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F.No. P/604/2015(389)/9 x 19 Ball amn/ NSG/Prov.II - 1656 Bharat Sarkar/Government of India

Griha Mantralaya/Ministry of Home Affairs

PM Division/Prov.II

26, Man Singh Road, Jaisalmer House New Delhi. Dated: 18.10.2016

DsG: AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

GC (prov)

Subject :- QRs and Trial Directives of Weapon based single channel TI sight.

The undersigned is directed to say that QRs and Trial Directives of Weapon based single channel TI sight (as per annexure) have been accepted by the competent authority in MHA subject to condition that no deviation will be made from the proposed QRs and Trial Directives without the permission of MHA.

- 2. Henceforth, all the CAPFs should procure the above item strictly as per the laid down Technical Specifications/QRs subject.
- CAPFs concerned will be liable for correctness of the QRs.

Encl: A/a

Yours Faithfully,

(Ram Raj)

Under Secretary to the Govt. of India Tele/Fax: 2338 1278

Copy forwarded for necessary action to:-

The Section Officer (IT), MHA: it is requested to host the QRs (soft copy attached) on the MHA website (under the page of Organizational set up-Police Modernization Division- QRs under A & A items)

Copy to :- DDG, (Procurement), MHA, Jaisalmer House

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QRs OF WEAPON BASED SINGLE CHANNEL TI SIGHT

S/No	Parameter	Specification	
1.	Field of View	Min $8^{\circ}x$ $6^{\circ}(1x)$ optical and provided with optical / digi zoom of $(2x,4x)$ or both.	
2.	Magnification	Ranging between 1x to 4x (Digital Zoom) or better.	
3.	Mount	Sight should be provided with Picatinny Rail arrangement for mounting on Assault Rif (weapon to be specified by the user)	
4.	Mount Locking Mechanism	The Sight should have single or dual, automatic lever locking mechanism for quick attachment and detachment.	
5.	Battery	Lithium ion battery with an endurance of min 6hrs of continuous use. The battery should be able to recharge/discharge for min 300 cycles.	
6.	Detector	Focal plane array 640 x 480 (or better) uncooled with spectral bandwidth of 3 to 5 micrometer or 8 to 14 micrometer.	
7.	Frame Rate	25 FPS or better.	
8.	Non Uniformity Correction	Shutterless Non Uniformity Correction (NUC).	
9.	Display	OLED display with min resolution of 640 x 800 pixels.	
10.	Reticule	 (a) Cross hair with center dot. (b) Reticule pattern with gyration to measure distance & size of tgt. 	
11.	Battery Status Indicator	Low Battery indication shall be provided on the OLED display while operating the sight.	
12.	Battery Charger	A suitable universal AC/DC charger should be provided to charge the battery within four to six hrs. The battery charger shall have the provision to charge one set of batteries simultaneously.	
13.	Weight with battery	1.00 Kg max.	
14.	Operating Temp	-30°C to +55°C	
15.	Storage Temp	-30°C to +65°C	
16.	Environmental Performance	As per JSS-5555/2012 or Mil Std 810F or latest of the series.	
17.	Command & Control	 (a) Autogain/Level (b) Polarity (White Hot/Black Hot) (c) Digital Zoom. (d) Brightness & contrast adjustment. 	
18.	Single man size target detection rg	800 mtr atleast or better.	

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QRs OF WEAPON BASED SINGLE CHANNEL TI SIGHT (Contd...)

=tor		Specification	
S/No	Parameter Single man size target	400 mtr atleast or better.	
19.	recognition rg	(a) Black Hot	
20.	Polarity	(b) White Hot There should be a facility of Azimuth & Elevation	
21.	Adjustment and Zeroing	adjustment in steps of 1 WOA.	
22.	Sight Performance	 (a) Sight should retain Zeronig even and hundred rounds in cyclic rate of fire. (b) Sight should retain zero even after several detact and re-attach. 	
1.050	Packing and Maint.	in the facilitate storage and	
23.	(i) Package	Suitable packing material to facilitate storage and transportation will be provided. The PM should be strong enough to withstand rough handling under operational conditions. Tool and accessories required for zeroing, bore sigh adjustment, routine maint to be provided. An in-situ try for a min of three days to be provided by the vendor. Description, operating instructions, user hand book shall be provided by the firm in both Hindi & English.	
	(ii) Engineering Support Package		
24.	Literature		
25	Other Aspects	(a) Zero forward emission in front of camera. (b) The sight should be complied to EMI/EMC as per Mil Std 461E. (c) TI should be hermetically sealed unit and have the provision for purging nitrogen gas.	

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The second control of	Specification	Trial Directives
Parameter		US ation from a NABL/
ield of View	Min 8°x 6°(1x) optical and provided with optical / digital zoom of (2x,4x) or both.	Firm to submit a certification from a NABI International Accredited lab confirming to ISC 17025 for the same. BOO to check the authentici of the certificate Firm to submit a certification from a NABI ISC 1806 from the ISC 1806
Magnification	better.	International Accredited lab confirming to 130- 17025 for the same. BOO to check the authenticity of the certificate
Mount	arrangement for mounting on Assault (weapon to be specified by the user). The Sight should have single or dual, automatic lever locking mechanism for quick attachment and detachment. Lithium ion battery with an endurance of min	I, To be physically checked by the BOO for fitmer and functional aspects. In Firm to submit a certification from a NABI International Accredited lab confirming to ISC 17025 for the same. BOO to check the authenticity of the certificate. BOO to also check the endurance of the bettery physically.
Mount Locking Mechanism		
Battery		
Detector	Focal plane array 640 x 480 (or better)) (a) The firm should provide datasheet of the
Detector	uncooled with spectral bandwidth of 3 to 5 micrometer or 8 to 14 micrometer.	sensor used. (b) The firm should provide a certificate conformance (COC).
יייי ייייייייייייייייייייייייייייייייי	Mount Mount Locking Mechanism	Min 8°x 6°(1x) optical and provided with optical / digital zoom of (2x,4x) or both. Magnification Ranging between 1x to 4x (Digital Zoom) or better. Sight should be provided with Picatinny Rail arrangement for mounting on Assault Rif (weapon to be specified by the user). The Sight should have single or dual, automatic lever locking mechanism for quick attachment and detachment. Lithium ion battery with an endurance of min 6hrs of continuous use. The battery should be able to recharge/discharge for min 300 cycles. Focal plane array 640 x 480 (or better uncooled with spectral bandwidth of 3 to 5.

		T. M.	Trial Directives
er	Parameter	Specification	(a) The firm should provide datasheet of the sensor
lo 7.	Frame Rate	25 FPS or better.	used. (b) The firm should provide a certificate of conformance (COC). (a) Switch on the sight and connect it to the DVR
8.	Non Uniformity Correction	Shutterless Non Uniformity Correction (NUC).	recording for at least 1 hour. (b) Two indls to move in front of the sight every 10 mins. (c) No physical buttons should be pressed on the sight during this period. The OEM to demonstrate and the same to be physically
10.	Display	OLED display with min resolution of 640 x 800 pixels.	checked by the BOO. To be physically checked by BOO.
11.	Reticule	 (a) Cross hair with center dot. (b) Reticule pattern with gyration to measure distance & size of tgt. 	the abacked by BOO
12.	Battery Status Indicator	provided on the OLED display while operating the sight.	by BOO
13.	Weight with battery	1.00 Kg max.	
14.	Operating Temp	-30°C to +55°C	Accredited lab confirming to 130-17020 for the data to check the authenticity of the certificate to check the authenticity of the certificate NARL / International
15	Storage Temp	-30°C to +65°C	Firm to submit a certification from a year BO Accredited lab confirming to ISO-17025 for the same. BO to check the authenticity of the certificate

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		Consilication	Trial Directives
Ser	Parameter	Specification	Firm to submit a certification from a NABL/ International
No 16.	Environmental Performance	As per JSS-55555/2012 or Mil Std 810F or latest of the series.	Accredited lab confirming to 150-17023 for the same to check the authenticity of the certificate
17.	Command & Control	 (a) Autogain/Level (b) Polarity (White Hot/Black Hot) (c) Digital Zoom. (d) Brightness & contrast 	To be physically checked by BOO.
18.	Single man size	adjustment. 800 mtr atleast or better.	To be physically checked by BOO.
10.	target detection rg	400 mtr atleast or better.	To be physically checked by BOO.
19.	Single man size target recognition	400 mtr atleast of better.	
	rg (a) Black Hot	(a) Black Hot	To be physically checked by BOO.
20.	Polarity	(b) White Hot There should be a facility of Azimuth & Elevation adjustment in steps of 1	To be physically checked by BOO.
21.	Adjustment and Zeroing		
22	 Sight Performance Sight should retain zeroing even after fire of hundred rounds in cyclic rate of fire. 		
		(b) Sight should retain zero everafter several detach and re-attach.	n

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	Downston	Specification	Trial Directives
Ser No	Parameter	Parameter	
23.	Packing and Maint.		2'- he shooked by BOO
	(i) Package	Suitable packing material to facilitate storage and transportation will be provided. The PM should be strong enough to withstand rough handling under operational conditions.	
	(ii) Engineering Support Package	Tool and accessories required for zeroing, bore sight adjustment, routine maint to be provided. An in-situ trg for a min of three days to be provided by the vendor.	
24.	Literature	Description, operating instructions, user hand book shall be provided by the firm in both Hindi & English.	To be physically checked by BOO.

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Ser	Parameter	Specification	Trial Directives
No 25.	Other Aspects	(a) Zero forward emission in front of camera.	
		(b) The sight should be complied to EMI/EMC as per Mil Std 461E.	Firm to submit a certification from a NABL/ International Accredited lab confirming to ISO- 17025 for the same. BOO to check the authenticity of the certificate
		(c) TI should be hermetically sealed unit and have the provision for purging nitrogen gas.	Firm to submit a certification from a NABL International Accredited lab confirming to ISO 17025 for the same. BOO to check the authenticity of the certificate

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Land Cist

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(RC Tayal) DG, NSG HARTINDER BEAME

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