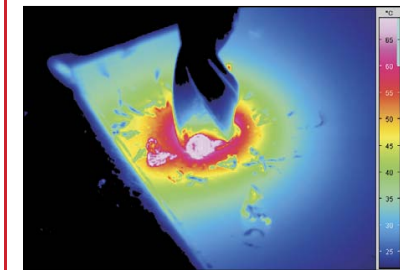


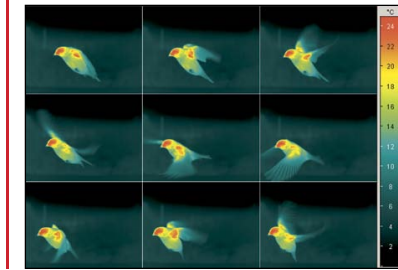
High-end Camera Series ImageIR®

Thermographic systems to match highest standards

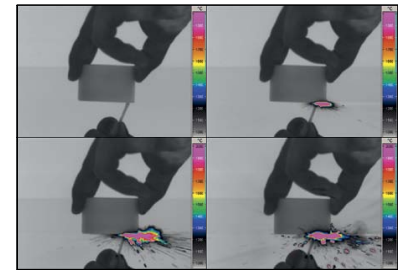
Cutting parameter optimisation (metal drilling)



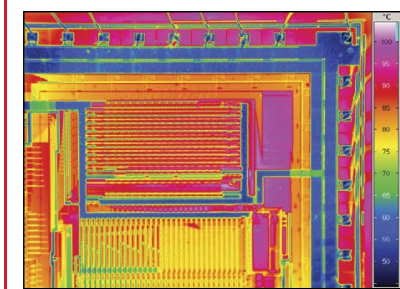
Thermal imaging of a bird's flight



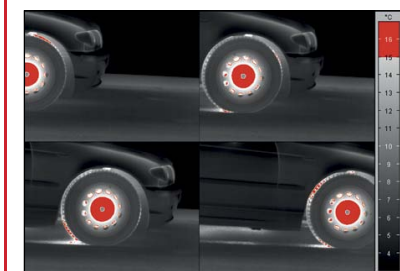
Igniting a match



Microthermography of a chip



Measuring the effective braking surface



**Image rate
up to
4,500 Hz**

Performance and equipment features

The ImageIR® presents the latest in Focal Plane Array infrared detector technology. The product series includes high-speed thermography systems with state-of-the-art focal-plane-array photon detectors of the types InSB, MTC and QWIP as well as of the formats (320 x 256) and (640 x 512) IR-pixels. Moreover, with the IRBIS® 3 plus and IRBIS® 3 professional software with integrated online functionality, the complete systems offered by InfraTec include adequate tools for digital realtime data recording and analysis and all further components required for solving challenging measuring tasks.

- Excellent image homogeneity, long-term stability and high measurement accuracy
- Different spectral ranges SWIR/MWIR/LWIR
- Thermal resolution < 20 mK
- Frame rate/linescan up to 4,500/13,000 Hz
- Snapshot detector, trigger interface
- Integration time (0.6 ... 20,000) µs
- Optional „MIT“ feature guarantees extra-long measurement ranges
- Separate filter- and aperture wheel with 16 different combinations
- Motorised focussing including autofocus feature available
- Industry-suited, closed housing
- Wide-ranging assortment of high-quality precision lenses
- Software packages for active thermography NDT
- Extensive accessories

High-end Camera Series ImageIR®

Thermographic systems to match highest standards

Technical specifications					
Model	ImageIR® 5100	ImageIR® 5300	ImageIR® 5800	ImageIR® 8300	ImageIR® 8800
Spectral range	(0.8 ... 2.5) µm	(2 ... 5) µm	(8 ... 9.3) µm	(2 ... 5) µm	(8.0 ... 9.3) µm
Detector format (IR-pixels)	(320 x 256)	(320 x 256)	(320 x 256)	(640 x 512)	(640 x 512)
Detector	MCT	MCT or InSb	MCT or QWIP	MCT or InSb	MCT
Detector cooling	Thermoelectrical	Stirling cooler	Stirling cooler	Stirling cooler	Stirling cooler
Measurement accuracy	-	± 1°C or ± 1%	± 1°C or ± 1%	± 1°C or ± 1%	± 1°C or ± 1%
Temperature resolution	-	0.020 K @ 30 °C	0.025 K @ 30 °C	0.025 K @ 30 °C	0.035 K @ 30 °C
Temperature measuring range	-	(-40 ... 1,500) °C (optional up to 2,000 °C)	(-40 ... 1,500) °C (optional up to 2,000 °C)	(-40 ... 1,500) °C (optional up to 2,000 °C)	(-40 ... 300) °C
Storage temperature	(-40 ... 70) °C	(-40 ... 70) °C	(-40 ... 70) °C	(-40 ... 70) °C	(-40 ... 70) °C
Operating temperature	(-20 ... 50) °C	(-20 ... 50) °C	(-20 ... 50) °C	(-20 ... 50) °C	(-20 ... 40) °C
Degree of protection	IP 54, IEC 529	IP 54, IEC 529	IP 54, IEC 529	IP 54, IEC 529	IP 54, IEC 529
Integration time	(10 ... 20,000) µs in increments up to 1 µs	(1 ... 20,000) µs in increments up to 1 µs	(1 ... 20,000) µs in increments up to 1 µs	(0.6 ... 20,000) µs in increments up to 1 µs	(1 ... 20,000) µs in increments up to 1 µs
Filter wheel	optional	optional	optional	optional	-
Dynamic range	14 bit	14 bit	14 bit	14 bit	14 bit
Window mode	No	Yes	Yes	Yes	No
Image rate (full screen mode/half screen mode/quarter screen mode)	up to 100/-/ Hz	up to 440/1,400/4,500 Hz optionally: 13,000 Hz line	up to 250/900/4,500 Hz optionally: 10,000 Hz line	up to 117/420/1,200 Hz optionally: 2,500 Hz line	up to 100/-/ Hz
Digital interface optional	GigE CAMLink, USB	GigE CAMLink, USB	GigE CAMLink, USB	GigE CAMLink, USB	GigE CAMLink, USB
Tripod adapter	1/4" photo thread	1/4" photo thread	1/4" photo thread	1/4" photo thread	1/4" photo thread
Weight (without lens)	3.3 kg	3.3 kg	3.5 kg	3.3 kg	4.0 kg

Design and specifications subject to change without prior notice.

Lens	Focal length	Availability
Wide angle lens	12 mm	ImageIR® 5100, 5300, 5800, 8300, 8800
Standard lens	25 mm	ImageIR® 5100, 5300, 5800, 8300, 8800
Telephoto lens	50 mm	ImageIR® 5100, 5300, 5800, 8300, 8800
Telephoto lens	100 mm	ImageIR® 5100, 5300, 5800, 8300, 8800
Close-up for telephoto lens	100 mm	ImageIR® 5100, 5300, 8300
Microscopic lens M=1.0x		ImageIR® 5100, 5300, 8300
Microscopic lens M=3.0x		ImageIR® 5100, 5300, 8300



Applications

- Aerospace, automotive engineering, medicine, laser technology, welding, electronics/microelectronics
- Glass, plastics and steel industry
- Research and development, non-destructive material testing
- High-speed thermography (Rotational test benches)
- Lock-in and spectral thermography
- Stress analysis testing of assemblies, site surveillance
- Microthermography