



International and Inter University Centre for Nanoscience and Nanotechnology

**Mahatma Gandhi University**

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**Dr. Nandakumar Kalarikkal**

*Hon: Director*

Date: 30/10/2018

Tender No. 14/Qut-Tend/IIUCNN/2018-2019

## INVITING QUOTATION

Tenders are invited from companies/firms for supplying the instruments mentioned below at the International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN), Mahatma Gandhi University, Kottayam

<b>Names of the equipments</b>	<b>THERMAL IMAGING CAMERA Imaging and Optical Data</b>
Last date and time of submission of relevant documents by speed post	14.11.2018, 10AM
Date and time of opening of technical bid	15.11.2018, 10AM
Date and time of opening of financial bid	15.11.2018, 10AM

IIUCNN reserve the right to accept or reject any/all quotations without assigning any reason whatsoever. For more details, please visit

<http://iiucnn.com/> & <https://www.mgu.ac.in/>

Regards

Hon. Director

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for Nanoscience & Nano Technology



## SPECIFICATIONS OF THERMAL IMAGING CAMERA

IR Resolution : 120 x 90  
Minimum focus distance: 0.5 m (1.6 ft.)  
Spectral range : 7.5–13  $\mu\text{m}$

### **Thermal Image Sample**

MSX Resolution : 320 x 240  
Thermal Sensitivity :  $<0.10^{\circ}\text{C}$   
Field of View :  $45^{\circ} \times 34^{\circ}$   
Focus : Focus Free  
Detector : Uncooled Microbolometer  
Screen : 3.0 in. 320 x 240 color LCD  
Frame Rate : 9 Hz

### **Analysis**

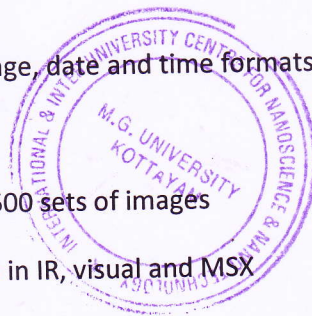
Image Modes : IR image, visual image, MSX, picture in picture, thumbnail gall  
Imaging (MSX) : IR image with enhanced detail presentation  
Temperature Range :  $-4^{\circ}\text{F}$  to  $482^{\circ}\text{F}$  ( $-20^{\circ}$  to  $250^{\circ}\text{C}$ )  
Accuracy :  $\pm 2\%$  or  $2^{\circ}\text{C}$   
Measurement Modes : 4 Presets : Center spot, area box hot, cold spot, no measurements  
Emissivity Correction : Variable from 0.1 to 1.0

### **Set-Up**

Color Palettes : Iron, Rainbow, and Gray  
Set-up Commands : Local adaptation of units, language, date and time formats

### **Image Storage**

Storage Capacity : Internal memory store at least 500 sets of images  
Storage Mode : Simultaneous storage of images in IR, visual and MSX  
File Formats : Standard JPEG, 14-bit measurement data included



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## Data communication interfaces

Interfaces : USB Micro: Data transfer to and from PC and Mac device

## Power system

Battery type : Rechargeable Li Ion battery

Battery voltage : 3.6 V

Battery operating time : Approx. 4 hours at +25°C (+77°F) ambient temperature and typical use

Charging system : Battery is charged inside the camera or in specific charger.

Charging time : 2.5 hours to 90% capacity in camera. 2 hours in charger.

Power management : Automatic shut-down

AC operation : AC adapter, 90–260 VAC input, 5 VDC output to camera

## Environmental data

Operating temperature range : –15°C to +50°C (+5°F to +122°F)

Storage temperature range : –40°C to +70°C (–40°F to +158°F)

Humidity (operating and storage): IEC 60068-2-30/24 h 95% relative humidity

EMC : • WEEE 2012/19/EC

• RoHS 2011/65/EC

• C-Tick

• EN 61000-6-3

• EN 61000-6-2

• FCC 47 CFR Part 15 Class B

Encapsulation : IP 54 (IEC 60529)

Shock : 25 g (IEC 60068-2-27)

Vibration : 2 g (IEC 60068-2-6)

Drop : 2 m (6.6 ft.)

## Certifications

Certification : UL, CSA, CE, PSE and CCC

## List of contents

• Infrared camera

• Hard transport case



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- Battery
- USB cable
- Power supply
- Battery charger
- User documentation CD-ROM
- Printed documentation
- software CD

Warranty : 2 years for camera 10 years for detector

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## TERMS AND CONDITIONS

- The quoted price should be inclusive of all taxes/freight/installation charges, etc.
- Customs/Excise Duty Exempted price should also be quoted
- The quotation should have at least Three Months validity
- Brand name of the equipments should be mentioned and Brochure to be enclosed
- Warranty conditions, details of the nearest servicing centers, user reference, necessary supporting catalogues and demonstration should be provided
- The right to accept or reject quotes without assigning any reason rests entirely with the undersigned
- If the product has a Valid DGS & D rate contract, it may be quoted
- If the date of receipt and opening of quotation is declared a holiday, the next working day shall be the last day for the purpose.
- At least two users should be trained by the application engineers during the time of installation.

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