## ImagelR® 10300

Full HD Thermography Camera



## InfraTec

Europe's leading specialist for infrared sensors and measurement technology

- 1) ImageIR\* 10300 with (1,920  $\times$  1,536) IR pixels
- 2) Format-filling image of circuit board
- 3) Detailed zoom into image

Cooled FPA photon detector with (1,920 × 1,536) IR pixels
Full-frame rate up to 100 Hz, 10 GigE interface
Snapshot detector, integrated trigger interface
Complete optical assortment
Microscopic pixel resolution up to 2 μm
Thermal resolution up to 0.03 K
Made in Germany

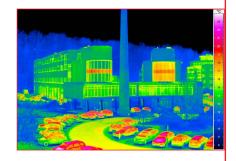


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Spectral range	(3.6 4.9) μm
Pitch	10 μm
Detector	InSb
Detector format (IR pixels)	(1,920 × 1,536)
Image recording system	Snapshot
Selection mode	ITR/IWR
Aperture	F/2 or F/3
Detector cooling	Stirling cooler
MTTF	15,000 h
Temperature measuring range	(-40 500) °C
Measurement accuracy	± 1 °C or ± 1 %
Temperature resolution @ 30 °C	Up to 0.03 K
Frame rate (full screen mode)	100 Hz
Binning (960 x 768) (identical FOV)	300 Hz
Window mode	Yes
Focus	Manual, motorised or automatical*
Dynamic range	13 bit
Integration time	(1 20,000) $\mu s$ increments up to 1 $\mu s$
Rotating aperture wheel and filter wheel*	Up to 5 positions
Multi Integration Time*	Yes
Interfaces	10 GigE, USB 2.0
Trigger	2 IN/2 OUT, TTL
Tripod adapter	$1/4$ "- and $3/8$ " photo thread, $2 \times M5$
Power supply	24 V DC
Protection degree	IP54, IEC 60529
Dimensions, weight	$(240 \times 120 \times 160)$ mm, 4.7 kg (without lens)





\* Depending on model

With its detector format of (1,920  $\times$  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  $\mu$ m, 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 realized. A broad variety of infrared lenses with highest optical performance parameters provides the camera's outstanding thermal sensitivity.

## Detector format (IR pixels)

Lenses	Focal length (mm)	FOV (°)	IFOV (mrad)
Wide angle lens	25	(42×34)	0.4
Standard lens	50	(22×18)	0.2
Telephoto lens	100	(11 × 9)	0.1

Macro- and microscopic lenses	Focus (mm)	FOV (mm)	Pixel (μm)
Close-Up 300 mm for telephoto lens 50 mm	300	(115 × 92)	60
Close-Up 500 mm for telephoto lens 100 mm	500	(96×77)	50
Microscopic lens M=1,0×	40	(19.2 × 15.4)	10
Microscopic lens M=8,0×	14	(2.4 × 1.9)	2

## Headquarters

InfraTec GmbH
Infrarotsensorik und Messtechnik
Gostritzer Str. 61 – 63
01217 Dresden | GERMANY

Phone +49 351 871-8630 E-mail thermo@InfraTec.de

USA office

InfraTec infrared LLC 5048 Tennyson Pkwy. Plano TX 75024 | USA

Phone +1 844-226-3722 (toll free) E-mail thermo@InfraTec-infrared.com