“SVIT” INFRARED IMAGER

Description
The imager provides high-quality thermal images (thermograms) of various objects by recording their thermal radiation in the infrared bandwidth of 2.65-3.1 micron, and subsequent computer processing. The object's surface temperature above 20 °C is recorded to a precision of 0.007 °C without additional filtering. The sensor is cooled by liquid nitrogen that allows setting up the operation in no more than 15 minutes; one charge of liquid nitrogen provides continuous operation for at least 12 hours.

“SVIT” infrared imager and examples of thermograms (above)

Technical appraisal and economic benefits
"SVIT" is used in medicine for early diagnostics of various diseases (inflammations, tumours, nerve and vessel injuries, etc.) without interference into the organism. The software of the system accepts user-specified temperature boundaries in imaging and saving the snapshots in a special graphic format or in the "Patient's card".
In technological applications, snapshot thermograms (for about 0.05 seconds) are used to record thermal fields in gases, liquids, and other objects in studies of transient and stationary processes.
The system is advantageous as it is fully computer controlled and the software is designed to record temperature in any point or temperature contrast between any two points of the object, to display temperature plots for any selected section of the thermogram, and to vary the colour spectra of the images.

Application areas
- Medicine
- Heat power engineering
- Ecology
- Scientific research
• Machine building
• Transportation

**Development stage**
The infrared imager is approved by the Pharmacological Committee of the Ministry of Health of the Russian Federation.

**Patent situation**
Know-how protected

**Commercial offers**
Procurement contract, joint production.

**Estimated cost**
20,000 USD for a standard lot of 20 pcs.

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