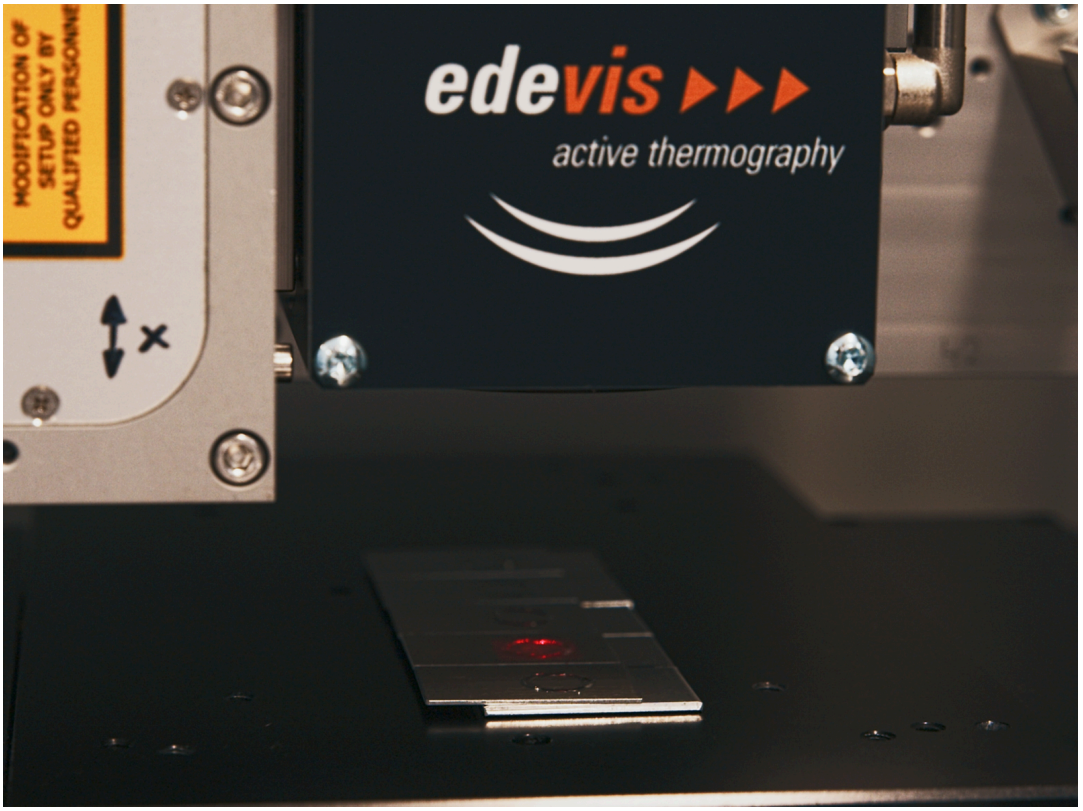
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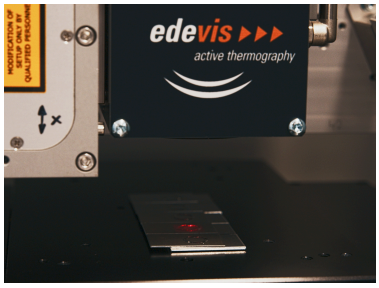
LTVIS PRODUCT FAMILY

Flexible laser thermography for precise non-destructive testing



LTVIS PRODUCT FAMILY

Flexible laser thermography for precise non-destructive testing





Targeted thermal excitation for a wide range of inspection tasks. LTvis uses laser thermography for non-contact inspection of components and materials. Depending on the application, diode or fiber lasers provide spot, line or area excitation. Cracks, delaminations, inclusions or defects in joints disturb the resulting heat flow and are captured by an infrared camera for software-based evaluation.

By selecting the appropriate laser source, optics and excitation method, LTvis can be adapted to the material, component geometry and type of defect. The product family ranges from modular fiber laser systems and scanning solutions for large-area crack inspection to highly integrated systems for fast inline inspection of welds and joints.

For more information about LTvis, visit the edevis website.

YOUR ADVANTAGES AT A GLANCE

Flexible laser excitation: Diode and fiber lasers enable precise adaptation to the material, geometry and inspection task

High inspection sensitivity: Local thermal excitation reveals fine cracks, delaminations, inclusions and defects in joints

Variable inspection areas: Spot, line and area excitation support both localized inspection and larger component areas

Non-contact inspection: Thermal excitation and detection are performed without direct contact with the component

Suitable for automated processes: LTvis systems can be integrated into production lines, robotic cells and automated inspection setups

Unified software platform: DisplayImg handles system control, data acquisition, evaluation and documentation

TECHNICAL INFORMATION

INSPECTION METHOD:	Active laser thermography
LASER SOURCES:	Diode and fiber lasers
LASER POWER:	50 W to 4 kW, depending on the system
EXCITATION:	Spot, line or area excitation
FIBER LASER WAVELENGTH:	Approx. 1070 nm
LASER CLASS:	Class 4
SYSTEM VARIANTS:	LTvis FL Module, LTcam, LThead
SOFTWARE:	DisplayImg Professional, DisplayImg Automation and system-specific modules

ACCESSORIES



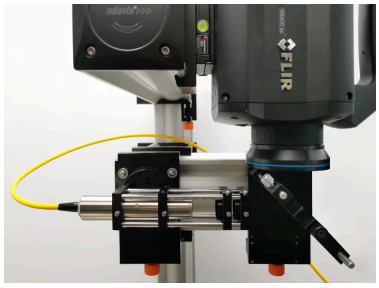
EDECAM
High-speed LWIR infrared camera for active thermography

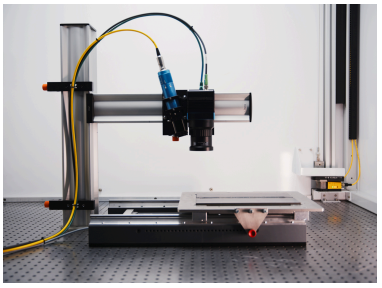


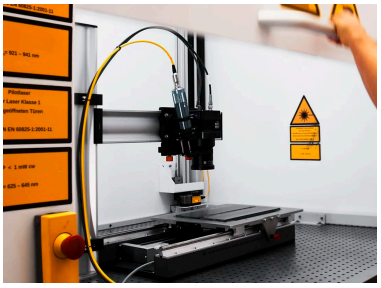
DISPLAYIMG SOFTWARE
Modular software platform for thermography and automated inspection

LTVIS FL

Fiber laser thermography for precise and flexible inspection tasks







Targeted laser excitation for high-resolution detection of hidden defects. The LTvis FL modules use a fiber laser for non-contact thermal excitation of components. Energy can be applied either pulsed or periodically, allowing the system to be adapted to the material, component geometry and inspection task.

With four power levels ranging from 50 to 300 W, the LTvis FL modules are suitable for inspecting welds and solder joints, thin coatings and laminates as well as detecting cracks, delaminations and voids. The modular design supports applications in research and quality assurance as well as integration into automated inspection setups.

YOUR ADVANTAGES AT A GLANCE

Flexible laser power: Four variants with 50, 100, 200 or 300 W for different materials and inspection tasks

Targeted thermal excitation: Focused laser energy enables precise inspection of small and complex areas

High inspection sensitivity: Cracks, delaminations, voids and defects in joints become visible through disturbances in heat flow

Variable excitation: Pulsed or periodic operation supports different thermographic evaluation methods

Easy system integration: Modular 19" design and optional optics allow adaptation to existing inspection setups

Reproducible evaluation: DisplayImg Professional supports system control, Fourier evaluation and documentation of inspection results

TECHNICAL INFORMATION

INSPECTION METHOD:	Active laser thermography
LASER TYPE:	Fiber laser
LASER POWER:	— 50 W (LTvis 50 FL) — 100 W (LTvis 100 FL) — 200 W (LTvis 200 FL) — 300 W (LTvis 300 FL)
WAVELENGTH:	1070 nm
BEAM DIAMETER:	5 mm, other sizes on request
BEAM QUALITY M^2:	1.05
FIBER COUPLING:	— Fixed: LTvis 50 FL — Fixed or QHB: LTvis 100 / 200 / 300 FL
FIBER LENGTH:	5 m
LASER CLASS:	Class 4
COOLING:	Air cooling
CONTROLLER:	19" rack, 4 + 1 U
POWER SUPPLY:	230 V AC, 16 A, 50/60 Hz
SOFTWARE:	DisplayImg Professional, LTvis module
OPTIONAL ACCESSORIES:	QHB coupling, alternative fiber lengths and beam diameters

ACCESSORIES



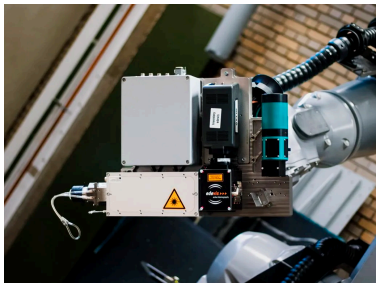
EDECAM
High-speed LWIR infrared camera for active thermography



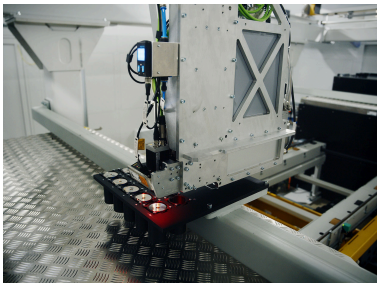
DISPLAYIMG SOFTWARE
Modular software platform for thermography and automated inspection

LTHEAD

Laser thermography for inline inspection of welded joints







Inspect welded joints quickly, without contact and with reproducible results. LThead is a highly integrated system for non-destructive inspection of welds and joints using laser thermography. Particularly for cell connectors in EV batteries and joints made of aluminum, copper and steel, the system enables quantitative quality control directly within the production process.

A high-power diode laser provides targeted thermal excitation while a fast MWIR camera captures the resulting heat flow. Bonding defects, cracks and voids alter the thermal response and can be detected and evaluated automatically. With inspection times of less than one second and industrial interfaces, LThead is designed for integration into automated production lines and robotic cells.

YOUR ADVANTAGES AT A GLANCE

Fast inline inspection: Inspection times of less than one second support integration into short production cycles

High inspection sensitivity: Bonding defects, cracks and voids become visible through their influence on heat flow

Versatile material inspection: Suitable for welds and joints made of aluminum, copper and steel

Flexible laser excitation: Spot sizes from 3 × 3 to 70 × 70 mm allow adaptation to different inspection areas

High level of automation: PROFINET, OPC UA and TCP/IP support integration into PLC-controlled systems and robotic cells

Reproducible evaluation: Automated OK/NOK evaluation and documentation support consistent quality assurance

TECHNICAL INFORMATION

INSPECTION METHOD:	Active laser thermography
INSPECTION TIME:	< 1 s
LASER:	Diode laser, blue or NIR
LASER POWER:	Up to 4 kW
SPOT SIZE:	3 × 3 to 70 × 70 mm
LASER CLASS:	Class 4
COOLING:	Water cooling
DETECTOR:	MWIR, 2–5 µm
RESOLUTION:	640 × 512 px
THERMAL RESOLUTION:	20 mK
FRAME RATE:	Up to 1000 Hz
MATERIALS:	Aluminum, copper, stainless steel
CABLE LENGTH:	Up to 30 m
INTEGRATION:	Robot and PLC integration
INTERFACES:	PROFINET, OPC UA, TCP/IP
EVALUATION:	Automated OK/NOK evaluation
SOFTWARE:	DisplayImg

ACCESSORIES



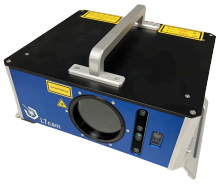
EDECAM
High-speed LWIR infrared camera for active thermography



DISPLAYIMG SOFTWARE
Modular software platform for thermography and automated inspection

LTCAM

Scanning laser thermography for large-area crack inspection



Inspect large areas quickly and without contact. LTcam uses the flying-spot method, where a laser line scans across the component surface. The infrared camera monitors the heat flow before and after the moving excitation zone. Cracks, delaminations and other defects disturb the lateral heat flow and are visualized through software-based evaluation.

The system is particularly suitable for large or complex-shaped components and enables automated, non-contact inspection with high spatial resolution. Typical applications include crack inspection on turbine blades, welds and difficult-to-access components as well as inspection of metallic and non-metallic materials.

YOUR ADVANTAGES AT A GLANCE

Large-area inspection: Scanning laser excitation enables efficient testing of large component areas

High spatial resolution: Local heat flow variations reveal fine cracks and delaminations

Flexible geometries: Suitable for complex component shapes and difficult-to-access inspection areas

Non-contact inspection: Laser excitation and infrared detection are performed without direct contact with the component

Variable inspection optics: Adjustable laser lines and different focal lengths support adaptation to different inspection tasks

Automated evaluation: DisplayImg LTcam supports data acquisition, stitching, visualization and inspection reporting

TECHNICAL INFORMATION

INSPECTION METHOD:	Scanning laser thermography
EXCITATION:	Moving laser line / flying-spot method
LASER POWER:	Up to 200 W
LASER CLASS:	Class 4
LASER LINE LENGTH:	Adjustable from 30 to 90 mm
WORKING DISTANCE:	150 to 1500 mm
LASER OPTICS:	Customized
BEAM PROFILE:	Homogeneous laser line
DETECTION:	High-resolution infrared sensor
CAMERA OPTICS:	Various focal lengths available
VIS CAMERA:	Wide-angle camera for overview and area selection
SOFTWARE:	DisplayImg LTcam
SOFTWARE FUNCTIONS:	Project management, automated stitching, VIS/IR support and system control

ACCESSORIES



EDECAM
High-speed LWIR infrared camera for active thermography



DISPLAYIMG SOFTWARE
Modular software platform for thermography and automated inspection

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The FOERSTER Group is represented by subsidiaries and representatives in over 60 countries worldwide. You can find a complete overview on our website.

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