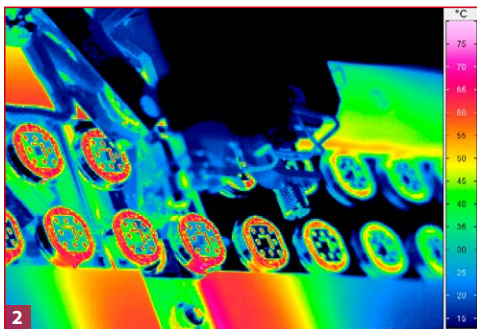


ImageIR® 8305 hp

High-speed Thermography Camera

INFRA TEC.

Europe's leading specialist for infrared sensors and measurement technology



- 1) ImageIR® 8305 hp with interchangeable lenses from InfraTec
- 2) Bonding of sensors
- 3) Machining with a tool bit

- Cooled FPA photon detector with (640 × 512) IR pixels
- Opto-mechanical MicroScan with (1,280 × 1,024) IR pixels
- Full-frame rate up to 232 Hz, GigE Vision compatible
- Snapshot detector, internal trigger interface
- Extremely short integration times in the microsecond range
- Pixel size with microscopic lens up to 2 μm
- Thermal resolution better than 0.02 K



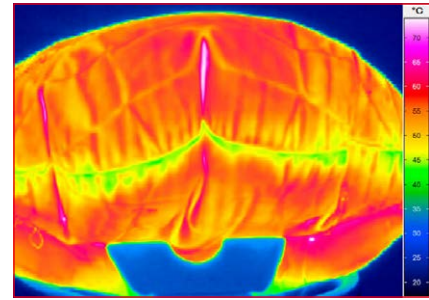
www.InfraTec.eu

www.InfraTec-infrared.com

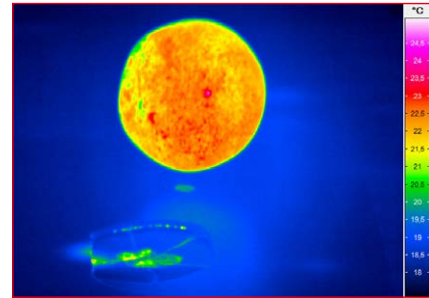
Made in Germany



Spectral range	(2.0 ... 5.5) μm
Pitch	15 μm
Detector	MCT
Detector format (IR pixels)	(640 \times 512)
Image format with opto-mechanical MicroScan (IR pixels)*	(1,280 \times 1,024)
Image acquisition	Snapshot
Readout mode	ITR / IWR
Aperture ratio	f/3.0 or f/2.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 ... 1,500) $^{\circ}\text{C}$, up to 3,000 $^{\circ}\text{C}$ *
Measurement accuracy	± 1 $^{\circ}\text{C}$ or $\pm 1\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.02 K
Frame rate (full / half / quarter / sub frame)*	Up to 232 / 828 / 2,300 / 3,725 Hz
Window mode	Yes
Focus	Manual, motorised or automatically*
Dynamic range	Up to 16 bit*
Integration time	(0.6 ... 20,000) μs
Rotating filter wheel*	Up to 5 positions
Rotating aperture wheel*	Up to 5 positions
Interfaces	GigE, 10 GigE*, HDMI*
Trigger	3 IN / 2 OUT, TTL
Analogue signals*, IRIG-B*	1 IN / 2 OUT, yes
Tripod adapter	1/4" and 3/8" photo thread, 2 \times M5
Power supply	24 V DC, wide-range power supply (100 ... 240) V AC
Storage and operation temperature	(-40 ... 70) $^{\circ}\text{C}$, (-20 ... 50) $^{\circ}\text{C}$
Protection degree	IP54, IEC 60529
Dimensions, weight	(250 \times 120 \times 160) mm, 3.3 kg (without lens)
Further functions	High-speed mode*, Multi Integration Time*, HighSense*
Analysis and evaluation software	IRBIS [®] 3, IRBIS [®] 3 view, IRBIS [®] 3 plus*, IRBIS [®] 3 professional*, IRBIS [®] 3 control*, IRBIS [®] 3 online*, IRBIS [®] 3 process*, IRBIS [®] 3 active*, IRBIS [®] 3 mosaic*, IRBIS [®] 3 vision*



Airbag test



Impact of a steel ball

* Depending on model

With its Imager[®] 8305 hp, InfraTec introduces another top level thermographic camera model belonging to the Imager[®] high-end camera series. The implementation of a **digitally interfaced (640 \times 512) pixel MWIR detector** now allows **232 Hz full-frame** real-time imaging without compromising any thermal accuracy. Like all camera models of this series the Imager[®] 8305 hp and its cooled focal-plane array photon detector reach an outstanding **thermal resolution better than 0.02 K**. The new version was developed for most demanding operations in research and development and process monitoring fields. Its **modular structure consisting of the optical, detector and interface section**, makes the camera easily compatible to the related applications and for tailored configurations. An **integrated trigger interface** guarantees a repeatable high-precision triggering of quick procedures. **Multiple configurable digital inputs and outputs** serve as control ports for the camera or as generator of digital control signals for external devices. The optical channel consists of the **exchangeable infrared lens** as well as application-specific apertures, filters and reference elements. All exchangeable Imager[®] 8305 hp standard lenses can be **equipped with a motorised focus unit** easily operable from the camera's application software. It allows **precise, fast and remotely controlled motorised focusing** and is part of the autofocus function.

Lenses	Focal length (mm)	FOV ($^{\circ}$)	IFOV (mrad)
Wide-angle lens	12	(43.6 \times 35.5)	1.3
Standard lens	25	(21.7 \times 17.5)	0.6
Telephoto lens	50	(11.0 \times 8.8)	0.3
Telephoto lens	100	(5.5 \times 4.4)	0.15
Telephoto lens	200	(2.7 \times 2.2)	0.08

Macro and Microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size (μm)
Close-up for telephoto lens 50 mm	300	(58 \times 46)	90
Close-up for telephoto lens 100 mm	500	(48 \times 38)	75
Microscopic lens M=1.0x	40 / 195 / 300	(9.6 \times 7.7)	15
Microscopic lens M=3.0x	22	(3.2 \times 2.6)	5
Microscopic lens M=8.0x	14	(1.2 \times 0.96)	1.9

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