



## THE TERAHERTZ-IMAGER FOR SAFE MAIL INSPECTION **T-SENSE**

**HÜBNER Photonics** | Coherence Matters.





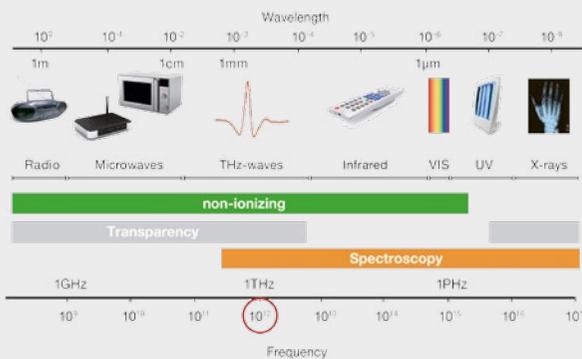
## T-SENSE THE TERAHERTZ-IMAGER FOR SAFE MAIL INSPECTION

### Your fast solution for higher security

Post offices in companies and public authorities alike are the departments most vulnerable to attacks via mail. In most cases, its staff is unprotected to those potentially severe incidents. To minimize the likelihood of such an event, HÜBNER Photonics developed an innovative bench-top system enabling you to check letters and small parcels: The T-SENSE visualizes hidden objects and hazardous substances in your mail.

With terahertz radiation being harmless for living tissue, T-SENSE can be operated without any safety precautions that are often necessary with conventional devices. Due to its intuitive graphical user interface, T-SENSE can be operated by everybody – no special training is required at all.

The T-SENSE permits effective and safe mail inspection to improve the security of people.



**Figure 1:** Schematic representation of wavelengths and frequencies

### Operation Principle

Terahertz waves essentially stand for the frequency range of the electromagnetic spectrum, ranging between 0.1 THz and 10 THz. Numerous nonconductive materials such as plastics, compounds, ceramics, paper or clothing appear almost transparent on THz frequencies. The T-SENSE makes use of the varying absorption levels of the objects being illuminated.

In addition, it measures the time range of the signal being emitted. It can recognize the smallest difference, regardless of whether this is due to varying levels of moisture or a deliberate or accidental alteration of the composition of the product in question.

### User-friendly

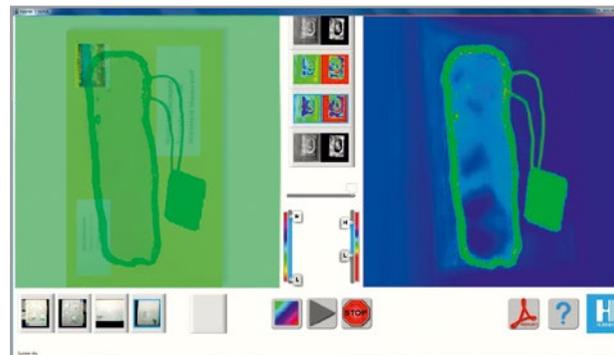
Thanks to easy-to-understand and intuitive modes of operation and interface, the T-SENSE can be used immediately after startup. It is not necessary to hold long staff trainings. The output log can be varied for individual customer requirements.

### Fast, mobile and flexible

Based on its lightweight and small dimensions, the T-SENSE can be handled easy, only a main connection is necessary. Quick scans detect hidden objects and materials such as drugs and explosives in letters and small parcels. The terahertz imager rapidly displays the objects to be examined, uncovering potentially dangerous contents. Since the device is highly sensitive, it even visualizes powders and adhesives!

### Safety for health and work

Unlike x-rays, there is no health risk with the terahertz-based imager T-SENSE. Typical safety precautions for conventional imaging devices are not needed – outside the casing, the terahertz waves are barely detectable.



**Figure 2:** T-SENSE user interface with different filters side by side. All parameters are intuitively customizable.

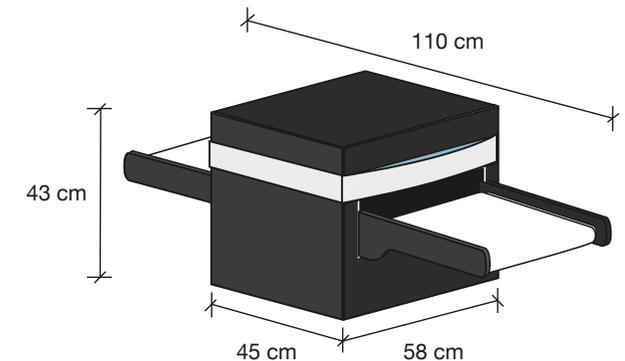
#### WORKLOAD CAPACITY\*

Envelopes/hour C4	250
Envelopes/hour C5	500
Envelopes/hour C6 (DL)	750

\* Value for standard resolution

#### MAXIMUM DIMENSIONS OF SCANNED OBJECTS

Width	275 mm
Height	30 mm



#### DIMENSIONS & WEIGHT

Length	450 mm
Width	580 mm
Height	430 mm
Weight	30 kg

#### SURROUNDINGS & ELECTRICAL SUPPLY

Operating temperatur range	10 – 45 °C
Power supply	100 – 230 VAC
Power consumption	< 200 W
Frequency	50 – 60 Hz



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an understanding based on mutual respect, honesty and products you can trust. Coherence Matters is in our genes and our spirit – all day, every day.



HÜBNER GmbH & Co. KG  
Division HÜBNER Photonics  
Heinrich-Hertz-Straße 2  
34123 Kassel, Germany

Tel. +49 561 998-1615  
Fax +49 561 998-2025

[photonics@hubner-germany.com](mailto:photonics@hubner-germany.com)



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