⁵⁾
	At 1.6 nm offset	dB	> 50	> 50	
Optical Return Loss	dB	> 30			
Response Time	s	< 1			
Power Consumption	W	< 2.0			

Notes:

- 1) Specs guarantee for input power range only from -40 ~ -10 dBm.
- 2) Do not include PDL.
- 3) For Type A FWHM.
- 4) For Type B FWHM.
- 5) At 6 nm offset for full-band OSA module.