Optical Channel Performance Monitor

IntelliGuard® OCPM Series





BaySpec's OCPM Series Optical Channel Performance Monitor is an embedded, integrated spectrum analyzer delivering precise measurement and powerful processing capabilities for dense wavelength division multiplexing (DWDM) applications.

The device covers C and/or L band wavelength ranges and provides simultaneous measurements of up to 160 channels spaced 50 GHz apart. High reliability (GR-63/1209/1221 qualified) is achieved through a rugged mechanical design with no moving parts. Periodic calibration is not required. Input/Output (I/O) is provided through a dual port RAM interface accessed through ADD/DAT bus direct connection or serial (RS232 or USB) communications.

The *IntelliGuard*® OCPM Series employs a highly efficient Volume Phase Grating (VPG®) as the spectral dispersion element and an ultra-sensitive InGaAs array detector as the detection element, thereby providing high-speed parallel processing and continuous spectrum measurements. As an input, the device uses a tapped signal from the main data transmission link through a single mode fiber, then collimating it with a micro lens. The signal is spectrally dispersed with the VPG®, and the diffracted field is focused onto an InGaAs array detector. The control electronics read out the processed digital signal to extract required information. Both the raw data and the processed data are available to the host through the chosen interface.

Key Features:

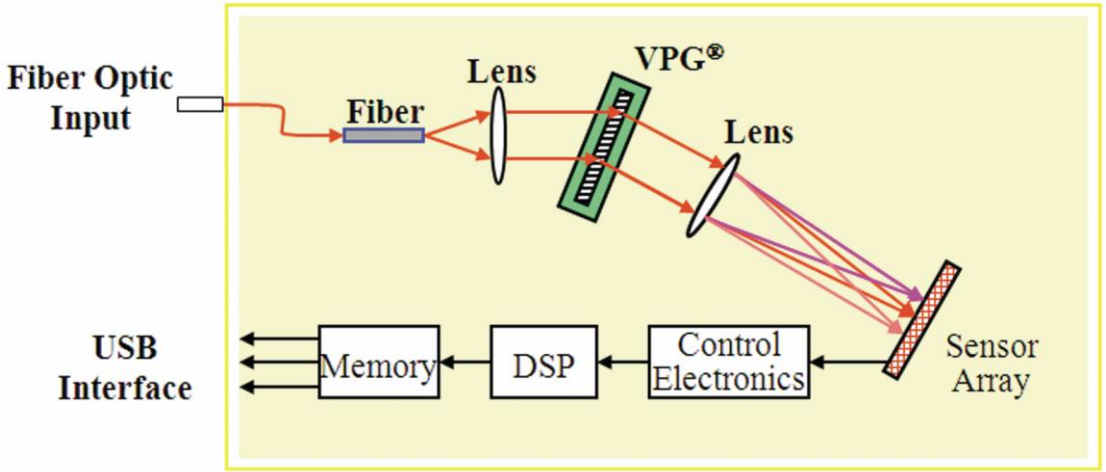
- Real-time <1 ms response time for raw data
- Remote gain equalization of DWDM networks based on optical power or OSNR
- High dynamic range - 50 dB
- High reliability - no moving parts and GR-63/1209/1221 qualified
- Athermal design for ultra-low power consumption
- Compact for new system space constrained environments 68 x 96 x 15.8 mm^3; legacy designs available upon request
- Supports different modulation schemes for 10/40/100 GHz transmission

Applications:

- EDFA gain balancing
- Optical add/drop monitoring
- Physical layer monitoring for provisioning and commissioning optical networks
- Real time fault detection and isolation in DWDM systems
- Channel power, wavelength and OSNR measurement
- OEM module for field test equipment

Compliance

- Telcordia GR-63/1209/ GR-1221 qualified



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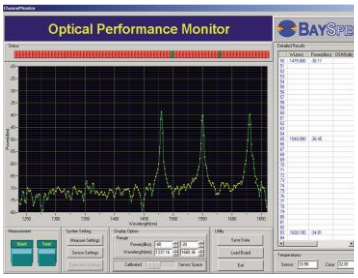
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Parameter	Data	Unit
Wavelength Range	C or L-band	
Number of Channels	40, 80, 160 or specify	#
Channel Spacing	100, 50 or specify	GHz
Absolute Wavelength Accuracy	± 50	pm
Relative Wavelength Accuracy	30	pm
Channel Input Power Range	-65 to –15 or specify	dBm
Channel Power Accuracy	± 0.5	dB
Power Resolution	0.1	dB
PDL	0.3	dB
Response Time	<50 processed data (<1 raw data only)	ms
OSNR	25	dB
OSNR Accuracy	± 2	dB
Size	68 x 96 x 15.8*	mm^3
Interface	USB, RS-232 or Dual-port RAM	
Weight	<260	g
Power consumption	<2 W max*	W

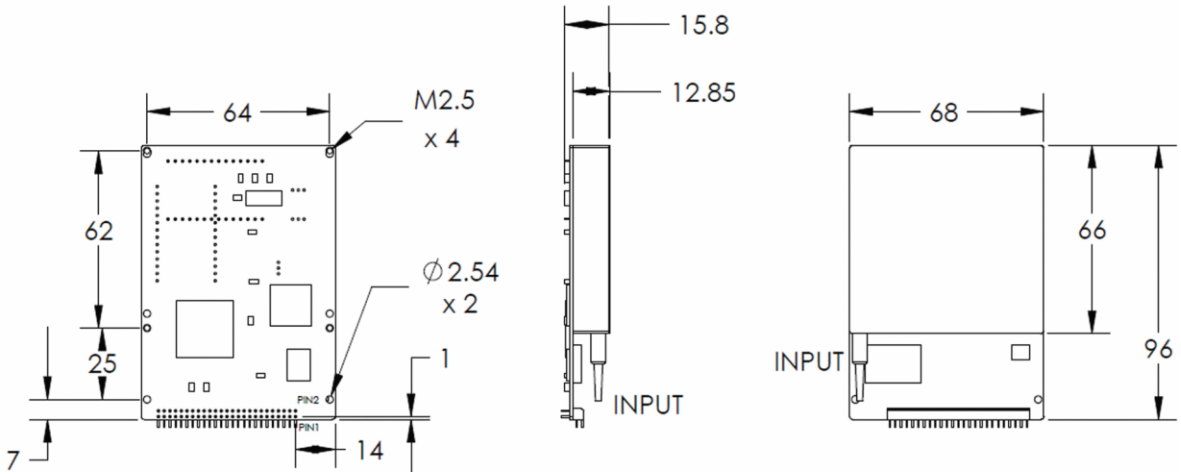
*Subject to Change, Depending on specifications

Sense 2020 Software



BaySpec's *Sense 2020* software included, a Windows-based package with flexible data acquisition, processing and output functionality

BaySpec SDK, a software development kit for new applications development and integration into to your host software systems.



Part Number Selection:

OCPM- □□□ - □□□ - □□□□ - □□

Code	Channel Spacing
100	100 GHz
050	50 GHz
xxx	TBD

Code	Channel Number
040	40
080	80
160	160
xxx	TBD

Code	Starting Wavelength
Please specify the shortest wavelength i.e. :	
2955	1529.55 nm

Code	Connector
NC	None
FA	FC/APC
FP	FC/PC
SA	SA/APC
SP	SA/PC
LA	LC/APC
LP	LC/PC
XY	TBD

Note: OSNR reporting optional
Standard fiber length is 1.0m



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