

संख्या. पी-63013/225/01/2025/मोड-1/सीसुबल 4599-4608

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली-03
दिनांक 27 नवम्बर 2025

सेवा में,

महानिदेशक:- आसाम राईफलस (through LOAR), केन्द्रीय ओद्यौगिक सुरक्षा बल,
केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा बल,
राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनुसन्धान एवं विकास ब्योरो

विषय: अनुमोदित गुणात्मक आवश्यकता / परीक्षण निर्देशों का प्रेषण

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित "Ultra Light Smart Thermal Imager for Weapon System" उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

आनन्द सिंह 27/11/25
(आनन्द सिंह तक्षक)
उप महानिरीक्षक (रसद)

संलग्न : उपरोक्तनुसार

प्रतिलिपि :-

1. तकनीकी निदेशक
The Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi (द्वारा ई-मेल)
(ई-मेल पता : mpsugandhi@nic.in)
 2. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address: soit@nic.in)
 3. Sh. Samarth Sharma,
Director Nodal Officer for MHA GeM,
3rd Floor, Jeevan Bharti Building
Conaught Lane, Janpath Cannaught
Place, N/ Delhi-110001
E-mail: directorcategory13@gem.gov.in
 4. तकनीकी विंग, सीमा सुरक्षा बल
 5. संकिया निदेशालय (तकनीकी अनुभाग)
बल मुख्यालय सीमा सुरक्षा बल।
 6. फाईल।
- : आपसे अनुरोध है कि उक्त उपकरण के गुणात्मक आवश्यकता / परीक्षण निर्देशों को गृह मंत्रालय की वैबसाइट (पुलिस आधुनिकीकरण संभाग) के गुणात्मक आवश्यकता पोर्टल में मशीनरी एवं उपकरण के साथ निगरानी उपकरण वर्ग के अर्न्तगत अपलोड करने का श्रम करें।
- : कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करें।
- For info with request to upload the approved QRs & TDs of "Ultra Light Smart Thermal Imager for Weapon System" on GeM Portal. Copy of QRs & TDs is attached with this letter.
- : कृपया उक्त उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देशों को सीमा सुरक्षा बल की वैबसाइट पर अपलोड करने का श्रम करें।
- : आपके यूओ संख्या-17870 दिनांक 09.10.2025 के सन्दर्भ में अनुमोदित उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित जाता है।

**QRs & TDs OF ULTRA LIGHT SMART THERMAL IMAGER FOR WEAPON
SYSTEM**

Part-I

Nomenclature of Eqpt: ULTRA LIGHT SMART TI SIGHT FOR WEAPON SYSTEM

1. Trial/ technical evaluation of equipment will be conducted by a Board of Officers (B.O.O) in the presence of vendor or representative of firm to assess actual performance of the equipment.
2. All specifications/ parameters of equipment mentioned in the QRs will be checked by B.O.O during the trial by ascertaining/ verifying in the following ways:
 - (a) **PHYSICAL CHECK**: - In this category, specifications of the equipment will be checked by B.O.O. physically as per QRs/ TDs.
 - (b) **FUNCTIONAL CHECK**: - In this category, Vendor/ Supplier will show practically all features/ configurations to the board of officers during trial.
 - (c) **SUBMISSION OF CERTIFICATE**: - Specification which cannot be checked due to lack of testing facilities/ expertise, certificate(s) will be provided by the vendor, issued by a Government Authorized Laboratory/ International accredited laboratory or OEM as specified against the parameter, and will be acceptable by B.O.O. during trial.

Part-II**GENERAL INFORMATION**

Ultra-light thermal imager sight should be compact, lightweight, weapon mounted as well as hand held optical device, which should form an image from LWIR (Long Wave Infra-Red) energy. It should have ability to identify targets in total darkness, smoke and light fog without active illumination. The equipment design should be made in such a way, that it does not affect the accuracy and balance during fire of the weapon on which it is mounted. It should have multi-role flexibility entailing its use for direct fire, reconnaissance, surveillance and over-watch from vehicles. The system should have very low power consumption, to be operable for long duration and it must not be detectable by enemy thermal sensors or infrared tracking devices.

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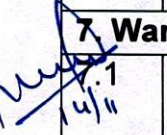
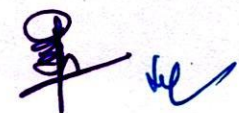
Part-III

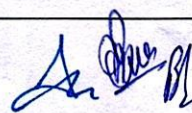
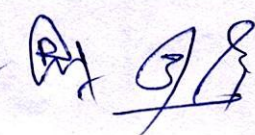
Physical and Technical Parameters

S.No	Qualitative Requirements	Trial Directives
1. Thermal Imager Camera		
1.1	Weight- Between the range 180gm to 220gm with gun mount	To be physically checked by BOO
1.2	Dimensions- Not more than 3.5 (L)x2.5(B)x3.5(H) inches with gun mount	To be physically checked by BOO
1.3	Detection Range- 1200m or more	To be physically checked by BOO
1.4	Recognition Range- 400m or more	To be physically checked by BOO
1.5	Resolution – 384x288 pixels or better	Firm to submit OEM certificate in this regard.
1.6	Pixel Pitch- 12µm or better	Firm to submit OEM certificate in this regard
1.7	Image Rate- 50 Hz or better	Firm to submit OEM certificate in this regard
1.8	Field of View (FOV)-13°x10° or better	To be physically checked by BOO. Firm to also submit OEM certificate in this regard.
1.9	Operating temperature – -10°C to +50°C or -20°C to +50°C (as per user requirement)	Firm to submit OEM certificate in this regard
1.10	Non-Uniformity Correction (NUC) – Sight should have manual and auto NUC features.	To be physically Checked by BOO and firm to also submit OEM Certificate in this regard.
1.11	Diopter Adjustment – -4D to + 2D or better	Firm to submit OEM Certificate in this regard.
1.12	Eye Relief – 50mm or more	To be physically Checked by BOO
1.13	Electronic Zoom- Thermal Imager should have 4x or more electronic zoom	To be physically checked by BOO.
1.14	Focusing – Sight should have 5m or better to infinity focusing	To be physically checked by BOO
1.15	Initialization time – Sight should have less than 10 seconds initialization time	To be physically checked by BOO
2. Mil Grade Screen		
2.1	Screen- Mil Grade MIL-STD-810H	Firm to submit OEM certificate in this regard
2.2	Operating Temperature- -10°C to +50°C or -20°C to +50°C (as per user requirement)	Firm to submit OEM certificate in this regard.
2.3	Storage – 128 GB ROM or better	To be physically checked by BOO.
2.4	RAM- 6 GB or better	To be physically checked by BOO

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2.5	Type of Display- Min 6" HD or better	To be physically checked by BOO
2.6	Battery – 5000 mAH Li-ion or better with continuous run time of minimum 10 hours	To be physically checked by BOO and firm to submit OEM certificate in this regard.
2.7	Operating System - Fully customized application with provision for regular updates and upgrades	To be physically checked by BOO firm to submit OEM certificate in this regard.
2.8	Recording- should record thermal footage, firing record and minimum 100 distinct profiles of zeroed weapons.	To be physically checked by BOO
2.9	Low Battery Indicator- should have low battery Indicator on screen.	To be physically checked by BOO
3. Gun Mount		
3.1	A) Gun Mount for Mil Std Picatinny Rail-Aluminum Alloy + Steel in black matte anodized finish, light weight and should not wobble or rattle B) Separate customized gun mount for INSAS	BOO to check physically and firm to also submit OEM certificate in this regard.
3.2	Time for mounting on Iron Picatinny Rail-Less than 30 Seconds	To be physically Checked by BOO.
3.3	Mount Handle for surveillance-Ergonomic handle for fatigue free surveillance	To be physically checked by BOO
4. Carrying Case		
4.1	Carrying Case- Hard case-for storage and transportation	To be physically checked by BOO
5. Accessories		
5.1	Technical literature	To be physically Checked by BOO
5.2	Training Manual and User Hand book	To be physically Checked by BOO
5.3	The system should charge from 0 to 100% within 03 hours.	To be physically Checked by BOO
6. Training		
6.1	Minimum 02 days or more operational and Maintenance training to 01 person or more per system as desired by user agency at user defined selected locations.	Firm to provide OEM system training Certificate in this regard
7. Warranty and Repair Support		
7.1	Warranty- The system will remain under warranty period for 2 years from the date of JRI (Joint Receipt Inspection) and the firm will extend all repair and maintenance support during this period without any additional cost	Firm to submit OEM Certificate in this regard

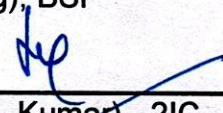



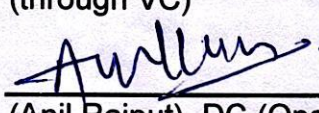
7.2	Repair support and Maintenance – Undertaking to be provided by firm that repair support/provision of spares will be provided for a period of 5 years after expiry of Guarantee/Warranty.	BOO to physically Checked the undertaking provided by firm
7.3	Shelf-Life- The Undertaking of shelf-life of equipment up to 7 years be provided by the firm	BOO to physically Check the undertaking provided by the firm.

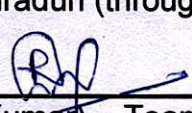

(Dinesh Kumar Boora),
ADG(Log), BSF

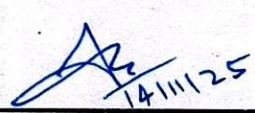

(K L Puri), SP, BPR&D
(through VC)

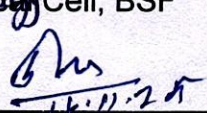
(Dr. Vinay Kumar), IRDE,
DRDO, Dehradun (through VC)


(Mukesh Kumar), 2IC, SIW,
BSF


(Anil Rajput), DC (Ops),
Technical Cell, BSF


(Rupesh Kumar), Team Cdr,
NSG

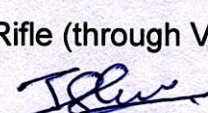

(Paramjeet), DC/AIA, Ord
Sec, BSF

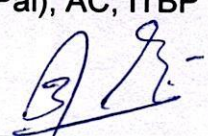

(Lajee Ram), JAD,
DCPW

(N/Sub Sanjeev Kumar), Assam
Rifle (through VC)

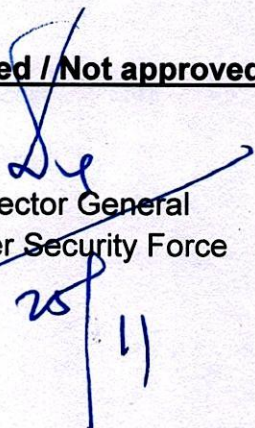

(Bhom Pal), AC, ITBP


(Inspr(A) Prabhat Kr.
Manna), SSB


(Inspr/Exe Ishwar Lal), CISF


(SI/RM N S Almiya), SIW,
BSF

Approved / Not approved


Director General
Border Security Force