

OMx – DCR Series of Optical Channel Monitors

Dynamic Channel Recognition for Mixed 10Gb/s-100Gb/s Formats



Product Features & Benefits

- Compact and Integrated Design
- Telcordia GR-63-CORE and GR-468-CORE Qualified
- 500 Million Field Device Hours
- Excellent Power Accuracy
- Leading OSNR Performance
- **No Limit to Number of Channels**
- ± 8.0 GHz Frequency Accuracy
- Full C, extended C or L Band Operation
- Supports 25, 50, 100 GHz Spacing
- 50dB Input Power Dynamic Range
- -5 to 70°C Operating Temperature
- RS-232 and High Speed DPRAM Interfaces
- High Spectral Resolution (50,000 sampling points)

Applications

- Dynamic Channel Monitoring
- Mixed DWDM Transmission Rates
- EDFA Gain Tilt Control
- Spectral Power Balancing
- Advanced Modulation Analysis (Handling all modulation formats)
- Wavelength Routing and Path Provisioning

Introducing the OMx-DCR Optical Channel Monitor – for Mixed 10Gb/s, 40Gb/s, 100Gb/s and beyond

To meet current and future modulation format challenges in high capacity, flexible DWDM networks, AXSUN Technologies presents the industry most advanced and comprehensive optical monitoring products. AXSUN's OMx-DCR family was specially designed to handle all commonly used modulation formats (DPSK, DQPSK, ODB, CRZ, CSRZ, etc) with mixed DWDM transmission data rates (2.5Gb/s, 10Gb/s, 40Gb/s, 100Gb/s and beyond), either on the ITU-grid or with a shifted ITU channel scheme.

Product Description

Based on Axsun Technologies' automated manufacturing process, OMx – DCR products incorporate AXSUN's patented, highly reliable MEMS tunable filter, micro-optics, and LIGA micro-alignment structures in an epoxy-free system that is fully qualified to stringent Telcordia requirements (GR-63-CORE and GR-468-CORE).

Axsun's OMx-DCR product line provides highly accurate DWDM channel optical power, frequency and OSNR measurement in the C, extended C or L band. New algorithms can be added easily via simple firmware download – a future-proof investment for customers who are expanding their system features while requiring complete backward compatibility with deployed systems.

Excellent Reliability

Backed by over 500 million field device hours, Axsun's OMx-DCR product line has a well-deserved reputation for high-reliability. OMx products have been providing instrument-class measurement capabilities for DWDM system monitoring since 2002. Tens of thousands of AXSUN OMx units are currently monitoring the performance of dynamic optical networks globally.

OMx-DCR Products: Future Proof

With high spectral resolution, flexible and expanded signal processing capabilities, OMx-DCR optical channel monitors can be used and adapted to your evolving optical monitoring needs.

Performance specifications for OMx-DCR Series

Parameter	OM2-DCR or OM3-DCR		Units
	Min	Max	
Operating Temperature	-5	70	°C
Supply Voltage (nominal = 3.3V)	3.15	3.45	Vdc
Supply Current (max at 70°C)		2.0	A
Operating Frequency/Wavelength ¹			
C Band	196.3 1527	191.55 1565	THz nm
L Band	190.9 1570	186.2 1610	THz nm
Absolute Power Accuracy ² (10Gb/s signals only)		± 0.5	dB
Absolute Power Accuracy ² (Mixed 40Gb/s and 10Gb/s)		± 0.7	dB
Relative Power Accuracy (Mixed 40Gb/s and 10Gb/s)		± 0.25	dB
PDL		< 0.5	dB
Power Repeatability		± 0.1	dB
Power Readout Resolution		0.1	dBm
Absolute Frequency/Wavelength Accuracy (EOL) ³	± 8.0		GHz
Relative Frequency Accuracy		± 4.0 ± 32	GHz pm
Frequency Repeatability		± 1	GHz
Frequency Readout Resolution		1	GHz
OSNR Magnitude (50GHz spacing)	25		dB
OSNR Magnitude (100GHz spacing)	28		dB
OSNR Repeatability	± 0.75		dB
Per Channel Input Power Range	-40	-7	dBm
Optical Return Loss		30	dB
Scan and Report Time ⁴	0.5	1.0	sec
Mechanical Dimensions (OM3), (mm)	106 x 70 x 15		
Mechanical Dimensions (OM2), (mm)	220 x 110 x 26		

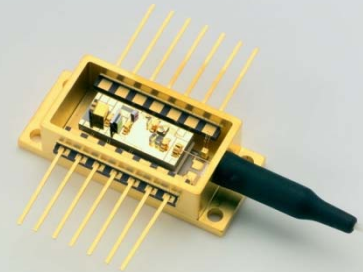
- Extended C band frequency ranges available upon request.
- Excluding PDL and random connector mating loss.
- Frequency accuracy for the OM2/3 is guaranteed for 25 year EOL.
- Scan and report time is determined from the format of information requested (i.e. < 500ms for Integrated Channel Power and Wavelength; < 1000ms for Integrated Channel Power, Wavelength with OSNR)

US Patent Numbers 5,807,622 5,618,474 6,373,632 6,341,039 6,416,937
 6,385,382 6,404,567 6,420, 206 6,509,972

Other Patents Pending

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