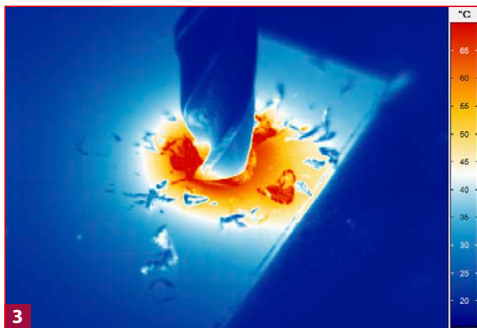


# ImageIR® 4300

High-end Thermography Camera



- 1) ImageIR® 4300
- 2) Software IRBIS® 3
- 3) Drilling process

## INFRA<sup>TEC</sup>.

Europe's leading specialist for infrared sensors and measurement technology

**Cooled FPA photon detector with (320 × 256) IR pixels**

**Frame rate up to 706 Hz, GigE Vision compatible**

**Snapshot detector, internal trigger interface**

**Extremely short integration times in the microsecond range**

**Pixel size up to 10 μm**

**Thermal resolution better than 0.02 K**



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**Made in Germany**



Spectral range	(2.0 ... 5.5) $\mu\text{m}$
Pitch	30 $\mu\text{m}$
Detector	MCT
Detector format (IR pixels)	(320 $\times$ 256)
Image acquisition	Snapshot
Readout mode	ITR
Aperture ratio	f/2.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 ... 300) $^{\circ}\text{C}^*$
Measurement accuracy	$\pm 2^{\circ}\text{C}$ or $\pm 2\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.02 K
Frame rate (full / half / sub frame)*	Up to 75 / 265 / 706 Hz
Window mode	Yes* (full frame / sub frame)
Focus	Manual
Dynamic range	14 bit
Integration time	(1 ... 20,000) $\mu\text{s}$
Rotating filter wheel*	Up to 5 positions
Rotating aperture wheel*	Up to 5 positions
Interfaces	GigE, HDMI*
Trigger	1 IN / 1 OUT, TTL
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	(241 $\times$ 120 $\times$ 160) mm*; 3.3 kg (without lens)
Analysis and evaluation software	IRBIS <sup>®</sup> 3, IRBIS <sup>®</sup> 3 view, IRBIS <sup>®</sup> 3 plus*, IRBIS <sup>®</sup> 3 professional*, IRBIS <sup>®</sup> 3 control*, IRBIS <sup>®</sup> 3 online*, IRBIS <sup>®</sup> 3 process*, IRBIS <sup>®</sup> 3 active*, IRBIS <sup>®</sup> 3 mosaic*, IRBIS <sup>®</sup> 3 vision*

\* Depending on model

Which qualities characteristic for the high-end camera series ImagerIR<sup>®</sup> are, shows already the entry-level model ImagerIR<sup>®</sup> 4300. Equipped with a cooled **focal plane array photon detector with (320  $\times$  256) IR pixels** this camera enables users to choose between detectors made of different material for thermal analyses in the SWIR and MWIR. Whether **MCT or InSb detector**, both options support **snapshot mode**. **Recording and storing images with frequencies up to 706 Hz** you can analyse even fast processes. In addition, the ImagerIR<sup>®</sup> 4300 comes with an impressive **thermal resolution up to 0.02 K (20 mK)**. In sum this camera series provides a potential that qualifies for usage for a broad range of applications in the fields of industry and science.

The **robust light-metal housing** of the instruments matches this claim. With the combination of the **modular designed camera concept**, the internal trigger interface, most diverse thermographic software and high-quality lenses users benefit from a high level of flexibility allowing to adapt the cameras to almost every measurement and testing task.

Lenses	Focal length (mm)	FOV ( $^{\circ}$ )	IFOV (mrad)
Wide-angle lens	12	(43.6 $\times$ 35.5)	2.5
Standard lens	25	(21.7 $\times$ 17.5)	1.2
Telephoto lens	50	(11.0 $\times$ 8.8)	0.6
Telephoto lens	100	(5.5 $\times$ 4.4)	0.3
Telephoto lens	200	(2.7 $\times$ 2.2)	0.15

Macro and Microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size ( $\mu\text{m}$ )
Close-up for telephoto lens 50 mm	300	(58 $\times$ 46)	180
Close-up for telephoto lens 100 mm	500	(48 $\times$ 38)	150
Microscopic lens M=1.0 $\times$ (2 versions)	195 / 300	(9.6 $\times$ 7.7)	30
Microscopic lens M=3.0 $\times$	22	(3.2 $\times$ 2.6)	10

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