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20096/NS-LMG(II)/TM(LS)/Inf

22 Mar 2023

RESPONSE TO PRE-BID QUERIES FOR TECHNICAL AND COMMERCIAL PROPOSAL FOR PROCUREMENT OF QUANTITY 1,072 NIGHT SIGHT (II) FOR LIGHT MACHINE GUN (LMG)

Dear Sir/Madam,

1. Reference is made to Request for Technical and Commercial Proposal for Procurement of Quantity 1,072 Night Sight (II) for Light Machine Gun (LMG) under Buy (Indian-IDDM) Category uploaded on MoD & Indian Army website on 14 Oct 2022.

2. Response to the pre-bid queries raised by vendors is enclosed as Appendix to this letter (15 pages).

3. Bids to be submitted positively by 1500hr, 13 Apr 2023.

Yours faithfully,

(D K Singh)
Colonel
Director 'C'
Office of ADG Acq Tech (Army)

RESPONSE TO PRE-BID QUERIES ON RFP: PROCUREMENT OF QTY 1,072 NIGHT SIGHT (II) FOR LMG

Ser No	RFP Ref	Question	Response by	Response
M/s Alpha Design Tech. Pvt. Ltd				
1.	Appendix A, Para No 3 **Zeroing**	(a) How many rounds will be provided for reticle zeroing before actual firing.	CD-4	Details of same will be shared during Pre Trial Meeting.
		(b) How many rounds will be fired to check zeroing i.e MPI (Alpha) & MPI (Bravo) ?		
		(c) Will opportunity be given before submission of samples for checking the reticle and zeroing ?		Practice firing can be undertaken by the firm based on the procedure outlined in SOP on Allotment and Utilisation of Proof and Field Firing Ranges by Private Defence Industry. The SOP is available on MoD website. FET is not contingent in any way upon the requested opportunity for range/ammunition.
2.	Appendix A Para No 4 **Reticle Pattern**	(a) To provide this facility of reticle pattern, we require ballistic details of 7.62 x 51 mm bullet. We request you to provide ballistic details.	Inf Dte	Weapon OEM (IWI, Israel) provided ballistic data is encl as Annexure I of the pre-bid response.
		(b) We understand that the reticle should have range estimation markings from 100m to 800m with a 100m interval for Human Target of 1.8m height, kindly clarify.	CD-4	For trials human target of size 170cm-180 cm will be considered.
		(c) Upto what ranges will the firing trials checked for and how many rounds and chances ?		Firing Trials will be carried out uptil the detection range mentioned in 'Appx A' of RFP. The number of rounds and chances will be shared during the Pre- Trials Meeting.
3.	Appendix A Para No 6 (c) **Screen (II Tube)**	(a) The Phosphor, type P-45 is not widely accepted by armies in the world. (b) With this Phosphor, the cost of the Tube goes high, without gain in performance. (c) It is not possible to economically manufacture the Tube with P-45 Phosphor and SNR 25. (d) We recommend use of phosphor, type P-43,	Inf Dte	No change to RFP parameters.

Ser No	RFP Ref	Question	Response by	Response
		which is the Standard Phosphor Type being used Worldwide by the Defense Forces. (e) It may be noted that, Phosphor Type P-43 has Luminosity Curve matching to Human Eye's Luminous Response. Hence is recommended for Human Observers. As the white phosphor Luminosity Curve does not match with Human Eye's Luminous Response, and also contains emissions in the **Blue Wavelengths**, for which the long term affects on the observer's eye are not known. We are attaching Emission Spectrum Curve of Phosphor Type P-45. Army should take the opinion of experts from Army Medical Corps / DRDO, before deciding to introduce the II tubes with white phosphor. (e) As per literature available, "Blue light exposure may increase the risk of macular degeneration. The fact that blue light penetrates all the way to the retina (the inner lining of the back of the eye) is important, because laboratory studies have shown that too much exposure to blue light can damage light- sensitive cells in the retina. This causes changes that resemble those of macular degeneration, which can lead to permanent vision loss. Many eye care providers are concerned that the added blue light exposure from computer screens, smartphones and other digital devices might increase a person's risk of macular degeneration later in life. (f) In view of the above, the phosphor type may be changed to Type P-43.		
4.	Appendix A Para No 06 (k) **Field of View**	Kindly request to accept tolerance of ±10%	Inf Dte	No change to RFP parameters.

Ser No	RFP Ref	Question	Response by	Response
5.	Appendix A Para No 06 (m) **Eye Relief**	Please specify the eye relief distance as this will decide the length of the eye guard in turn the total length of sight?	Inf Dte	Eye Relief should be adequate to enable use of Night Sight while firing without any adverse effect in firer due to recoil of the weapon.
6.	Appendix A Para No 6 (b) **FOM**	BEL being the BNE for II Tubes has confirmed that the FOM which can be provided is 1700 only. Kindly request accept FOM 1700 minimum.	Inf Dte	No change to RFP parameters. No BNE laid down in the instant case.
7.	Appendix A Para No 07 (d) **Focus Adjustment of OG**	Generally for weapon sights the Objective Glass (OG) will be in fixed condition. Kindly request to omit this option.	Inf Dte	Focus adjustment of OG is provided with a self-locking mechanism for the User. Adjusting of focus is required for the maintenance echelons for facilitating repairs.
8.	Appendix A Para No 9 **Battery Status Display**	The battery status is indicated by the reticle illuminator within the sight, the color of the reticle will change when battery status is low. Kindly clarify if this is acceptable.	Inf Dte	Ref Para 8 (c), Appendix 'A' of RFP. Normally, blinking/flickering of reticle takes place depicting low battery status and is clearly distinguishable. The change in colour of the reticle may not be clearly perceivable to a person especially under operational conditions.
9.	Appendix A Para No 13 (b) **Carriage and Transportation**	What are the certifications or tests to be performed on the soft case and hard case for transportation? the same may please be specified.	DGQA	The draft ATP for the soft case & Hard case are attached as Appendix 'A'. The draft ATP is required to be mutually agreed before DGQA evaluation. CoCs should be along with NABL/Govt accredited lab test reports.
M/s Bharat Electronics Limited				
10.	Appendix A Para No 3 (d)	II Tube is the most critical part of the weapon sight. The present acquisition category being "Buy-Indian IDDM" the applicable IC for II Tube may please be mentioned as 50% (Min) which is in-line with indigenous sourcing. The present IC of 30% (Min) for II tube is equivalent to Buy (Global)-Indian vendor.	Acq Tech (Army)	30% IC content is specific to II tube. Overall for the sight 50% IC has been laid down aligned to Buy-Indian IDDM category as per DAP 2020.
11.	Appendix A Para No 6	The applicability of participation of **Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not**	Acq Tech (Army)	Not applicable.

Ser No	RFP Ref	Question	Response by	Response
		permit direct export by OEM) in Buy (Indian-IDDM) cases may please be clarified.		
12.	Part I 7	At which stage of the procurement process, the audit is planned may please be clarified.	Acq Tech (Army)	The MoD can exercise its right to conduct verification with reasonable notice of relevant certifications and costs pertaining to imports for the Contract at all or any stages (tiers) of manufacturing/ production/assembly, starting from the Prime Vendor downwards. Refer Para 10 Appendix B Chapter 1 of DAP 2020.
13.	Part I 7	It is requested that the IC on Night Sight (II) and on II tubes individually may please be mentioned as min 50%. The present IC of 30% (Min) is equivalent to Buy (Global)-Indian vendor.	Acq Tech (Army)	30% IC content is specific to II tube. Overall for the sight, 50% IC has been laid down in line with Buy-Indian IDDM category in DAP 2020.
14.	Part I 8	Year of manufacturing for II tube may please be asked specially to avoid refurbished II tubes.	Acq Tech (Army)	Refer Para 8 Year of Production of RFP.
15.	15&16	PNS being a simple instrument in the operational and maintenance perspective, the training period may be mentioned as below. (a) User training - 2 days per each batch. (b) Maintenance training (Field level) - 2 days per each batch. (c) Maintenance training (Base level) – 6 days per each batch. Maintenance Training may be proposed before despatch of MST/STEs.	HQ TGEME	No Change to RFP parameters.
16.	17	The dependency on imported kits is maximum with the IC of 30% (Min) leading to regulations / restrictions of kits. This also impacts the product.	Acq Tech (Army)	30% IC content is specific to II tube. Overall for the sight, 50% IC has been laid down aligned to Buy-Indian IDDM category as per

Ser No	RFP Ref	Question	Response by	Response
17.	18	If the IC is increased to 50%, the dependency on the importing the kits will be minimized.	Acq Tech (Army)	DAP 2020.
18.	Part II 27	“II Tube Diameter” may please be re-phrased as “Useful Photocathode Diameter of II Tube”.	Inf Dte	As per RFP parameters. No change.
19.	Part II 27	(a) Phosphor Type P-43 has Luminosity Curve matching to Human Eye’s Luminous Response. As per literature available, “ Blue light exposure may increase the risk of macular degeneration. It is not friendly to human eye. (b) Further, The Phosphor, Type P-45 is not widely accepted by armies in the world. With this gain in performance. (c) It is requested to include Screen (II Tube) Phosphor, Type P-43. We recommend use of Phosphor, Type P-43, which is the Standard Phosphor Type being used Worldwide by the Defence Forces.	Inf Dte	No change to RFP parameters.
20.	Part II 27	It is requested to include that the II Tube to be used in the Night Sight, to be compliant to MIL-I-49052F, for all the performance, Environmental and Reliability Parameters, unless otherwise specified in this RFP.	DGQA	For the II Tube parameters as per MIL-I-49052 F, CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports, wherever applicable. All the performance/functional and envt durability test for the Night Sight (II) will be carried out as per the JSS-5855-11-2019 (Rev-1).
21.	Part II 38	It may please be clarified that the IC in Night Sights and II Tube as required in the RFP also applies to the six samples to be provided for evaluation. As also seen in previous recent RFPs for Night Sights, it should also be a condition in this RFP to ensure min IC as stipulated, in the six nos of samples as well.	CD-4	As per Para 21 of Chapter I and Appx D to Chapter II of DAP 2020.

Ser No	RFP Ref	Question	Response by	Response
22.	Part II 39 (b)	To ensure reliability of II tubes, II tubes may please be evaluated under the aegis of DGQA for parameters laid down in the ATP, including for environmental parameters as per Mil Standard, for image quality and other parameters as also stated in the given RFP. The applicable climatic and durability tests are available with DGQA.	DGQA	CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters.
23.	Part II 41	To ensure reliability of II tubes, may please be evaluated under the aegis of DGQA for parameters laid down in the ATP, including for environmental parameters as per Mil Standard, for image quality and other parameters as also stated in the given RFP.		
24.	Appendix A Para No 3 **(Range)**	(a) Range performance to be carried out at under Starlit (Min 1mlux) and Medium Contrast.	CD-4	(i) Range performance will be carried out as per RFP. (ii) The sight should have different contrast level to facilitate iden of tgt.
		(b) To either detect / recognise the target, it is essential to have a moving target. (c) Hence, for Recognition : Single Human walking may please be mentioned.		(i) Detection test be carried out with single human walking at 800m. (ii) Recog test be carried out with single human standing at 600m.
25.	Appendix A Para 7 (d) **Focus adjustment of OG**	(a) Zeroing of the Sight will be done at 100 mtrs. So Focusing of OG is not required as OG will set at Infinity Focus (From 100 meters to Infinity). (b) If it is essential to have focus adjustment in OG, minimum focussing distance may please be mentioned.	Inf Dte	Minimum Focus distance (at infinity focussing): $\leq$ 25 meters.
26.	Appendix A Para 10 **Length of the Night Sight (II)**	May please be specified so as to address the fitment in design stage.	Inf Dte	The Night Sight (II) for 7.62x51mm Light Machine Gun(LMG) will be used by troops to facilitate acquisition and accurate engagement of ***moving and static targets with 7.62x51mm Light Machine Gun***

Ser No	RFP Ref	Question	Response by	Response
				(LMG) without any effect on the functional effectiveness of the weapon or its handling. Arrangement is being made to facilitate access to the weapon to check precise fitment at a military establishment near vendor's location. Weapon handling and live firing can be organised at Infantry School, Mhow.
27.	Appendix A Para 11	Under the aegis of DGQA, separate evaluation for II tubes may please be planned for environmental testing as per Mil 49052 F standards.	DGQA	The applicable standard for testing II tube is as per Mil 49052 F standards. The sight will be tested as per JSS-5855-11-2019 (Rev-1).
28.	Appendix D **Product Support**	(a) With the IC at 30%, there is increased dependency on the foreign suppliers. (b) In order to maintain and provide support, IC may please be fixed at 50% (Min) so that timely product.	ADG Acq Tech (Army)	30% IC content is specific to II tube. Overall for the sight, 50% IC has been laid down aligned to Buy-Indian IDDM category as per DAP 2020.
29.	Appendix E **Trial Methodology**	(a) Please confirm that the trial Equipment (Qty 6) also need to comply to the IC criteria of min. 50% with IDDM on PNS and of min 30% on II Tubes. (b) As also seen in previous recent RFPs for Night Sights, it should also be a condition in this RFP to ensure min IC as stipulated, in the six nos of samples as well.	ADG Acq Tech (Army)	Each vendor is required to submit an undertaking to comply with indigenous design as per Appendix A to Chapter I of DAP 2020. Certificates will be checked during the TEC stage.
30.	Annexure (refer Para 11 (a) & 22 of Appx G of RFP)	In order to ensure reliability of II tubes, the parameters along with climatic and durability tests may please be evaluated under the aegis of DGQA.	DGQA	CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters.

Ser No	RFP Ref	Question	Response by	Response
31.	Appendix J (Refers to Para 6 of RFP)	(a) Considering the complexity and criticality of the II tube, the indigenous supplier or II tube should also be compliant to the Technical criteria stated in Appendix L, and should be a manufacturing entity of II tubes (not a trader) with min. 2 years experience in manufacturing of II tubes. (b) The II tube supplier must have an existing facility for manufacturing, testing and repair of II	ADG Acq Tech (Army) & CD-4	As per RFP. Refer Appendix J Criteria for Vendor Selection/ Pre-Qualification (Refers to Para 6 of RFP). Also refer Para 10 Appendix B Chapter I of DAP 2020.
32	1 (g) **CLIMATIC AND DURABILITY TESTS**	To ensure the reliability of the II Tubes, II Tubes may please be evaluated for environmental parameters as per Mil 49052 F standards by DGQA as per the approved ATPs.	DGQA	CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters.
33	2 (b)	The II tube should also undergo environmental tests for reasons stated above and be checked visually and functionally before and after each environmental test.	DGQA	
MKU Limited				
34	Appendix A to RFP Clause 1	We request the department to kindly specify the contrast between target and background. We suggest that the contrast should be medium to achieve the required ranges.	Inf Dte	As per the design specfications of the vendor within the ambit of RFP.
35	Appendix A to RFP Clause 3	It is requested that the MOA smallest correction and adjustment range be tested by adjustment of reticule, by placing a target at 100 yards. Number of clicks and the range of movement of the reticule on the target placed at 100 yards, to be in accordance to the requirement of the stated parameter. One MOA should correspond to one inch movement at 100 yards or 0.5 MOA should correspond to half inch at 100 yards. Kindly confirm.	Inf Dte	One MOA should correspond to one inch movement at 100 yards.

Ser No	RFP Ref	Question	Response by	Response
36	Appendix A to RFP Clause 6 (g)	We request there should be no restriction on upper limit regarding the system gain. Higher the system gain, better is the image quality and system performance. Kindly amend (**System gain should be minimum 2000 fl/fl**) and confirm.	Inf Dte	As per RFP parameters. No change.
37	Appendix A to RFP Clause 6 (h)	(a) We understand that there is some typographical error and the requirement is for "Mil-PRF-49052F" instead of MIL-STD-49052F. please confirm.	DGQA	Yes; Mil-STD-49052F is correct.
		(b) We request all the parameters related to II Tube be tested in IRDE (DRDO) Lab. This would ensure fairness and transparency in the testing procedure. Kindly confirm.	Acq Tech (Army) & DGQA	CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters.
38	Appendix A to RFP Clause 8 (d)	Please specify the voltage rating of both AC & DC sources.	DGQA / Inf Dte	AC and DC power source input range for charging the batteries are 90 V to 250 V for AC and 12 V to 32 V for DC.
39	Appendix A to RFP Clause 9	In case of Image intensification devices as there is no OLED display, hence Image Intensification NVDs have LED indicator to indicate low battery. We request battery status display be replaced with LED indicator with low battery. Kindly amend and confirm.	Inf Dte	Ref Para 9, Appendix 'A' to RFP. No change to RFP parameters.
TATA Advanced Systems Limited				
40	Appendix A to RFP, Page 22 Point No 6 (g) **System gain**	Here Manual gain adjustment is required? or AGC is OK? Here AGC is the Automatic Gain control, part of the inbuilt feature of the II tube.	Inf Dte	Automatic Gain Control.

Ser No	RFP Ref	Question	Response by	Response
41	Appendix A to RFP, Page 22 Point No 6 (I) **Diopter adjustment**	This range is not sufficient for whose power is beyond ±3D, we recommend the minimum dioptre value should be ±5D.	Inf Dte	As per RFP parameters. No change.
42	Appendix A to RFP, Page 22 Point No 9 **Battery status display**	Is this is required in the instrument as a low battery indication, or it is required in the battery charger as a percentage of charging or full charging indication?	Inf Dte	Low battery indication is required in the weapon sight.
43	Appendix A to RFP, Page 23 Point No 15 EPP	Is there any EPP on Size and weight.	Inf Dte	Nil.
44	Appendix F, Para 1.4.4, Page 47	Please note the final 25% payment and warranty period are linked with completion of JRI and I/C. therefore, kindly confirm the following :- (a) Provide the timeline for JRI after the receipt of stores at consignee location. (b) Whether installation / commissioning of Equipment's & SMT-STE's will be done by seller at consignee location.	DGQA HQ TGEME & RFP Cell	• Timelines for JRI depends upon the Lot size received and the QA checks to be carried out as per mutually agreed ATP. Timeline for JRI at consignee location will be provided by COD/DGOS. • Ref Pt (vii) of Annexure II to Appendix D of RFP.
45	Appendix F, Para 1.4.6, Page 48 Appendix G Notes, Page 63	As we do not have any control on taxes & duties levied by the Govt. Hence any increase or decrease in the taxes should be on account of the Buyer at actuals. Please confirm.	Acq Tech (Army) & MGS Budget (PCM)	Refer Note to Appendix G Price Bid Format Any increment/ decrease in tax structure on account of Buyer's govt will be reimbursed as difference to taxes as quoted by the seller/ actuals whichever is lower.
46	Appendix G Para 1,3 Page 61	Is Night Sight (II) for LMG exempt from custom duty under existing customs notifications? Kindly confirm.	Acq Tech (Army) & MGS Budget (PCM)	As per extant customs notification of GoI. Ref Dept of Expdr Notification No 19/2019.

Ser No	RFP Ref	Question	Response by	Response
Additional Queries raised by M/s Reliance Defence Limited during Pre Bid Meeting				
47.	Para 3, Sub-Para 3(d), Page No. 2 Minimum IC Content required	(i) Please clarify what is meant by "Source of II tube will be Indigenous?" As per our understanding, II tubes are currently being made in India by BELOP. Does it mean that all companies will source the II tubes from BELOP only or procurement from other sources meeting the 30% IC is permissible? (ii) As minimum 30% IC in II tube is mandatory, please clarify the mechanism to validate this content on II tube being sourced locally. (iii) We were being provided the yearly price list of II tubes being produced by BELOP. It is requested that price list for current FY 22 – 23 be shared in order to ensure cost parity to all participating companies.	ADG Acqn Tech (Army)	30% IC content is specific to II tube. Overall for the sight 50% IC has been laid down aligned to Buy-Indian IDDM category as per DAP 2020. No BNE laid down in the instant case.
48	Part I, Para 8, Page No. 8 Year of Production	Please clarify how this parameter would be validated on sights with refurbished II tubes fielded for the program.	DGQA	• CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters. • Deterioration Rate of FOM will be acceptable as per International Standards and will be evaluated as per MIL STD 49052F and as per various evaluation procedures given out in DAP 2020 during FET, PDI, JRI and production stage QA, if required.

Ser No	RFP Ref	Question	Response by	Response
49	Para No. 17, Page No. 10, Government Regulations	(i) As there is a min. of only 30% IC in the II tubes, there will be a need to import modules/ kits of II tubes. Some of the sources for procurement of II tubes or its parts are from countries like Russia, France, Netherlands, and United States. The export of II tubes from such countries is controlled and at times subject to audit. It may please be confirmed if post clearance of audit (End Use Control) whether import of II tubes of its parts from these countries into India is acceptable? (ii) II tubes and its parts are also manufactured in China. It may please be specified whether II tubes or its kits/ modules/ components are permitted to be imported from China? If not, then please share what measures shall be taken to ensure that no vendor offers Chinese origin II tubes or modules/ components directly sourced from China, or routed through some other countries, to have a price advantage.	ADG Acqn Tech (Army)	• End User is Indian Armed Forces as per para 7 of Appx A of Chapter II of DAP 2020. • 30% IC content is specific to II tube. Overall for the sight 50% IC has been laid down aligned to Buy-Indian IDDM category as per DAP 2020. • Any import restrictions in this regard will be guided by the Policies of government of India. Ref Department of Expenditure letter no F.18/37/2020-PPD dated 08 Feb 2021.
50	Part II, Para 39, Sub – Para(b), Page No. 15 Technical Trials	In order to ensure reliability of II tubes to the maximum extent possible, it is important to test the II tubes separately also for all the listed parameters and subjected to MET Evaluation. This will help establish to a large extent if the II tube or its components are refurbished or from the grey market. Please clarify upon the following:- (i) What methodology and range of tests will be used to calculate the deterioration rate of II tube? (ii) How much deterioration rate of FoM is acceptable (yearly) in terms of percentage loss for II tubes for achieving 10,000 hours of operation or 10 years, whichever is earlier?	DGQA TGEME	CoC is generally obtained from OEM for II tube Parameters alongwith NABL/Govt accredited lab test reports. Functional, Climatic & durability tests are carried out as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will also be trial evaluated during the FET as per Trial Directive for all technical and operational parameters Deterioration Rate of FOM will be acceptable as per International Standards and will be evaluated as per MIL STD 49052F and as per various evaluation procedures given out in DAP 2020

Ser No	RFP Ref	Question	Response by	Response
51	Appendix A, Para 6, Sub-Para(f), Page No. 21 "High Light Resolution	We are in a position to supply the PNS having II tube with a min. High Light Resolution 55 lp/mm. The High Light Resolution plays a key role in operational scenarios, giving advantage to the end user compared to its adversaries while also protecting the eyes of the soldier when exposed to sudden high light levels. Please clarify whether price preference in form of EPP can be awarded.	Inf Dte	As per RFP parameters. No change.
52	Appendix F, Page No. 27 Product Support"	The II tube is the most critical, costly and complex component of the PNS. It is important that the II tube supplier also has indigenous repair, maintenance and testing capability (upto component level). The facility infrastructure will cater to provide Life Cycle Support for repair, maintenance, service and testing of II sights and tubes. Please clarify whether this would also constitute towards meeting the 30% IC in II tubes?	ADG Acqn Tech (Army) / TG EME	As per RFP and provisions DAP-2020.
53	Annexure (Refer Para 9 of Appx E of RFP), Page No. 41 "BROAD TRIAL PLAN	In order to ensure reliability of II tubes to the maximum extent possible, it is important to test the II tubes separately also for all the listed parameters. This will help in establishing to a large extent if the II tube or its components are refurbished or from the grey market. DGQA as well as MET evaluation can be undertaken as during MET individual part and assembly it can be physically checked and origin confirmed. Please clarify upon the following:- (i) What methodology and range of tests will be used to calculate the deterioration rate of II tube? (ii) How much deterioration rate of of percentage loss for II tubes for achieving 10,000 hours of operation or 10 years, whichever is earlier?	CD-4 DGQA	• CoC from Vendor supported with OEM Certificate for II tube parameters along with NABL/ Govt accredited lab test reports. CoC should also support Functional, Climatic & Durability tests as per relevant table of JSS-5855-11-2019 (Rev-1). The EUT will be trial evaluated during the FET as per Trial Directive for all technical and operational parameters. • Deterioration Rate of FOM will be acceptable as per International Standards and will be evaluated as per MIL STD 49052F and as per various evaluation procedures given out in DAP 2020 during FET, PDI, JRI and production stage QA, if required.

Ser No	RFP Ref	Question	Response by	Response
54	Appendix A, Para 8(d), Page No. 22	What is the value of DC voltage at which the charger will be used to charge the batteries?	DGQA	It depends upon the type of battery and battery charger offered by the vendor and same will be verified during trials. Generally II Tube works in 3±0.3 VDC, as such the vendor accordingly shall provide the battery along with the charger.
55	Appendix A, Para 8(e), Page No. 23	As per this Para, the sight should also function with 'Commercially Available Batteries'. Our sight uses the rechargeable batteries which are commercially available. Hence, we understand that there is no need for the sight to function with any additional commercially available batteries. Please confirm.	Inf Dte\ DGQA	As per Para 8, Appx A of RFP, the sight should be able to function with removable rechargeable commercially available battery.
56	Appendix A, Para 9, Page No. 23	Our sight shows low battery status by the blinking of reticle. Please clarify whether any rate for blinking is desired?	Inf Dte	It should be clearly perceivable by person with normal vision.
57	Appendix A, Para 10, Page No. 23	Please clarify whether the length and weight of the sight be measured with OG and Eye guard?	Inf Dte	Length and weight of Night Sight will be measured without Dust Cap/ OG Cover and Eye Guard.

7.62x51mm.NATO NEGEV 508mmBARREL				
Range	Velocity	Angle of Departure	modified Angle	Vertix Height
[m]	[m/s]	[Milrad]	[Milrad]	[cm]
0	816	0	0	-4.8
25	797	0.19	2.11	2
50	779	0.38	1.34	8
100	743	0.78	1.26	16
150	708	1.22	1.54	20
170	694	1.40	1.68	20
200	673	1.68	1.92	19
250	640	2.17	2.36	12
300	607	2.70	2.86	0
400	544	3.88	4.00	-46
500	485	5.25	5.35	-124
600	429	6.86	6.94	-245
700	377	8.78	8.85	-420
800	328	11.09	11.15	-664
900	282	13.91	13.97	-1000
1000	240	17.42	17.46	-1461

K=	0.000457918	[1/m]

Appendix

STORAGE CASE (SOFT CASE) NIGHT SIGHT (II) FOR 7.62MM LMG

Sl No	Tests	
1.	**Visual Inspection:** Loose/missing/damage components. No deterioration of Rubber & foam (if applicable) Cat/Part/SN No. Nomenclature Finish & Workmanship	
2.	(a) Dimensions (LxWxH) : As per OEM Drawing (b) Weight : As per OEM	
3.	**Functional tests:** Fitment of sight	
4.	**Water proof:** Cloth of Soft case should be water proof **(OEM CoC)**	

STORAGE CASE (HARD CASE) NIGHT SIGHT (II) FOR 7.62MM LMG

Sl No	Tests With Specified Value (AS PER JSS: 5855-11: 2019):	
1.	**Visual Inspection:** Loose/missing/damage components . Cat/Part No. Nomenclature, Regd No, Year of supply, Mfg initial etc. Finish & Workmanship Gluing of foam/rubber cord etc. Engraving /marking Correctness of name plate. No deterioration of rubber & foam.	
2.	(a) Dimensions (LxWxH) -- as per OEM drawing (b) Weight -- as per OEM	
3.	**Functional tests:** Fitment of sight Fitment of accessories and spares of sight Function of locking system and handles.	
Climatic & Environmental Tests (AS PER JSS: 5855-11: 2019)		
(i)	**Dry Heat Test:** +70º C ±3º C for 16 hrs	
(ii)	**Low Temp Test:** - 40º C ±3º C for 16 hrs	
(iii)	**Drop Test:** Dropped from a height of 150 cm (1.5 mtrs) in hard case on test platform containing a layer of river sand bed 15 cm thick and covered with thin cloth. Once on each face.	
(iv)	**Rain Test :** Spraying for 01 hrs at room temperature on all external surfaces with water at pressure 200 Kpa ± 15 % , no ingress of water is permitted.	