## **Technical Specifications**

Infrared (IR) thermal imager with software for accurate, repeatable and convenient measurements of IR thermal imaging, image analysis and generating reports using software. Simultaneously captures both a thermal and visible light picture. Software should be license free and all upgrades for the software to be provided. Instrument should be easy to operate with friendly interface, Data transmission to a computer via USB, Wi-Fi hotspot, or Wi-Fi network. Wireless connectivity to PC and smart phones. Easily portable to use in field with rechargeable batteries. Additionally, the instrument should comply with following specifications.

- Detector resolution should be minimum of 1,60,00 pixels or more
- Should be with manual and laser Auto Focus based on distance measured having laser distance meter which displays distance on screen.
- Touchscreen display with minimum display size of 3.5 inch LCD or more with digital zoom.
- Should have temperature measurement range of  $\leq -10$  °C to +650 °C or higher range with accuracy level of  $\pm 2$  °C or 2% and thermal sensitivity (NETD) of  $\leq 0.05$  °C at 30 °C target temperature.
- On-screen emissivity correction is required having on-screen reflected background temperature compensation and transmission correction and live line marker.
- Picture-In-Picture (PIP) feature for IR images and built-in digital camera (visible light) should have resolution of 5 MP or more
- Standard lens having IFOV (spatial resolution) of 0.93 mRad or less with Field of view of minimum of 24°H × 18 °V and Minimum focus distance of 15 cm (approx. 6 in) or less. Capturing frequency for image should be minimum of 30 Hz or more. Can be operated both in Manual and Auto mode
- Instrument should have provision for color alarms for high, low temperature, and isotherms (within range) in Instrument / Software. Center-point temperature measurement, Spot temperature for hot and cold spot and user-definable spot markers
- At least 16 GB removable micro SD memory card or more.
- Image capture, review, save mechanism with one-handed image capture, review, and save options.
- Image file formats fully radiometric, non-radiometric and export file formats with software should have option for bitmap (.bmp), GIF, JPEG, PNG and TIFF.
- Video recording should have provision for both standard and radiometric with appropriate file formats. Auto capture facility is required for temperature at interval.
- Minimum two field-replaceable & rechargeable lithium ion battery packs with 2.5 hours per battery or more. Battery level indicator in the form LED preferably on the battery. AC operation power supplies 100 V AC to 240 V AC, 50/60 Hz.
- Instrument should be light weight (battery included) preferably less than 1.2 kg
- Should have standard warranty for whole instrument and lens as per the company policy.
- Full analysis and reporting software to be included. Software should be license free and all upgrades for the software to be provided. The Software shall have feature for complete analysis of the Thermal Imager, capability to add comments & remarks in the Image, 3D IR Analysis of the Thermal Images, automatic reports generation.
- Standard accessories to be included along with instrument are AC power supply adapter, battery pack charger, two lithium ion battery packs, SD memory card, Software, with appropriate carrying case, sun visor.
- Optional Accessories like Industrial tripod stand with tripod mounting may be provided with separate estimation.
- The testing, commissioning and demonstration of the equipment need to be provided by authorized technical person.
- Attach product brochure, any other supportive document as evidence to authenticate the compliance of technical specifications.