Technical Specifications

Model Number	ASIS-HTFBG
Product Name	High-Temperature Sensing FBG Interrogator
Version	V1.2
Revision Date	07.08.2025

Email: info@aimili.com
Tel: +1 724-612-8935
Address: Oakland, Pittsburgh, PA 15213, USA

1. Product Overview

The ASIS-HTFBG is a broadband, multi-channel optical sensing module designed for high-temperature measurements using Type-II fiber Bragg grating (FBG) sensors fabricated with femtosecond laser technology. Engineered for robustness and precision, it enables accurate and stable sensing up to 850 °C, making it ideal for extreme industrial environments such as power generation, metallurgy, and intelligent manufacturing.

The system integrates a high-performance optical switch and an industrial control computer (IPC) for automated, real-time monitoring of up to 64 FBG channels. Laser signals are sequentially routed to each sensor, and the reflected temperature data is processed using advanced demodulation algorithms. A high-speed, Windows-based IPC ensures precise data acquisition, low crosstalk, and efficient signal analysis.

With a compact modular design, the system offers inherent safety, corrosion and radiation resistance, and EMI immunity. These features ensure reliable performance in harsh environments. Compatibility with Type-II FBGs and integrated intelligent control make it a powerful solution for next-generation high-temperature sensing.

2. Optical Specifications

Parameter	ASIS-HTFBG
Operating Wavelength (nm)	1525-1605
Maximum Measurable Temperature (°C)	850
Temperature Accuracy (°C)	≤0.2
Wavelength Resolution (pm)	1.7
Bragg Grating Reflectivity	>4%
Data Refresh Rate (Hz)	64
Number of Channels	64 (customizable)
Fiber Optic Port	FC/APC

Email: info@aimili.com
Tel: +1 724-612-8935
Address: Oakland, Pittsburgh, PA 15213, USA

3. Other Specifications

Parameter	ASIS-HTFBG
Communication Interface	Gigabit Ethernet
Operating System and Software	Windows 10/11, LabVIEW
Input Power	AC 120V/15A
Operating Temperature (°C)	0-50
Dimensions (mm)	360 × 280 × 200

Email: info@aimili.com
Tel: +1 724-612-8935
Address: Oakland, Pittsburgh, PA 15213, USA