ABB MEASUREMENT & ANALYTICS | PRODUCT DESCRIPTION

LEMI 70-TI™ THERMAL INFRARED MULTISPECTRAL IMAGER

Precision thermal observation in a compact package

ABB is a global leader in space optics with over 50 years of experience delivering high-performance remote sensing instruments for government and commercial missions. Our optical payloads fly on flagship programs from major space agencies, with growing adoption across the private space sector.

The LEMI 70-TI thermal infrared imager delivers actionable Earth intelligence for compact satellite platforms. This imager combines scientific-grade optics with a lightweight, thermally tolerant design that scales from single-satellite missions to full constellations.

With proven flight heritage, the LEMI 70-TI enables heat-signature monitoring, anomaly detection and data-driven decision-making.

What you can achieve with the LEMI 70-TI

- Detect and monitor wildfires, volcanic activity and thermal anomalies
- Monitor soil humidity levels for precision agriculture
- Support disaster response with thermal imaging of affected zones
- Track urban heat islands and energy efficiency patterns
- Monitor industrial sites, pipelines and power plants for safety and compliance
- Generate climate and environmental studies through surface temperature mapping

ABB's imaging solutions are engineered to help you move from data to decisions faster, smarter and with confidence.

Features

- Complete thermal coverage: 3–14 µm spectral range
- Configurable up to 10 spectral bands
- Resolution: 95 m @ 500 km
- Wide coverage: 100 km swath @ 500 km
- Compact design: 2.9 kg, optimized for small satellites
- Maturity: currently in orbit

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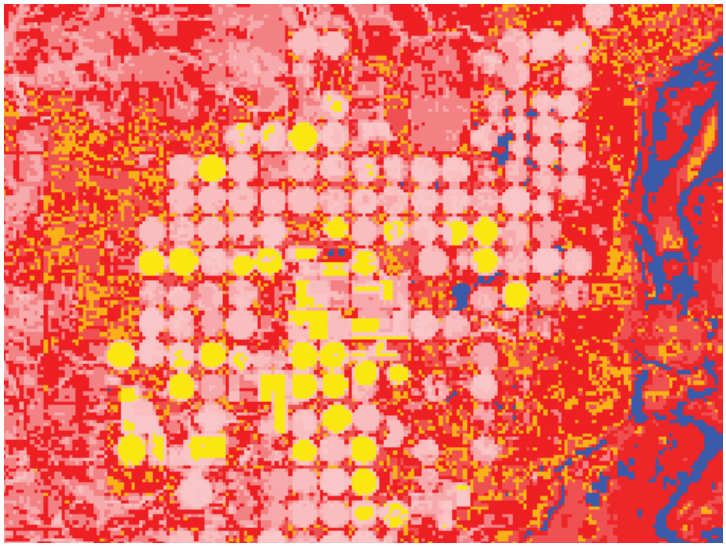


Track heat. Protect assets. Drive decisions.

The LEMI 70-TI delivers thermal infrared imagery that helps you detect, analyze, and respond to heat-related phenomena — anywhere on Earth. With a ground sampling distance of **95 m**, the imager provides sufficient detail to monitor industrial sites, detect thermal anoma-lies, and observe environmental features across large areas. Its 100 km swath width allows full coverage of major regions in a single pass—scanning cities, coastlines, and critical zones.

Whether you're tracking energy efficiency, responding to disasters, or monitoring volcanic activity, the LEMI 70-TI gives you the spatial and spectral acuity to act with confidence.

Because every mission is unique, the LEMI 70-TI is fully customizable across the thermal infrared spectrum. This unlocks AI-driven analytics, helping you extract insights from every pixel.

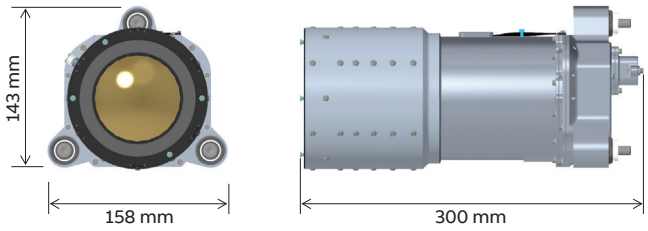
What you can monitor with the LEMI 70-TI

- **Disaster zones**: Detect wildfires, volcanic activity and heat anomalies in near real-time
- **Industrial infrastructure**: Assess pipelines, power plants and critical assets for thermal leaks
- **Climate change**: Map surface temperatures, track heat islands and monitor energy balance
- **Agriculture and forestry**: Evaluate soil moisture and crop stress through thermal signatures
- **Urban environments**: Analyze heat distribution for sustainable development and cooling strategies

With ABB's flight-proven technology, the LEMI 70-TI is ready to support your mission — whether you're launching a single satellite or building a global constellation.

Specifications

Description	Value
Configuration	Pushbroom
Aperture diameter	70 mm
GSD	190 µrad (95 m @500 km)
System MTF	11% at 9 µm
Swath	11.1 deg (100 km @500 km)
Frame rate	30 Hz typical
Pixel depth	16 bits
Spectral bands	Up to 10
Spectral range	3 – 14 µm
Power consumption	5W typical
Mass	2.9 kg
Volume	158 × 143 × 300 mm
Operating temperature	+15 to +25°C
Data interface	LVDS



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