

FiSpec FBG X400

Ultraminiature, precise and rugged fully-integrated FBG Interrogator with embedded light source and on-board processing. With an unprecedented small size, the FBG X400 integrates all necessary components for the accurate analysis of up to 120 fiber Bragg grating (FBG) sensors. Its compact and energy-efficient design enables FBG based applications where space and power is limited.



Performance Properties

Number of Channels	4
FBG Sensors of Channels	30
Sampling Range	1-200Hz (simultaneous)
Wavelength Range	808-880nm
Measurement Range	from 0,1°C 1µe (10Hz)
Digital Measurement Res.	0,01°C 0,01µe
Thermal Stability	<0,1°C/°C
Polarization Stability	±7µe/±0,7°C

Applications

Predictive Maintenance
Condition Monitoring
Thermal Mapping
Process Control

Used for

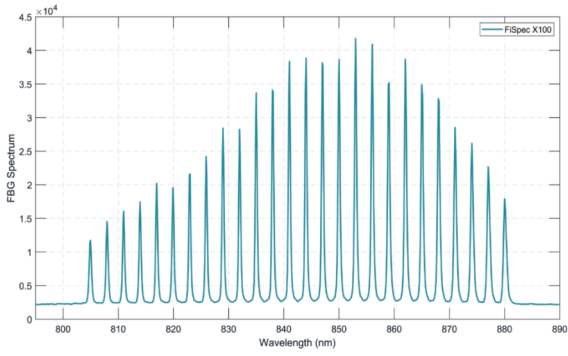
Temperature
Pressure
Force
Strain

Physical Properties & Communications

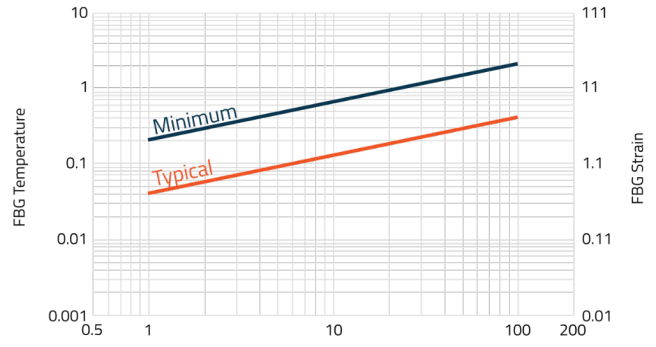
Operating Temperature	0-60°C
Storage Temperature	0-80°C
Dimensions	130 x 68.5 x 15.3mm
Weight, Power Consumption	120g, 1,5W

Optical Interface	FC/APC
Electrical Interface	USB-C, UART (RS-232)
Software Protocol	User Data Protocol (UDP)
Hardware Protocol	Direct Serial Communication

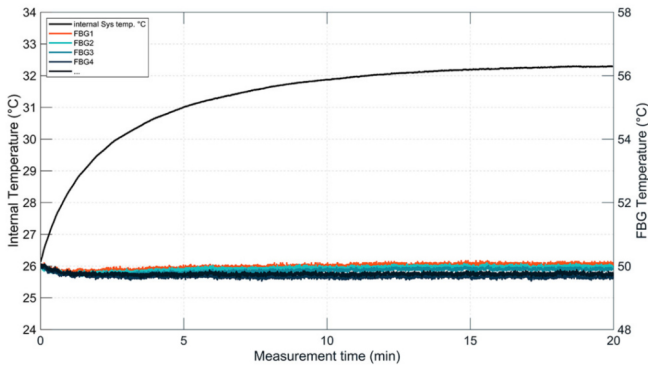
Exemplary FBG Spectrum @ 850nm



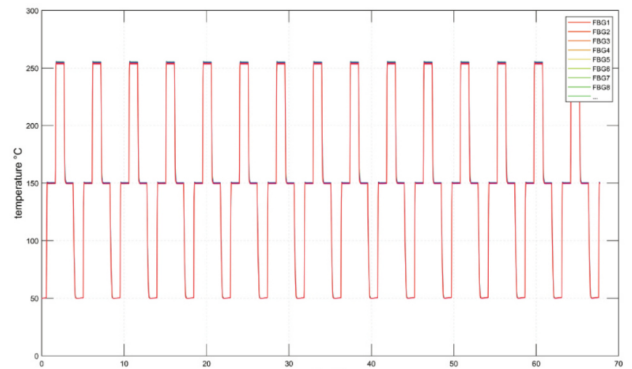
Precision 2σ noise level



Heat-up Behaviour



High Repeatability



Technical Drawing

