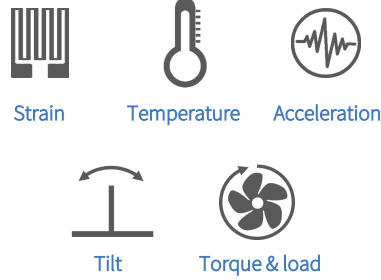


Fiber optic sensors. Everywhere.

Sentea SR-1080 / DM-4120 / DM-8125 mini-interrogator datasheet

Cost-effective acquisition system optimized for dynamic measurements using fiber optic sensors. Highly integrated, interoperable design tailored for large-scale monitoring.



Non-contractual picture

Functional characteristics	SR-1080	DM-4120	DM-8125
Number of fibers	1	4	8
Max. number of sensors per fiber ⁽¹⁾	8	10	
Max. sampling frequency ⁽²⁾	24kHz		
Wavelength range	1530-1570nm	1525-1575nm	
Wavelength sensitivity ⁽³⁾	< 0.5pm		
Wavelength accuracy ⁽⁴⁾	< 10pm		
Sensors FWHM	From 100pm to 1nm		
Light source	SLED		
Optical connection	LC/APC		
Data interface	Ethernet (TCP/UDP/MQTT) · Modbus TCP		
Time synchronization	NTP		
Software interface	PeakViewer™ visualization app · API for Python		
Physical characteristics			
Dimensions	170 x 135 x 65mm		
Weight	1.2kg		
Operating conditions (non-condensing)	0 to +40°C	-20 to +60°C	
Power	12 to 24 V DC external		

(1) Minimum peak spacing of 3nm required in operation | (2) Valid for 1 fiber connected. For *n* fibers connected, this value has to be divided by 2*n* | (3) Defined as standard deviation over 10 minutes | (4) Over full temperature range



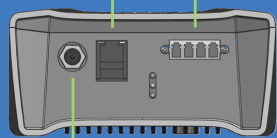
SENTEA

SENTEA'S INTERROGATORS

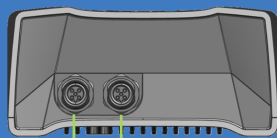
detect change in reflected light proportional to change in strain, temperature, acceleration, etc.

Data transfer
1x RJ45

Optical fibers
4x LC/APC



Power supply
1x 12V DC



Data transfer
2x M12

About Sentea

Sentea has the ambition to become the market leader in fiber optic sensor interrogators leveraging the benefits of integrated photonics. The company is a spin-off of Ghent University and research center imec and commercializes more than 10 years of research on fiber optic sensors and silicon photonics. Its headquarters are on the Ghent technology campus, the silicon photonics hotspot of Europe.

For more information

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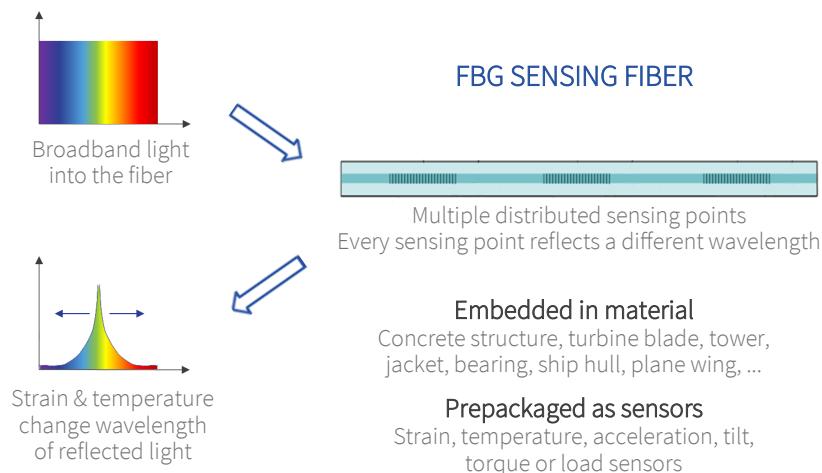
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Optical sensors based on Fiber Bragg Gratings (FBG)



Monitoring in harsh environments

Unaffected by electromagnetic interferences and lightning, resistant to corrosion and extreme temperatures, and safe to use in explosive applications, fiber optic sensors can be used even in the harshest environments.

The sensing element is a specialty fiber with multiple distributed sensing points that can be embedded in, or mounted onto, steel, concrete or composite materials of any system or structure.

For easy installation, also various stand-alone fiber based sensors are available to measure strain, temperature, acceleration, tilt, torque or loads in any structure or system that needs to be monitored.

Tailored for large-scale deployment

The cost of interrogators has been the biggest hurdle for the wider adoption of fiber optic sensors. Leveraging the benefits of silicon photonics, Sentea brings to market the most cost-effective fiber sensor interrogator.

Thanks to its highly integrated and interoperable architecture, Sentea's interrogator represents the ideal solution for large-scale monitoring applications.



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