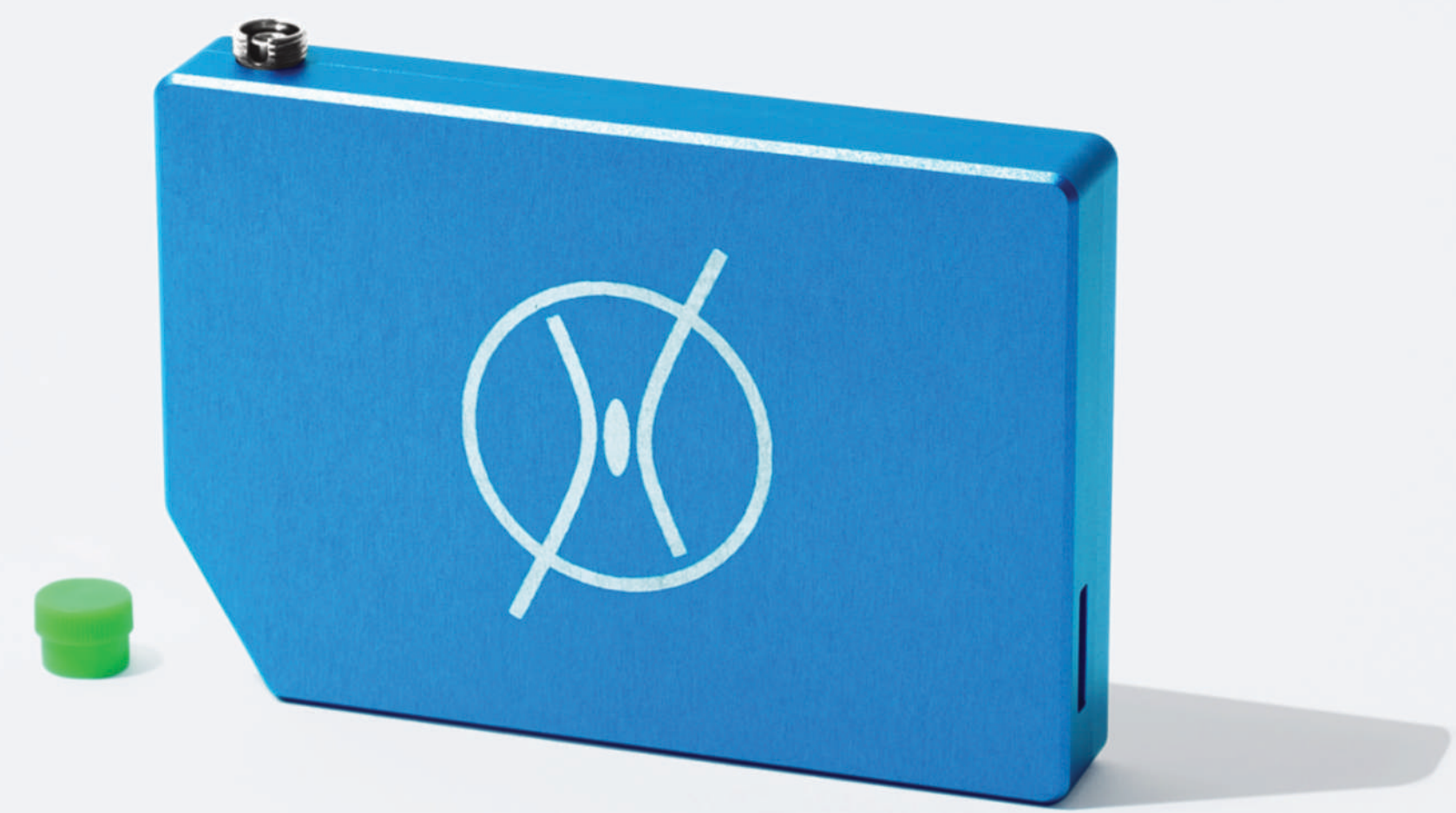


FiSpec FBG X100



Ultraminiature, precise and robust fully-integrated FBG Interrogator with embedded light source and on-board processing.

Overview

With an unprecedented small size, the FBG X100 integrates all necessary components for the analysis of up to 30 fiber Bragg grating (FBG) sensors.

Its compact and energy-efficient design enables FBG based applications where space and power is limited.

Key Features

- Plug & Play System
- Ultra-compact
- Low Weight
- High Precision
- High Thermal Stability
- Energy-efficient
- On-board FBG Analysis

Used For

- Temperature
- Strain
- Pressure
- Force

Applications

- Process Control
- Predictive Maintenance
- Condition Monitoring
- Thermal Mapping

Performance Properties

Number of Channels	1
FBG Sensors per Channel	30
Sampling Rate	1 - 100Hz (simultan.)
Wavelength Range	808-880nm
Measurement Precision	from 0,1°C 1µe (10Hz)
Digital Measurement Res.	0,01°C 0,01µe
Thermal Stability	<0,1°C/°C
Polarization Dependency	±5µe/±0,5°C

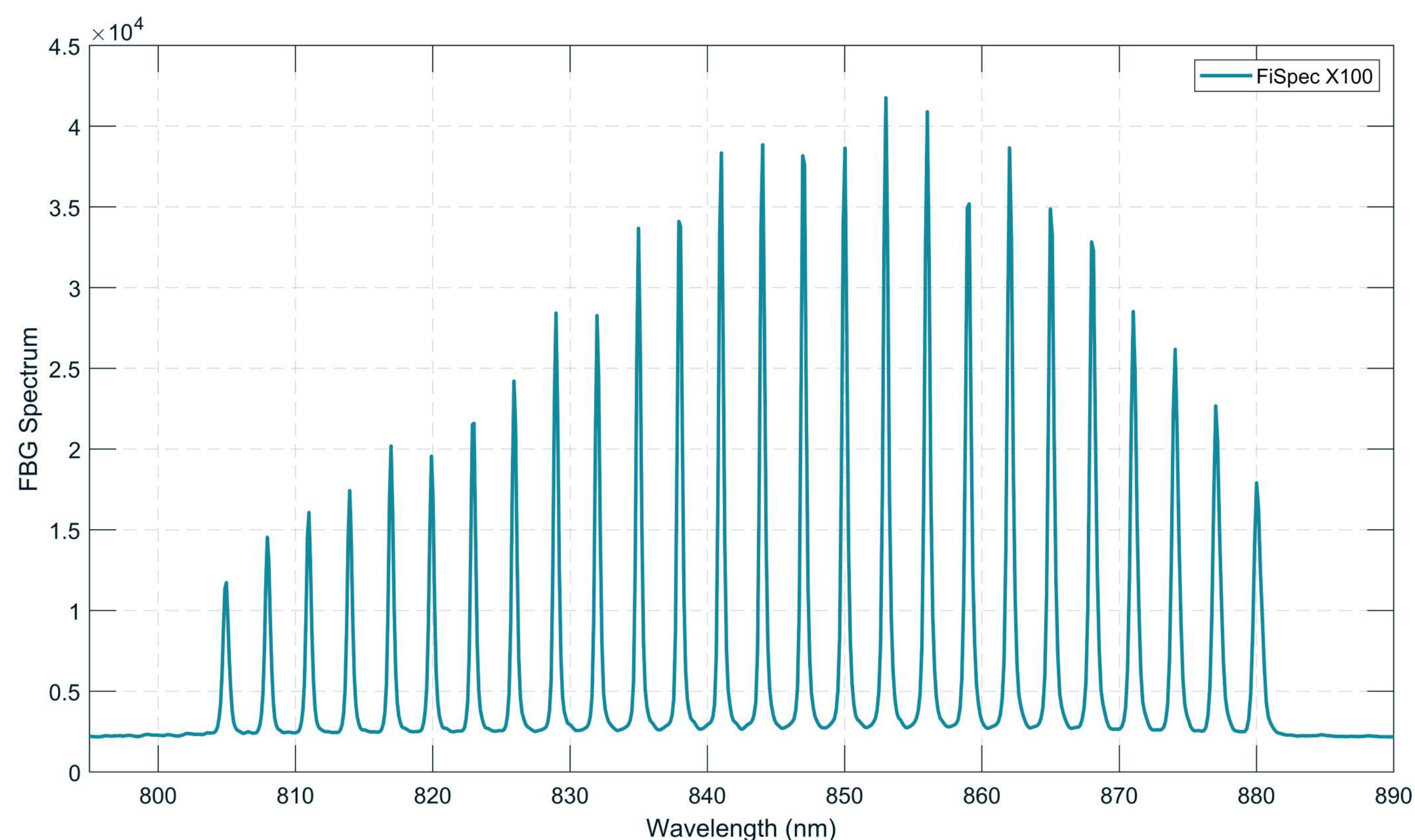
Physical Properties

Operating Temperature	0 - 60°C
Storage Temperature	0 - 80°C
Dimensions	74 x 50 x 15mm
Weight	60g
Power Consumption	1W

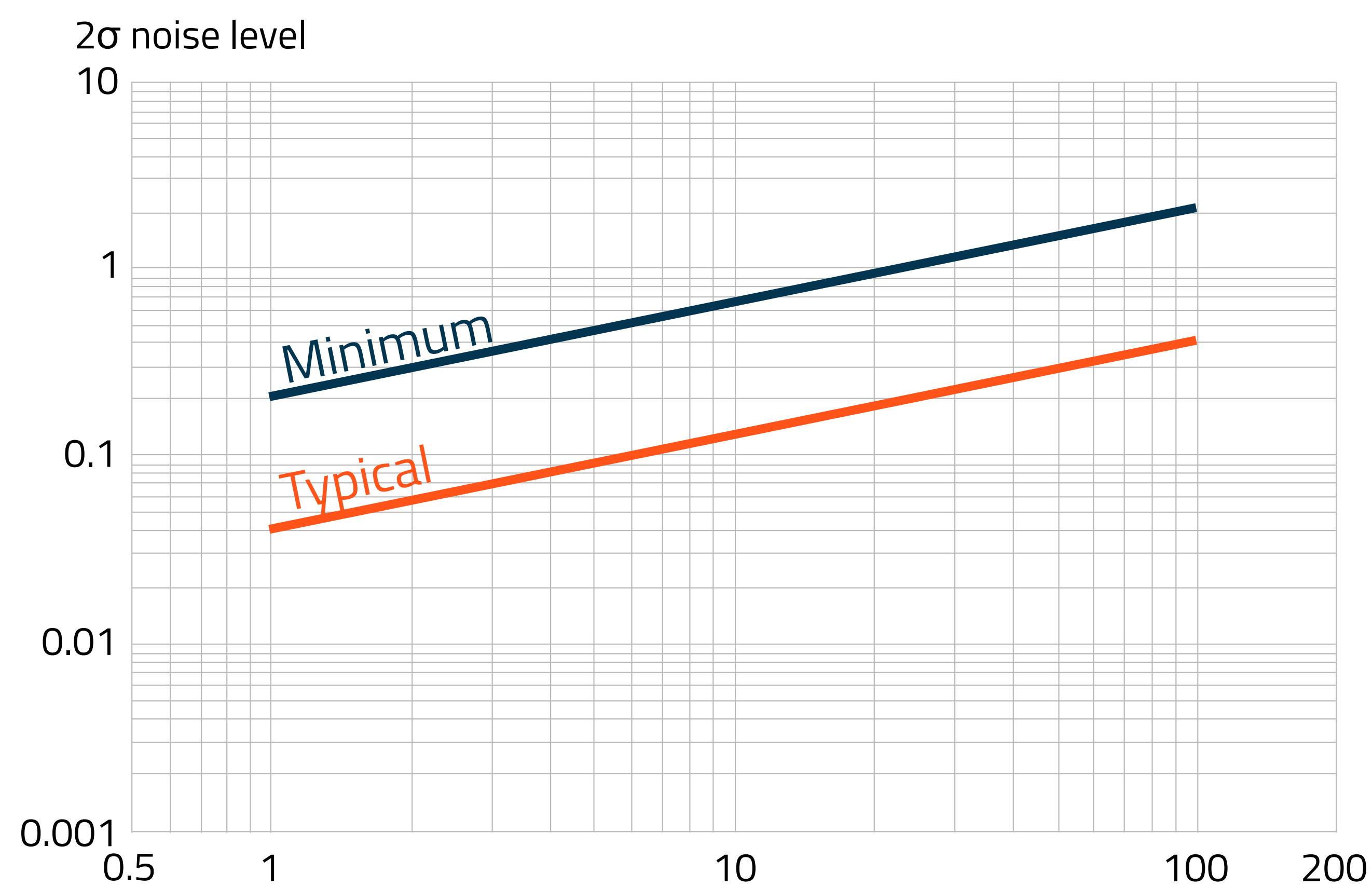
Communication

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

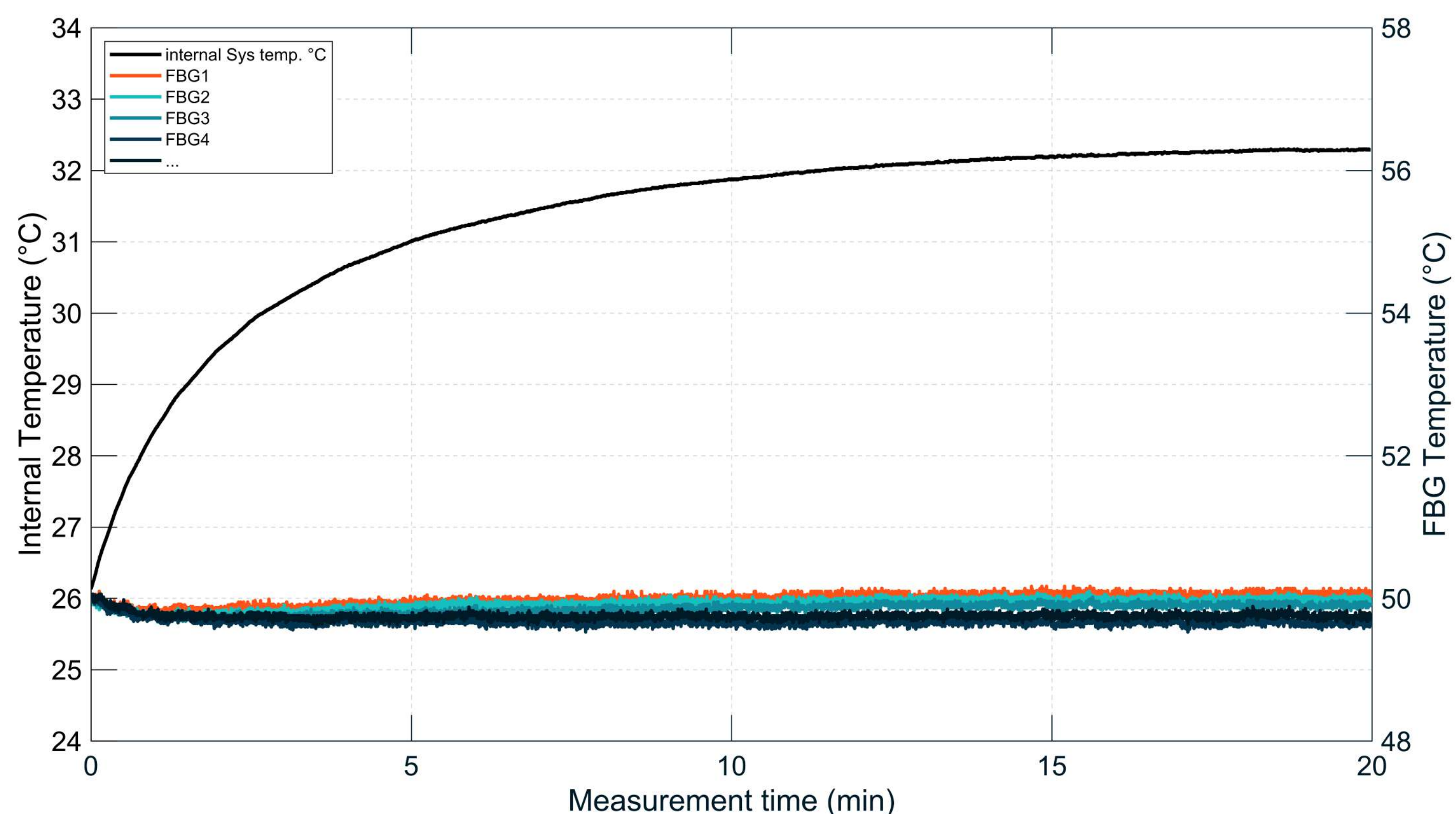
Exemplary FBG Spectrum @ 850nm



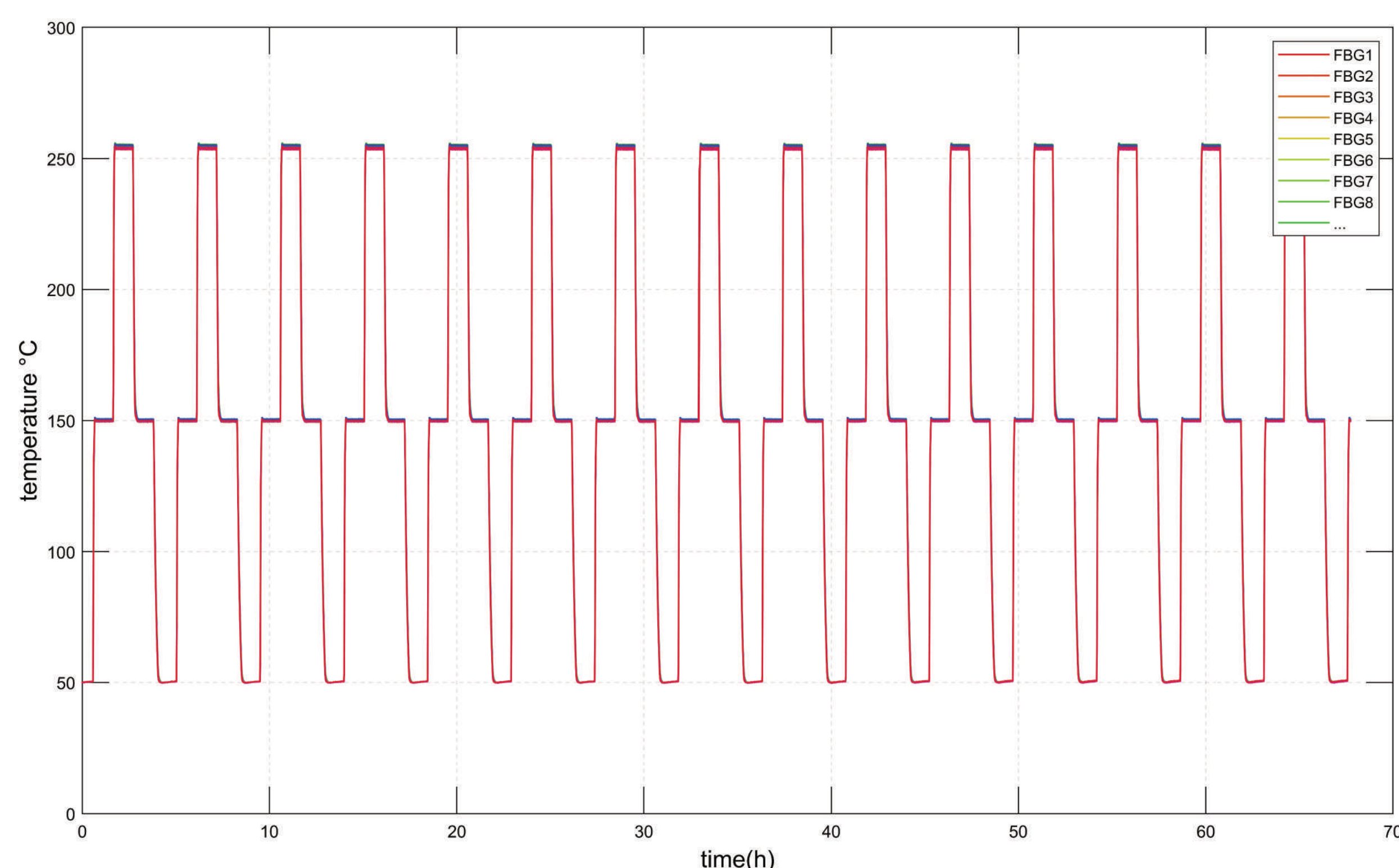
Precision in (°C) vs. Sampling Rate (Hz)



Heat-up Behaviour



High Repeatability



Technical Drawings

