

Technical Requirements for Solicitation NNG14515827Q (LWIR Imaging Camera)

1. Spectral response: 7.5-13 μm or greater extended range
2. NETD: 20 mK (at 30 C) or better in UNCOOLED operation
3. Measurement accuracy: ± 1 C for ambient
4. Sensor, Pixel format: Uncooled Microbolometer, 640X480 or greater
5. Pixel pitch: 20 μm or smaller
6. Lens: close-up lens with 25 μm spatial resolution or better (finer) with working distance of 30-50 mm, the working distance shall be clear without obstruction/overhang
7. Focus: Auto & manual dual capability
8. A/D: 14 bit or better (higher)
9. Frame rate: 30 Hz or higher
10. Digital zoom: 1-8X or better
11. Visual images: shall include visual camera for context images with automatic storage of both infrared and visible.
12. Output: Real time full dynamic radiometric digital output through USB port
13. Internal storage: SD card with ability to save radiometric video frames; shall include SD card
14. Communication interfaces: USB, WiFi, DVI; shall include cables
15. Operating temperature range: -10 C to 40 C
16. Power: Lithium-ion rechargeable battery and spare with better than 2 hours operational time, shall include VAC adapter.
17. Mass requirements: 2 kg or less
18. Dimensions: 15cm \times 20 cm \times 100 cm (L \times W \times H) with 1/4"-20 threaded aperture on bottom for optical mounts
19. Camera alignment: integrated laser, with on/off, for pointing and facilitating hot spot identification
20. Display: Integrated capacitive touch screen LCD display with 800X400 or better pixel resolution to include viewfinder
21. Measurement analysis: shall include image detail and contrast improvement abilities, area and profile for automated hot/cold spot detection, ability to set reference temperature, and emissivity correction capability
22. Software: Shall include research grade software for saving and interpretation of radiometric video imaging, and ability to convert video to MPEG format
23. Certificate: shall include calibration certification.