

Department of Mechanical Engineering
Indian Institute of Technology Delhi

Notice Inviting Quotation

August 27, 2012

SUB: Quotations for Infrared Thermal Imaging Camera

Quotations are invited for the purchase of Infrared Thermal Imaging Camera, required to observe thermal pattern and mechanical contact between two parts. This camera must have:

- Facility to capture thermal images. Associate software to analysis the temperature in detail should be provided.
- An arrangement to view metallic contacting pair from a fixed point (Tripod mounting facility) should be available.
- Temperature measurement range should be from 10°C to 350°C.
- Image resolution should be at least 320 x 240 pixels.
- 8x digital interpolating zoom should be available.
- Clear and accurate online image facility (Real time 16 bit image streaming for signal / Temperature Linear & Radiometric image)
- Detector pitch should be 25 µm or less
- Thermal Images should be captured automatically based on temperature based alarm function.
- Thermal sensitivity should be at least 0.1°C at room temperature.
- Field of view of lens should be 25° x 19° +/- 2°.
- Auto focus & Manual motorized Focus facilities.
- Spectral range should be 7.5 to 13 µm.
- Optic transmission correction should be available based in signals from internal sensors.
- Video Output should be available in the form of PAL/NTSC.
- Open & well described TCP/IP protocols should be available for control & set-up.
- Measurement mode should be available in camera in the form of Spot, Area, Isotherm, Delta T etc. & all functions can be used through PC control for live thermal imaging pattern.
- Camera should be fully controlled from the PC on site or in control room.
- Alarm function should be available in case temperature within one of the pre defined spot / area rises above or falls below a predefined value.
- Images should also be stored as a function of alarm, whenever temperature within prescribed area rises above or falls below a predefined value.
- At least one Digital Input / Output should be user configurable.
- Ethernet connectivity should be available in camera for retrieving data even over long distance.
- Camera should be configurable with IP address for operation & control throughout internal server network.
- Spot / Area threshold alarm / internal temperature sensor alarm function should be available for configurable Digital output.
- Isotherm function should be available in the camera to highlight area within predefined temperature range.
- Camera should have provision of external triggering to initialize image storage.
- Camera should be available with rugged housing & should not weight more than 1 KG.
- Operating temperature should be from -15°C to 50°C.
- Camera should be able to operate from 230 VAC (Standard) along with DC supply of 12 or 24V. Required adapters should be provided along with camera.

- Software CD should accompany camera as standard accessory.
- Camera needs to have protection grade IP-40, IEC-529 encapsulated and shock (under unit operation) tested to 25G, IEC 68-2-29 and vibration (unit under operation) tested to 2G, IEC 68-2-6.
- Bidder must have supplied similar equipment to Research or technological institute. Supporting documents should be provided along with technical quotations.
- Bidder must have in-house calibration check facility.

Sealed quotations (technical & financial) must reach us by 5.00 pm of 10th September, 2012 at address:

Dr. Harish Hirani, II-354, Department of Mechanical Engineering, IIT Delhi-110016, INDIA.

- Validity of Quotation: 45 days from the date of opening of the Technical Bids.
- IIT Delhi reserves the right to accept/reject any bid, without assigning any explanation or reason. The decision of finalizing the bid on the subject shall be final and binding on all Bidders.

(Harish Hirani)