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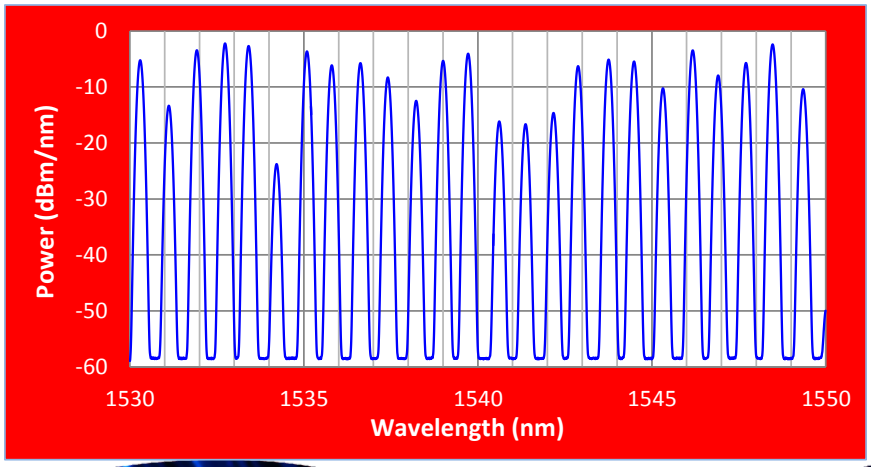
Optical Spectrum Analyzer Modules

OSA-100 modules are designed for applications to test and measurement equipment. The OSA product is designed and produced using proprietary micro-optics and 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. 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.

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
- No moving parts
- 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	1.5
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		> 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.
4) For Type B.
5) At 6 nm offset for full-band OSA module.