ImageIR® 10300

Full HD Thermography Camera

Detector format (1,920 × 1,536) IR pixels

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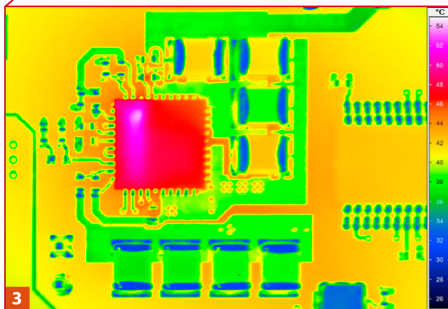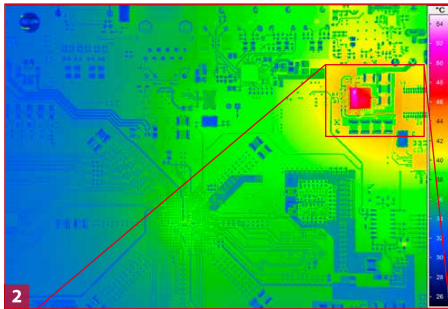
1) ImageIR® 10300 with (1,920 × 1,536) IR pixels
2) Format-filling image of circuit board
3) Detailed zoom into image

INFRATEC.

Europe's leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (1,920 × 1,536) IR pixels

Full-frame rate up to 100 Hz, 10 GigE interface

Snapshot detector, internal trigger interface

Complete optical assortment

Pixel size with microscopic lens up to 1.3 µm

Thermal resolution up to 0.03 K

Made in Germany

www.InfraTec.eu
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NEW

Spectral range	(3.6 … 4.9) µm
Pitch	10 µm
Detector	InSb
Detector format (IR pixels)	(1,920 × 1,536)
Image acquisition	Snapshot
Readout mode	ITR / IWR
Aperture ratio	f/2.0 or f/3.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 ... 500) °C
Measurement accuracy	± 1 °C or ± 1%
Temperature resolution @ 30 °C	Up to 0.03 K
Frame rate (full frame mode / 960 x 768)	100 Hz / 300 Hz, (identical FOV)
Window mode	Yes
Focus	Manual, motorised or automatically*
Dynamic range	13 bit
Integration time	(1 … 20,000) µs
Rotating aperture wheel and filter wheel*	Up to 5 positions
Multi Integration Time*	Yes
Interfaces	10 GigE, USB 2.0, HDMI*
Trigger	2 IN / 2 OUT, TTL
Analogue signals*, IRIG-B*	2 IN / 2 OUT, yes
Tripod adapter	1/4" and 3/8" photo thread, 2 × M5
Power supply	24 V DC, wide-range power supply (100 ... 240) V AC
Storage and operation temperature	(-40 ... 70) °C, (-20 ... 50) °C
Protection degree	IP54, IEC 60529
Dimensions, weight	(241 × 123 × 160) mm, 4.7 kg (without lens)

* Depending on model
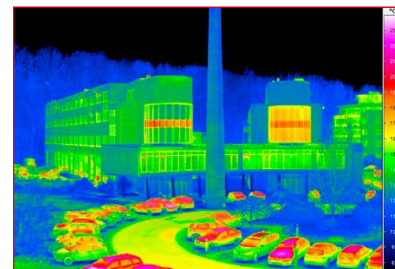
With its **detector format of (1,920 × 1,536) IR pixels** the ImageIR® 10300 sets new standards in geometric resolution worldwide and creates thermograms with an unprecedented image detail and sharpness. For the first time an infrared camera for civil use with a cooled photon detector permits **full HD images.** In combination with the small **pitch dimension of 10 µm,** this ensures that measurement, inspection and surveillance tasks can be solved even more efficiently than before. Everywhere such very fine structures need to be analysed on large-surface measurement objects, for example, users save time, effort and thus costs.

Despite the detector format of about 3 Megapixels, the transfer of **full frame images** achieves a rate **up to 100 Hz.** Thanks to the **10 GigE interface** of the ImageIR® 10300 users can store large amounts of measurement data on a computer in the shortest amount of time. The interface is a part of the modular design of the entire high-end camera series ImageIR®. Individual adjustments like retrofitting a remotely controllable filter and aperture wheel or a motor focus unit can easily be realised. A broad variety of infrared lenses with highest optical performance parameters provides the camera's **outstanding thermal sensitivity.**

Lenses	Focal length (mm)	FOV (°)	IFOV (mrad)
Wide-angle lens	25	(42.0 × 34.2)	0.4
Standard lens	50	(21.7 × 17.5)	0.2
Telephoto lens	100	(11.0 × 8.8)	0.1

Macro and microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size (µm)
Close-up for telephoto lens 50 mm	300	(115 × 92)	60
Close-up for telephoto lens 100 mm	500	(96 × 77)	50
Microscopic lens M=1.0×	40	(19 × 15)	10
Microscopic lens M=8.0×	14	(2.4 × 1.92)	1.3

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