» OSA Modules

Single-Band OSA

Dual-Band OSA

Full-Band OSA

1064 nm OSA

OCM/OPM Monitors

SMSR Analyzer

Optical Channel/Performance Monitors

» Product Description

Optical channel monitor (OCM) or Optical performance monitor (OPM) has played an important role in optical networks to measure signal quality at optical layer. It is used for managing high capacity dense wavelength division multiplexing (DWDM) optical network and ROADM (reconfigurable optical Add/Drop) systems. OPM involves assessing the quality of data channel by measuring its optical characteristics without directly looking at the individual bit of data. OPM measures channel power, channel wavelength, and optical signal-to-noise ratio (OSNR) for each channel. These fiber-optic components/modules are typically configured at 50 GHz and 100 GHz ITU grids.

GouMax's OPM consists of a narrow bandpass tunable optical filter, a photodetector and low noise, high-dynamic range electronics, as schematically shown in Figure 1-1. When a multiple-channel optical signal 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 through control electronics, the whole input signal 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 amplified and digitized. The data processing unit analyzes the data, calculates channel wavelength, power and OSNR, and then outputs to the customers.

The OSA module can be used as a standalone device. GouMax provides control software and GUI for data analysis.



Figure 1: OCM/OPM Monitor (C-band)

» Key Features

- High spectral resolution
- High wavelength repeatability
- High wavelength accuracy
- High slice and super band power accuracy
- Configurable to 50/100 GHz channel spacing
- No mechanical wear-outs
- Long operation durability

» Key Applications

- Optical wavelength monitoring for flexgrid networks
- Optical power monitoring for flexgrid networks
- OSA module for test and measurement equipment
- Feedback control signal for power balancing at DWDM
- Monitoring power for gain equalization
- Monitoring ROADM networks

» Typical Specifications

Here is the typical specifications for C-band OCM/OPM modules.

For details, please request specifications from GouMax Sales.

Parameter	Unit	Specification
Operating Wavelength Range	nm	1527 ~ 1568
Input Power Range	dBm	-40 ~ -10
Channel Spacing	GHz	50 or 100
Maximum Input Power	dBm	30
Absolute Wavelength Accuracy	pm	±50
Absolute Power Accuracy	dB	± 0.5
Relative Power Accuracy	dB	± 1.5
Power Repeatability	dB	± 0.1
OSNR Accuracy	dB	± 0.1
PDL	dB	0.3
Noise Floor	dBm	-55
Optical Return Loss	dB	> 40
Response Time	s	< 1
Power Consumption	W	< 2.0
Electrical Interface	-	USB/RS232
Mechanical Dimension	mm	68x115x21

Note 1: OPM can be used at 50GHz or 100 GHz mode
Note 2: Do not include PDL.
Note 3: OSNR is measured at 100 GHz mode only for 2.5/5/10Gb/s signals. At 50 GHz mode, no OSNR is measured.



» Other Information

- Download product specification
- **Please contact our Sales for your requirements**

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