



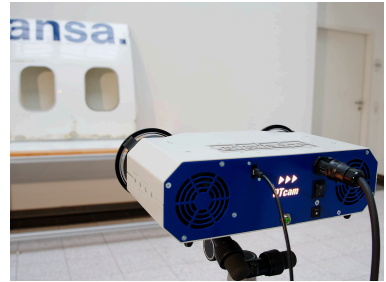
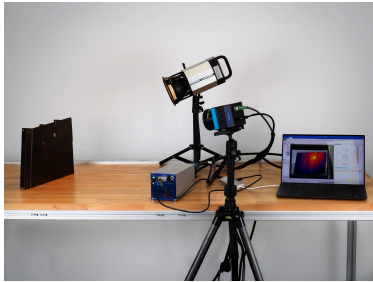
OTVIS PRODUCT FAMILY

Optically excited lock-in thermography for precise non-destructive testing



OTVIS PRODUCT FAMILY

Optically excited lock-in thermography for precise non-destructive testing



Reveal hidden defects across large areas without contact.

OTvis systems use optically excited lock-in thermography for reliable, non-contact inspection of fiber-reinforced composites and other materials. Periodically modulated light generates thermal waves within the component. Delaminations, inclusions, corrosion, variations in wall thickness or defects in adhesive bonds disturb the heat flow and can be detected by an infrared camera and evaluated using dedicated software.

The method is particularly suitable for large-area inspections and complex component geometries, providing depth-resolved information about hidden defects.

The OTvis product family ranges from the compact OTvis 3600 for flexible inspection tasks and the fully integrated OTcam 3600 PRO for mobile and automated inspections to powerful 4, 6 and 8 kW systems for larger inspection areas, laboratory applications and industrial production environments. The OTcam combines optical excitation, infrared imaging and lock-in thermography within one compact all-in-one inspection head and can also be integrated directly into robotic systems.

For more information about OTvis, visit the [edevis website](https://www.edevis.com).

YOUR ADVANTAGES AT A GLANCE

Non-contact inspection: Large-area examination without direct contact with the component

Depth-resolved defect detection: Hidden defects become visible through their influence on heat flow

Suitable for large inspection areas: Efficient examination of large components and complex geometries

Reproducible evaluation: Phase-image analysis reduces disturbing influences from different surface conditions

Flexible system configuration: From the compact OTvis 3600 and integrated OTcam to powerful 4, 6 and 8 kW systems

Mobile and automated inspection: OTcam 3600 PRO combines excitation and infrared imaging in one compact inspection head for both MRO applications and robotic integration

TECHNICAL INFORMATION

INSPECTION METHOD:	Optically excited lock-in thermography
EXCITATION:	Periodically modulated light
EXCITATION SOURCE:	Halogen lamps
SYSTEM POWER:	3.6 to 8 kW, depending on system variant
DETECTION:	Infrared camera with MWIR or LWIR detector
SIGNAL EVALUATION:	Phase-image analysis using Fourier transformation
SYSTEM CONCEPT:	Modular systems as well as fully integrated all-in-one solution with OTcam 3600 PRO
SOFTWARE:	DisplayImg Elements or DisplayImg Professional, depending on system variant
POWER SUPPLY:	— 230 V AC, 16 A (OTvis 3600 elements) — 230 V AC, 16 A, 50/60 Hz (OTcam 3600 PRO) — 400 V AC, 16 A (OTvis 4000 / 6000 NT) — 400 V AC, 32 A (OTvis 8000 NT)
SYSTEM VARIANTS:	— OTvis 3600 elements — OTcam 3600 PRO — OTvis NT (4, 6, 8k)

ACCESSORIES



EDECAM

High-speed LWIR infrared camera for active thermography



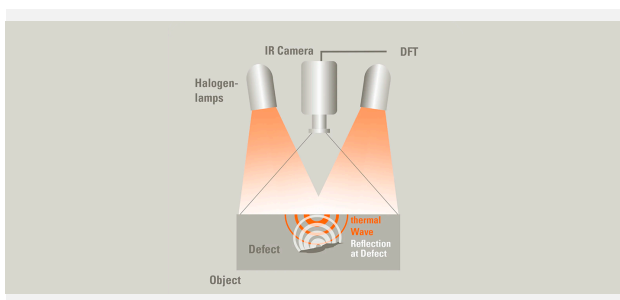
DISPLAYIMG SOFTWARE

Modular software platform for thermography and automated inspection

THERMOGRAPHY

Active thermography is a non-contact, non-destructive testing method that visualizes temperature distributions in components. Through targeted thermal excitation and the analysis of infrared radiation, defects such as delaminations, cracks or material-related anomalies can be detected quickly and reliably. Ideal for quality assurance, process control and preventive maintenance.

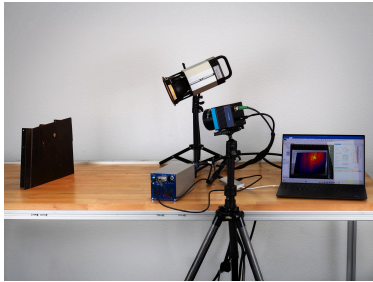
Lock-in thermography



In lock-in thermography, the component is periodically excited using a modulated heat source. The resulting temperature oscillations are recorded synchronously with an infrared camera and evaluated as phase and amplitude images. Phase analysis reduces disturbing influences and enables sensitive analysis of the heat flow. By adjusting the excitation frequency, different inspection depths can be analyzed selectively. The method is suitable, among other applications, for detecting delaminations, air inclusions, bonding defects and variations in material thickness.

OTVIS 3600

Compact system for flexible lock-in thermography



Powerful large-area inspection in a compact design. OTvis 3600 is a flexible system for optically excited lock-in thermography. Two halogen lamps enable non-contact inspection of larger areas, while the integrated signal generator keeps the overall system setup particularly compact.

The system is especially suitable for inspecting CFRP and other fiber-reinforced composites. Delaminations, impact damage, inclusions, porosity and defects in adhesive bonds can be reliably visualized. Its portable setup makes OTvis 3600 suitable for changing inspection tasks in production and maintenance as well as for laboratory applications.

YOUR ADVANTAGES AT A GLANCE

Compact system design: Integrated signal generator reduces additional hardware and simplifies the inspection setup

Flexible large-area inspection: Two halogen lamps enable non-contact testing of larger component areas

Depth-resolved defect detection: Delaminations, inclusions and other hidden defects become visible through their influence on heat flow

Versatile applications: Suitable for composites, adhesive bonds, corrosion inspection and wall thickness measurement

Easy to transport: Compact components and transport bag support use at different inspection locations

Reproducible evaluation: DisplayImg enables software-based phase image analysis and documentation of inspection results

TECHNICAL INFORMATION

INSPECTION METHOD:	Optically excited lock-in thermography
CONTROLLER:	— OTvis Controller ELC 3M — Maximum output power: 3.6 kW — 2 lamp outputs — Max. 1.8 kW per output
HALOGEN LAMPS:	— 2 × EHL2000 — Rated power: 2.0 kW per lamp — Parabolic reflector — Homogeneous illumination of large areas
LAMP SAFETY:	— Safety glass — Overheating protection — Integrated fan
SIGNAL GENERATOR:	Integrated in ELC 3M
INTERFACES:	— USB-C host interface — D-Sub 15P camera trigger — M8 synchronization interface — 24 V DC camera power supply
POWER SUPPLY:	— 230 V AC, single-phase — 50/60 Hz — Max. 16 A
CONTROLLER: DIMENSIONS / WEIGHT:	— 166 × 105 × 105 mm — 2 kg
LAMP: DIMENSIONS / WEIGHT:	— 305 × 145 × 145 mm — 3 kg per lamp
OPERATING CONDITIONS:	— Controller: 5 °C to 40 °C — Lamps: -15 °C to +40 °C
PROTECTION CLASS:	Class I
SOFTWARE:	DisplayImg Professional, OTvis module
SPARE PARTS / ACCESSORIES:	— 2 kW replacement illuminant for EHL, 240 V, GY16, 3200 K, Ø 400 h lifetime — Borosilicate filter glass, 2 mm, Ø 130 mm, optimized for CFRP inspection — Extension cables, 5 m

ACCESSORIES



EDECAM

High-speed LWIR infrared camera for active thermography

OTVIS 3600

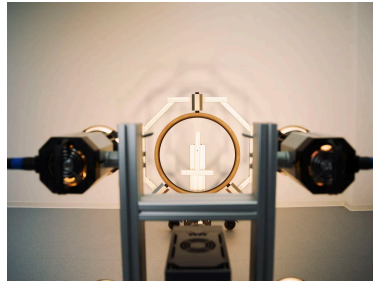


DISPLAYIMG SOFTWARE

Modular software platform for thermography and automated inspection

OTVIS NT

Scalable lock-in thermography for large-area inspection tasks



More excitation power for demanding large-area inspections. The OTvis NT systems use optically excited lock-in thermography for non-contact inspection of fiber-reinforced composites and other materials. With system power levels of 4, 6 or 8 kW and up to four halogen lamps, the excitation can be adapted to the component size and inspection task.

The robust 19" systems are suitable for reproducible inspections in laboratory and production environments as well as for integration into automated inspection processes. Typical applications range from the detection of delaminations and inclusions to the inspection of adhesive bonds, corrosion and wall thickness.

YOUR ADVANTAGES AT A GLANCE

Scalable excitation power: 4, 6 or 8 kW variants for different component sizes and inspection tasks

Large-area inspection: Up to four halogen lamps provide homogeneous thermal excitation across large inspection areas

Depth-resolved defect detection: Hidden defects become visible through their influence on heat flow

Modular system design: Lamps, camera and signal generator can be configured to suit the individual inspection application

Suitable for automated inspection: 19" system design enables integration into industrial inspection setups

Reproducible evaluation: DisplayImg supports phase image analysis, evaluation and documentation of inspection results

TECHNICAL INFORMATION

INSPECTION METHOD:	Optically excited lock-in thermography
POWER:	— 4 kW / 2 × 2 kW (OTvis 4000) — 6 kW / 3 × 2 kW (OTvis 6000) — 8 kW / 4 × 2 kW (OTvis 8000)
HALOGEN LAMPS:	— 2 × EHL (OTvis 4000) — 3 × EHL (OTvis 6000) — 4 × EHL (OTvis 8000)
CONTROLLER HOUSING:	— 19", 3 U, half installation depth (OTvis 4000) — 19", 3 U (OTvis 6000 / 8000)
LAMP HOUSING / REFLECTOR:	Anodized aluminum, coated reflector
POWER CONNECTION:	— 400 V AC, 16 A, 50/60 Hz (OTvis 4000 / 6000) — 400 V AC, 32 A, 50/60 Hz (OTvis 8000)
SIGNAL CABLE:	ESG3 OTvis Extension Cable, 1 m
LAMP CABLE:	Robust lamp connection cable with screw locking, 5 m
POWER CABLE:	— CEE 400 V / 16 A, 5 m (OTvis 4000 / 6000) — CEE 400 V / 32 A, 5 m (OTvis 8000)
TRIPOD:	— 1 × Manfrotto with T-Bar for 2–3 lamps (OTvis 4000 / 6000) — 2 × Manfrotto with T-Bar for 4–6 lamps (OTvis 8000)
INTEGRATED CONTROL:	No
SOFTWARE:	DisplayImg Professional, OTvis module
ADDITIONAL SCOPE OF SUPPLY:	— Filter packages — Transport and storage bag — ESG OTvis Extension

ACCESSORIES



EDECAM

High-speed LWIR infrared camera for active thermography

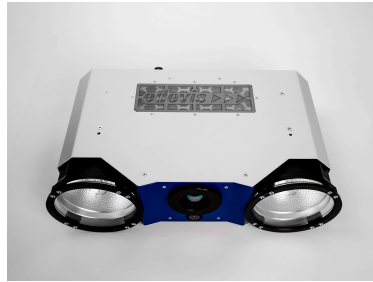


DISPLAYIMG SOFTWARE

Modular software platform for thermography and automated inspection

OTCAM 3600 PRO

Compact all-in-one system for mobile and automated lock-in thermography



Bring optically excited lock-in thermography directly to the component. The OTcam 3600 PRO combines the proven OTvis inspection method with the high-performance core of the EDECAM infrared camera in one compact, fully integrated inspection head. Halogen excitation, infrared imaging and visual imaging are integrated directly into the system, enabling flexible non-destructive inspection without a complex external measurement setup.

Large areas and complex geometries can be examined within a single measurement. This makes the OTcam particularly suitable for applications requiring short cycle times as well as for the inspection of fiber-reinforced plastics in aerospace and automotive applications.

The robust lock-in technique provides reliable measurements both in production environments and during maintenance, repair and overhaul operations. Thanks to its compact design, the OTcam can also be integrated directly into robotic systems for automated inspection with high throughput.

YOUR ADVANTAGES AT A GLANCE

Fully integrated inspection system: Halogen excitation, infrared camera and VIS camera combined in one compact inspection head

Mobile inspection: Compact design for flexible use in maintenance, repair and overhaul applications

Automated inspection: Direct integration into robotic systems for repeatable inspection and high throughput

Large-area acquisition: Large inspection areas and complex geometries can be examined within a single measurement

High thermal sensitivity: Integrated EDECAM core with 640 × 480 pixels and 30 mK NETD

Fast data acquisition: Frame rates of up to 120 Hz at full sensor resolution

Integrated visual imaging: 1080p CMOS camera for visual documentation of the inspection area

Robust lock-in technology: Reliable inspection even under challenging environmental conditions

TECHNICAL INFORMATION

INSPECTION METHOD:	Optically excited lock-in thermography
INTEGRATED HALOGEN LAMPS:	2 × EHL, 2 kW each
INTEGRATED POWER CONTROLLER:	2 × 1.8 kW
HOUSING:	Compact aluminum housing
POWER SUPPLY:	230 V AC, 16 A, 50/60 Hz
SOFTWARE:	DisplayImg Professional
IR CAMERA:	Integrated EDECAM core
IR SENSOR:	Uncooled microbolometer
IR RESOLUTION:	640 × 480 pixels
PIXEL PITCH:	17 µm
SPECTRAL RANGE:	8–14 µm
NETD:	30 mK
FRAME RATE:	120 Hz at full resolution
VIS CAMERA:	Integrated CMOS camera
VIS RESOLUTION:	1080p
VIS SENSOR SIZE:	1/2.8"
VIS PIXEL PITCH:	2.9 µm
COMPUTER:	DELL High Performance Laptop Computer
CPU:	Core Ultra 5
DISPLAY:	14" QHD
MEMORY:	16 GB RAM
STORAGE:	1 TB SSD
WEIGHT:	8.7 kg



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