I-MON 850 OEM

Interrogation monitors for 850 nm FBG sensor systems

Cost efficient, high-resolution spectrometers ideally suited for OEM Integrators of FBG sensing systems

The I-MON 850 OEM Series Interrogation Monitors offer real-time spectrum monitoring of Fiber Bragg Grating (FBG) sensors in the 850 nm wavelength range. High spectrometer resolution combined with broad wavelength range provides high-resolution interrogation monitors allowing measurement of a large number of FBG sensors.

A direct interface to the diode array detector offers OEM integrators a cost efficient solutions for building their FBG sensing systems.

Features
High measurement frequency
Broad wavelength range
High resolution
Large dynamic range
Compact size
No moving parts

Applications
Stand-alone Interrogation monitor and/or
OEM Interrogation monitor modules:
- Vibration analysis
- Temperature measurements
- Pressure monitoring
- Strain measurements

I-MON Developer's Kit

The I-MON 850 OEM is available as a Developer's Kit including software providing plug-and-play operation.

Operating principle

The Ibsen I-MON Interrogation Monitors build on patented (*) Ibsen high-resolution spectrometer technology, utilizing Ibsen fused silica transmission gratings. The I-MON splits the wavelength spectrum spatially to allow for parallel processing of the individual FBG sensor peaks. The FBG sensor peaks are measured by a diode array.

(*) US patents no's.: 6,842,239 and 6,978,062

About Ibsen Photonics

Ibsen Photonics is building its portfolio of high resolution spectrometer modules on more than 20 years of experience in diffractive optics.
Ibsen Photonics also has a leading position within phase masks for FBG manufacturing, holographic fused silica transmission gratings, and spectrometers.
Ibsen Photonics welcomes partnerships with original equipment manufacturers based on the Ibsen high resolution spectrometer technology.
Ibsen Photonics is a privately held company.

Specifications

Parameter	Unit	I-MON 850 OEM
Max no. of FBG's and spacing		> 45 at 1200 pm
Wavelength range	nm	823 - 878
Wavelength fit resolution	pm	< 0.5*
Repeatability (over any pol state)	pm	3 (5 max.)
Wavelength linearity	pm	3 (typ.)
Wavelength drift	pm/^{o}C	1 (3 max.)**
Dynamic range	dB	30*
Input optical power range	dBm	-80 to -20*
Measurement frequency	Hz	> 100*
Interface		Direct interface to CCD array
Temperature range	^{o}C	0 - 70
Size	mm	23 x 58 x 71

(*) Depending on customer electronics

(**) Note that by applying temperature control or temperature correction the wavelength accuracy over the entire temperature range can be improved.

Specifications are subject to change without prior notice. Design and specifications can be modified to suit a range of customer requirements

Ibsen photonics

For further information you can contact us directly at:

Ibsen Photonics A/S Ryttermarken 15-21 DK-3520 Farum Denmark
Phone +45 4434 7000 Fax +45 4434 7001 www.ibsenphotonics.com E-mail inquiry@ibsen.dk