

BENEFITS IN PRACTICE:

- Fully radiometric IR cameras "Made in the EU"
- Real-time measurements guarantee high-quality thermal images
- High thermal sensitivity
- Maintenance-free operation using microbolometer technology
- Large, swivel-mounted colour LCD monitor
- Image recording with an image repetition frequency up to 50/60 Hz
- DuoVision function for Picture-in-Picture presentation
- Integrated laser pointer
- In-built digital camera for real-time images
- Built-in photo lamp
- Memory for infrared and real images
- Automatic temperature tracking (Hot/Cold Spot)
- Various measuring functions
- Ergonomic and featherlight
- Robust construction (IP 54)
- Docking station with USB 2.0 port*
- Bluetooth headset for audio recordings (EC 060 V+)

* only for real-time applications

IR cameras in the EC-Series

First-Class Thermography – Economy-Class Price!



EC as in an "Extra Class" in the field of thermal imaging

Precise real-time measurements, a high thermal sensitivity and a high degree of accuracy, a built-in laser pointer, a swivel-mounted colour LCD monitor – this is what you get when you buy an infrared camera in the EC-Series. What you don't get are false promises. The cameras in the EC-Series all come standard-equipped with a variety of functions and features which you would normally only expect to find in a high-end model – with a price tag to match. Should you, however, be looking for something a little more specific: the EC-Series also encompasses two special models - the EC060V and the EC060V+ - for more individual and specialized applications.

A brief overview of the most important differences of models	EC 060	EC 060V	EC 060V+
Measuring spots	2	5	10
Isotherm		■	■
Digital camera		■	■
Photo lamp		■	■
DuoVision		■	■
Professional analysis			■
Area measurements			■
Bluetooth headset			■
Voice annotations			■
IR real-time via USB 2.0*			■

* in connection with the optionally available software expansion pack

Ground-breaking technology, ground-breaking price

The cutting-edge EC-cameras in the **MultiMeasure Professional Series** set new standards as far as value for money is concerned.



The maintenance-free, uncooled image sensor has a detector resolution of 160 x 120 measuring spots and a thermal sensitivity of 0.1 °C which enable you to create fully-radiometric thermal images within a temperature range of between -20 °C and +250 °C.

REAL TIME A high image repetition frequency guarantees continuous real-time thermal imaging.

And the mini-USB included in the scope of delivery can quite comfortably save thousands of thermal images.

A variety of integrated measuring functions and the automatic measured value correction function ensure optimum results every single time thus making the thermal imaging cameras in the EC-Series extremely reliable infrared measuring tools.

The interplay between the EC camera and the software included in the scope of delivery allow you to compile comprehensive and conclusive evaluations and reports.

Professional thermography made easy...

The featherweight cameras weigh in at a mere 500 g and fit snugly in the palm of your hand. Yet despite their compact size and low weight they are extremely tough: IP54-protected, 25G shock and 2.5G vibration tested and built to withstand the harshest of conditions.

The practical single-handed control, the ergonomically-arranged keys and the clearly-structured menu not only make the camera extremely user-friendly but also very effective and efficient.

The large 2.5-inch LCD colour display can also be pivoted through an angle of 270° making it possible to create thermal images in hard-to-reach or inaccessible places.

Mains and stress free...

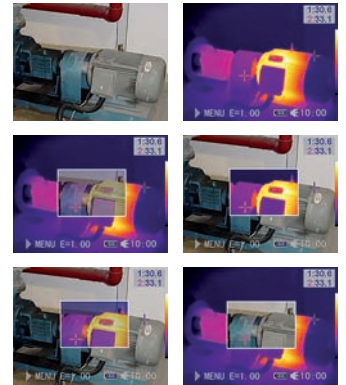
There's no need to hunt for a mains point when you want to carry out your measuring application when you've got one of the IR cameras in the EC-Series. The cameras in the EC-Series do not require an external power source because they all run on high-performance Li-ion batteries to guarantee you hours of uninterrupted operation and because this type of rechargeable battery does not have a memory effect you can charge them as and when you see fit.



Technical data		EC060	EC060 V	EC060 V+
Article number		3.110.003.003	3.110.003.004	3.110.003.005
Measuring	Temperature range	-20 °C to +250 °C		
	Accuracy	±2 °C, ± 2% of the measured value		
Image radiometric	Detector type	Focal Plane Array (FPA), uncooled microbolometer		
	Detector resolution	160 x 120 pixels		
	Spectral range	8 to 14 µm		
	Field of Vision (FOV)	20° x 15°		
	Geometric resolution	2.2 mrad		
	Thermal sensitivity	0.1 °C at 30 °C		
	Image repetition frequency	50/60 Hz		
	Focus	manual		
	Min. Focus Distance	0.10 m		
	Image visual	Digital photo camera	–	Colour representation 680 x 480 pixels, integrated photo lamp
Video norm		PAL/NTSC		
Image representation	Display	2.5-inch TFT LCD		
	Image display	Pseudo colours, 6 colour palettes		
	Image display options	IR image	IR image, real image, different DuoVision options for combined display of IR and real imagesd	
Measuring functions	Measuring spots	Two movable measuring points (1 x manual, 1 x autom. temperature tracking)	Five movable measuring points (1 x manual, 1 x autom. temperature tracking)	Ten movable measuring points (9 x manual, 1 x autom. temperature tracking)
		–	Yes (between the upper and the lower threshold)	
	Area measurement	–	–	Yes
	Degree of emission	User-defined variably adjustable from 0.01 to 1.0		
	Measurement correction	Automatically on the basis of user-defined input with regard to the surrounding temperature, distance, rel. humidity		
Data storage	Memory medium	Mini-SD card slot		
	Data format radiometric	14 bit radiometric IR format		
	Data format visual	–	CCD	
	Voice recording	–	–	Voice annotations can be saved with each IR image
Laser	Type	Semi-conductor AlGaInP diode laser, 1 mw/635 nm red		
	Classification	Class 2		
Power supply	Battery type	Standard, Li-ion; rechargeable, replaceable		
	Operating time	≈ 3.0 h		
	Mains power	8 - 11V DC		
	Energy saving mode	user defined		
Environmental conditions	Operating temperature	-15 °C to +50 °C		
	Storage temperature	-40 °C to +70 °C		
	Relative humidity	10 % to 95 % RH (non-condensing)		
	Protection class	IP 54 IEC 529		
	Shock	25G IEC 68-2-29		
Physical characteristics	Dimensions	175 x 55 x 160 mm		
	Weight	500 g		
	Tripod mount	1/4-inch - 20		
Interface	PC	–		
	Video	composite video		
Scope of delivery	Standard lens	20° x 15°		
	Standard equipment	IR camera with standard lens, standard software package, operating instructions, 2GB mini-SD card slot, carry case, Li-ion battery, docking station, battery charger, video cable, temperature test certificate; EC060V+ additionally with Bluetooth headset and USB cable for thermographic video recordings in real-time		
	Optional interchangeable lens	38°, 12°, 6.4°, 3.8° lens		
	Optional accessories	Software expansion for real-time IR video recordings (EC060V+), mains adapter for battery-independent mains supply, further accessories and software packages on request.		

The EC-duo with DuoVision: the EC 060V and the EC 060V+

Both the EC 060V and the EC 060V+ are equipped with an additional digital camera with a built-in photo lamp designed to shed light on poorly-illuminated and dark areas in order to provide you with crisp, clear photos and an ideal combination consisting of real and thermal images so that you can identify and analyse different problems more quickly and efficiently and find a solution to them.



DUO VISION The infrared camera's patented DuoVision technology enables either infrared or real images to be displayed exclusively or a combination of overlapping images in varying degrees of transparency in freely-selectable areas. This allows any damage or defects to be detected much more easily.


In addition the software DuoVision function allows you to display the overlapped images in varying degrees of intensity. Or to put more bluntly: you decide what you would like to see.

The DuoVision images created using this method provide a far more sophisticated means of analysis and a much more graphic form of documentation.

The Crem de la Crem in the EC-Series: the EC 060 V+

The EC 060 V+ is the flagship product in the EC-Series: it offers the most comprehensive functions and features of all our models and provides you the user with a professional measuring device designed to deliver extremely precise and reliable measuring results in a variety of different applications.

You can voice over videos and attach voice annotations to your thermal images for future reference using the Bluetooth headset included in the scope of delivery.

And the EC 060 V+'s USB 2.0 port allows you to hook your infrared camera up to  your computer and use the optionally available software expansion pack to create video recordings and analyses quickly and efficiently.