

# The thermal imager **testo 885** is the test winner.

**Thermal imagers and technology from Testo have convinced independent experts. The testo 885 came top in the comprehensive market overview conducted by the trade magazines Photon and Photon-International. In a further test, the renowned Fraunhofer Institute was able to confirm the benefit of testo SuperResolution technology for typical applications in industrial thermography.**



Savings in consumption-dependent costs for the generally complex system technology represent huge competitive potential in industry. Downtimes have a particularly negative effect, not to mention the production losses involved. Critical points in plants and machines can be efficiently tested using thermal imagers – without contact, and non-intrusively. For this purpose, Testo provides high-quality instruments such as the thermal imager testo 885. In combination with the high-quality germanium optics and a resolution of 320 x 240 pixels, it detects measurement objects in excellent image quality. Thanks to the testo SuperResolution technology, the resolution is even improved by one class, to 640 x 480 pixels. At the same time, the 30° lens guarantees large image sections and records the temperature distribution of the object to be measured. The excellent temperature resolution (NETD) of < 30 mK makes even the smallest temperature differences visible. Exchangeable lenses allow the user to work in different recording situations or new areas of use.

## "Everything fits"

Features such as these also convince independent experts. The trade magazines Photon and Photon-International comprehensively tested 14 thermal imagers including the model testo 885. The current market overview records almost 100 individual pieces of information per imager, and is of special significance because Photon's laboratory has for the first time given ratings. 13 categories were scored with varying weighting. The testo 885 (with the testo SuperResolution

option) was at the very top in almost all individual disciplines. With a total rating of 1.6, it only just missed the best grade "very good". "Everything fits" was Photon's judgement of the test winner.

As the most important single category, the display noticeably influenced the overall rating. A score of 1.8 for the 4.3 inch touchscreen (LCD) of the testo 885 meant the second-best value in the competition overall. The movable fold-out, rotatable display has a high level of brightness; "thermograms are displayed in sharp focus and contrast," writes Photon.

Since the emphasis of the test is in the thermal imagers' suitability in photovoltaics, the experts place great value on the handling of measurement tasks such as the observation of a generator set-up or the presentation of an individual module (with two provoked malfunctions each). All four malfunctions were reliably identified by the testo 885, and were clearly visible in the display as well as later on the computer monitor – score: 1. The testo 885 scores more top grades for all aspects of energy supply and the battery running time of 4.5 hours. The Photon tester found the hand focus to be "truly praiseworthy". "Adjusting the focus in the testo 885 using the rotatable wheel is as soft as butter". For this reason, the testo 885 was granted the score 1 in this sub-category, as well as for the integrated digital camera.

"Nothing much more to complain about", agreed the Photon experts in the end. "Anyone who takes the time to concern himself a little with its operation will enjoy the testo 885", is their summary.

**testo SuperResolution – as easy as it is brilliant**

The most expensive component of a thermal imager is the sensor. Developers therefore look for possible ways of increasing the resolution without using a higher-resolution sensor which is therefore correspondingly more expensive. At the request of the specialist media publishers Vogel Business Media, the Fraunhofer Institute for Optronics, System Technologies and Image Exploitation IOSB in Karlsruhe, Germany scientifically examined the question of whether this “squaring the circle” works, and tested six imagers from leading manufacturers.

The engineers at Testo solve the problem with testo SuperResolution. The patent-pending technology uses the natural movement of the hand to quickly record several images, slightly offset to each other. Using an algorithm, these are then calculated to obtain an image. This then contains four times more measurement values, and a geometric resolution increased by a factor of 1.6. At one go, 320 x 240 pixels are turned into 640 x 480 pixels. The infrared image quality is thus improved by one whole class. The result is a better focused image with more details; even the smallest structures can be thermographically recorded. Instruments with SuperResolution bring considerable advantages in industrial maintenance”, is Vogel Business Media’s positive overall summary of the Fraunhofer test series.

However, the benefit of testo SuperResolution is shown not only from a technical, but also from an economical point of view: Thermal imagers with 320 x 240 detection elements and with testo SuperResolution achieve roughly the same resolution as conventional instruments with 640 x 480 pixels – but they cost less than half as much.

