संख्या. पी-63013/53/12/2021/मोड- I/सीसुबल 14 91-1565 भारत सरकार, गृह मंत्रालय महानिदेशालय सीमा सूरक्षा बल (रसद निदेशालय: आधूनिकीकरण सैल) (Email-comdtord@bsf.nic.in) (Fax: 011-24367683)

> ब्लाक संख्या . 10, सीजीओ काम्पलैक्स, लोधी रोड, नई दिल्ली–03

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महानिदेशकः— आसाम राईफलस (through LOAR), केन्द्रीय ओद्यौगिक सुरक्षा बल, केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा बल, राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनूसन्धान एवं विकास ब्योरो ।

## विषयः अनुमोदित गुणात्मक आवश्यकता / परीक्षण निर्देशों का प्रेषण

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित "Miniature Thermal Weapon Sight" के गूणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता हैं।

संल्गनः उपरोक्तनुसार

## प्रतिलिपि :-

- तकनीकी निदेशक 1. 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)
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- तकनीकी विंग, सीमा सुरक्षा बल 4.

: आपसे अनुरोध है कि उक्त उपकरण के सूत्रीकरण किये गये गुणात्मक आवश्यकता / परीक्षण निर्देशों को गृह मंत्रालय की वैबसाईट (MHA website Division of MHA+ - Police Modernization Division- Qualitative Requirements-Qualitative Requirements of Machinery & Egpt Items with Surveillance item) पर अपलोड करने का श्रम करें।

: कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करें।

- Group Commander (Proc) HQ NSG, : वास्ते सूचनार्थ एवं आपके पत्र संख्या 1346 दिनांक 02/05/2023 के संदर्भ में ।
  - के गुणात्मक : कृपया उक्त उपकरण आवश्यकता/परीक्षकण निर्देशों को सीमा सुरक्षा बल की वैबसाईट पर अपलोड करने का श्रम करें।

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## **QRs & TDs OF MINIATURE THERMAL WEAPON SIGHT**

Ser No	Para • meters	Qualitative Requirements	Trial Directives
1.	General *	A miniature thermal weapon sight is a light weight and small military standard rugged sight, which is compliant with mil std 1913 picatinny rail.	To be physically checked by board of officers.
		(Optional feature) Miniature thermal sight should be compatible with Reflex/ holographic/ day sight as a clip on feature. (To be specified by user at the time of tender)	To be physically checked by board of officers.
2.	Non Uniformity Correction (NUC)	Sight should have manual and automatic (shutter less technology) feature in it.	Firms to provide OEM certificate in this regard and BOO to physically check the NUC feature.
3.	Field of View	12 degree x 08 degree minimum.	OEM to provide certificate in respect of the same. BOO to physically check the parameter at SIW, BSF or any other Indian government agency.
4.	Resolution	640 x 480 or better with 12 micron or better.	Firm to provide COC (Certificate of compliance) and Data sheet of micro-bolo meter from OEM . BOO to check the certificates
5.	Diopter Adjustment	+2D to -2D or better	To be physically checked by BOO at SIW, BSF or any other govt agency.

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Ser No	Para meters	Qualitative Require-ments	Trial Directives
6. •	OLED Resolution	640x480 or better.	Firm to provide COC (Certificate of compliance) and Data sheet of OLED from OEM.
7.	Spectral Range	8 to 14µm.	BOO to check the certificates OEM certificate in respect of the same. BOO to check the certificates.
8.	Sensor / Detector	12 micron detector or better	OEM of micro bolometer to provide certificate in respect of the same. BOO to check the certificates.
9.	Frame Rate	50 fps/Hz or better	Firm to provide OEM certificate from detector & OLED manufacturer in respect of the same.
10.	Electronic Zoom	Should have following modes 1x2x4.	To be physically checked by board of officers.
11.	Bty Charger	<ul> <li>A universal charger operating between 100V to 270 V AC main and 12 to 48 V DC (entire range).</li> <li>Should be able to charge battery fully in less than4 hrs.</li> <li>The charger should be able to show the charging status of battery alongwith an auto-cut system to avoid over charging.</li> </ul>	To be physically checked by board of officers.
12.	Battery	Commercially available rechargeable lithium based battery with min endurance time of 6hrs on single/set of battery.	To be physically checked by board of officers.



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Ser No	Para meters	Qualitative Requirements	Trial Directives
13.	Range	Detection - 200m.	<b>Detection</b> – Detection of any standing/moving single human target at 200m.
		<ul> <li><u>Recognition</u> –100m</li> </ul>	<b><u>Recognition</u></b> – Recognition of standing/ moving single human target at 100m.
			BOO to physically check the same.
14.	Reticule polarity	Sight should have dual colour (Black/ White) digital reticle or better.	To be physically checked by the BOO.
15.	Size	Max (130 x 90 x 65 mm)+10% without eye piece cover and OG cover	To be physically checked by board of officers.
16.	Weight	Not exceeding 450 gms+10% (with battery and mounting adapter, OG cover and Eye cup)	To be physically checked by board of officers.
17.	Locking Mechanism	<ul> <li>(a) It should have locking arrangement for quick attachmentand detachment.</li> <li>Time &lt; 1 min.</li> <li>(b) It should have a rugged locking mechanism compatible with Mil Std 1913 rail.</li> </ul>	To be physically checked by board of officers.
18.	Operational Switches	Brightness control, contrast control, Black hot& white hot, NUC, reticle toggle option.	To be physically checked by board of officers

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Ser No	Para meters	Qualitative Requirements	Trial Directives
19.	Ruggedness *	<ul> <li>(a) Weapon system should be ruggedized as per latest mil Std 810H or JSS 55555/JSS 5855 for following test :</li> <li>Shock.</li> <li>Vibration.</li> <li>Bump.</li> <li>Thermal shock.</li> <li>Humidity.</li> <li>Low pressure(altitude)</li> <li>(b) Should be IP-67 complied.</li> </ul>	Firm to provide Certificate from any Indian Govt lab/ NABL lab for all parameters.
		(c) Should be able to withstand sustained firing with the weapon without any effect on zeroing optics of sight after firing 100 Rds in burst mode	BOO to physically check the same with the weapon at firing range.
20.	Operating Temperature	-30° C to +50° C (±3°C)	Firm to provide Certificate from any Indian Govt lab/ NABL lab for same.
21.	Storage Temperature	-40° C to +50° C (±3°C)	Firm to provide Certificate from any Indian Govt lab/ NABL lab for same.
22.	Black Hot White Hot Mode	The equipment must work effectively and be successfully be able to show image in Black hot and white hot mode	To be physically checked by board of officers
23.	Spare Battery	For Cycle of operation It must provide 02 x set spare battery	To be physically checked by board of officers.
24.	Warranty min 02 years & shelf life of 10 years.	An undertaking in this regard must be obtained by the firm	Warranty of min 02 year and shelf life of 10 years
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Ser No	Para meters	Qualitative Requirements	Trial Directives
25.	Reticule	<ul> <li>(a) Fine cross hair with centre Dot capable to zero the weapon on target.</li> <li>(b) There should be facility of changing the colour of the reticle.</li> <li>(c) The reticle pattern for 100m should be provided.</li> </ul>	Switch on the equipment and observe for reticle pattern confirmation with the facility of changing colour. Reticle of 100 metre should be physically checked by BOO.
26.	Focusing	5m to Infinity	To be physically checked by board of officers.
27.	Visibility	Must be able to penetrate through fog, smoke, rain, foliage and complete darkness	To be physically checked by board of officers.
28.	Technical Literature	User Hand-book, operating manual and technical manual to be provided.	To be physically checked by board of officers.
29.	Initialization Time	Time ≤ 30 Sec	To be physically checked by board of officers by switching ON the sight And it should be ready to use operationally
30.	Spare part list	Illustrated spare part list along with photograph and cat part number to be provided.	To be physically checked by BOO.
31.	<u>Training</u> : Operational & Repairs	Operational user training for 3 days to be provided for at-least 50 persons at location decided by indenter. Base level Repair and maintenance training should be provided at-least to 5 technicians on 100 equipment for 1 week at firm premises.	Firm to provide OEM certificate for the same.
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Ser No∼	Para meters	Qualitative Requirements	Trial Directives
32.	Minimum Resolvable Temperature Difference (MRTD)	Value to be specified by the OEM of the equipment	OEM to provide CoC(Certificate of Confirmation) for the same and BOO to check correctness of the certificates.
33.	Low Battery Indicator	Low Battery indication status to be displayed on OLED/screen.	To be physically checked by BOO.
34	<ul> <li>Firing Accuracy</li> <li>(a) Wpn types (Model &amp; calibre) will be informed by User at Tender stage.</li> <li>b) Amn to be provided by User for Zeroing &amp; Test fire.</li> </ul>	<ul> <li>(a) Zero the sight with the weapon at 25m. BOO to check the sight for the facility provided to electronically shift the aiming dot in azimuth and elevation as per the requirement.</li> <li>(b) Reticle at 100 should be physically checked and its accuracy shall be checked by test fire (10 Rds per target).</li> <li>(i) For 9mm caliber weapons, accuracy shall be checked by test fire at 25 &amp; 50m ranges.</li> <li>(ii) For 5.56mm/ 7.62mm caliber weapons, accuracy shall be checked at 100m.</li> <li>(c)The weapon should be able to engage figure 11 target with min 60% hits (i.e 6 out of 10 rounds).</li> </ul>	
35.	Misc (To be specified by User if required)	<ul> <li>(a) Purging kit to be provided by the firm.</li> <li>(Quantity to be decided by User at tender stage)</li> <li><u>OPTIONAL</u></li> <li>Acceptance Test station for Base level repair to be provided by Firm. User will provide details of test equipments at the time of tender.</li> </ul>	

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Ser No	Para meters	Qualitative Requirements	Trial Directives
36.	Carrying Case	X5 STD along with each sight.	Firm to provide National/NABL accredited lab cert for Soft carrying case and BOO to physically conduct the Drop Test for Hard carrying case.
		(b) <u>Hard Carrying Case:</u> Firm to provide a rugged hard carrying case, which will sustain a drop test from 3mheight on a hard surface. No deformation and breakage of box is acceptable. Sight to be checked for operational use post drop test.	

(Ravi Prakash (DC/Ere)) CISF (AC-II ASHOK Kumar) SWJ NSG (SUSHIL KUMAR) (MAD ISITAN BASU) (CAPT SP SINGH SISAG, NSG BPRAP. SZ SAG, NSG) (Balachandran) Ac(T) Werling (DPMIShug NSUB 240) (majesticitye (icrima)) e.c (cite) , Hanvish Bhatt shekhar) (vingy) Ema) ASJ (comm, SSB DEREFF 1734 APPROVED / NOT APPROVED (SHALIN, IPS IGT (PROV) (simardeep Singh) 214 (Mar), Henrsch March PC sharmas DIRECHOR GENERAL BOADER SECURITY FORCE

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