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No. P-63013/02/2013-Ord/BSF/  
Government of India  
Ministry of Home Affairs  
Directorate General Border Security Force  
(Prov Dte : Mod Cell)  
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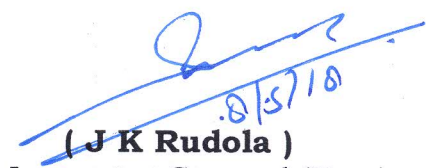
Dated, the 8<sup>th</sup> May 2018

1. DIG (Prov)  
HQ CRPF, SSB, ITBP & CISF
2. DIG (Prov)  
HQ DG NSG, Mehram Nagar,  
Near Domestic Airport, Palam,  
New Delhi-110037
3. DIG (Prov)  
AR (Through LoAR)

**Sub : Forwarding of QRs and TDs of Laser Illuminator**

I have been directed to forward herewith QRs and Trial Directives of "Laser Illuminator" as per appendix-'A' and 'B' duly formulated & finalized by Sub-group of technical experts and approved by DG BSF for your information and necessary action please.

**Encl** :- As above

  
( J K Rudola )

Dy. Inspector General (Prov)

**Copy to:-**

- |                                   |   |
|-----------------------------------|---|
| 1. DS (Prov), PM Division,<br>MHA | For information with a request to host the above QRs and TDs on MHA website please. |
| 2. IT Cell,<br>FHQ BSF, New Delhi | For information with a request to host the above QRs and TDs on BSF website please. |

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**DIRECTOR GENERAL BORDER SECURITY FORCE**  
**(PROVISIONING DIRECTORATE (Mod Cell))**

The Sub-group of Technical Experts constituted by MHA vide their letter No. IV-24011/12/2011-Prov-I dated 13 Jun 2012, No. IV-24011/12/2011-Prov-I dated 28 Dec 2012 & UO No. IV-24011/12/2011-Prov-I- 350 dated 27 Jun 2013 held its meeting at BSF Headquarters on 30<sup>th</sup> March 2017 to rectify the observation raised by MHA vide their UO No. P-63011/02/2013-Ord/BSF/MHA Prov.II/1914 dated 23<sup>rd</sup> Dec 2016 on the draft QRs of 'LASER ILLUMINATOR'.

After detail deliberations the referred Sub-group has finalized the QRs of 'LASER ILLUMINATOR' as under:-

**QUALITATIVE REQUIREMENTS OF LASER ILLUMINATOR**

S. No.	Parameter	Specification
1	Size	Should not exceed :- L- 155 mm, H- 80 mm (including fitment) W- 50 mm
2	Weight	Should not exceed 300 g inclusive of battery.
3	Range	Minimum range in IR illumination mode is 300 Mtr.
4	Power source	Rechargeable cells.
5	Life of battery	Minimum 3 hours continuous operation at the power output mentioned at Srl. No. 7.
6	Battery	Battery should be commercially available.
7	Output power	Should be 60mW maximum.
8	Beam wavelength	It should be invisible, infrared and class 1 eye safe.
9	Nominal ocular hazard distance	At minimum and maximum divergence should be 0.00.
10	Mode of operation	Should have the facility of IR illumination mode with adjustable Zoom lens enabling illuminator operation mode with a widely variable beam divergence of minimum 6 to 10 degree or better.
11	Mounting	Should be compatible with weapons like 5.56 INSAS, 7.62 mm, AK Series, 9 mm & MP 5 etc. through picatinny rail/adaptor on weapon.
12	Features	Must have the following:
		(i) Convenient switch for operation.
		(ii) Power-on indicator LED.
		(iii) Should comply with Mil Std 810-G and IP65 or better.
		(iv) Optional beam flashing configuration.

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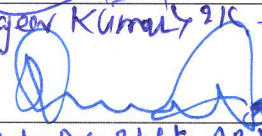
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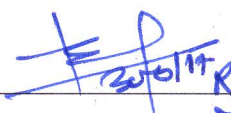

		(v)	IR illuminator must be compatible with night vision devices which are in use with security forces and enhance the viewing distance when used in combination.
		(vi)	There must be a heat sink for dissipation of heat when the IR illuminator is used for longer time in operations.
13	Engineering Support Package	The manufacturer of the device should provide Engineering Support Package including :-	
		(a)	Technical Literature in English.
		(b)	Training Manual and User Hand Book.
		(c)	Cleaning Kit.
		(d)	List of Special Tool Equipment/Special Maintenance Instruments/Test Jigs & fixtures for :-
		(i)	Repair and testing of main equipment at field level.
		(ii)	List of spares for four year for field level, base level repairs and spares backup must be assured for at least 10 years.
		(iii)	Training aids-charts, slides, training brochure blow u diagram, video film and CDs.

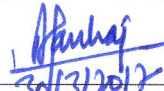
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Rajeev Kumar, SIC, SIW ASF  
  
CNb. Sub. D.S. Bishit, AR)


  
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Srikant R., Insp. JFBP)

  
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Abhisambhanaj,  
DC CRPF

  
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Asi/Rm S. K. Singh

RECOMMENDED/ NOT RECOMMENDED

  
(K K SHARMA) IPS  
DIRECTOR GENERAL  
BORDER SECURITY FORCE

## TRIAL DIRECTIVE FOR LASER ILLUMINATOR

S No	PARAMETERS	Trial procedure suggested for Board of Officers	Result expected / desired	Complied / Not Complied
1.	Size : Should not exceed L-155 mm, H-80 mm (including fitment), W- 50 mm	Measure the dimensions of the Laser Illuminator with the help of measuring tape / scale.	Should not exceed L-155 mm, H-80 mm (including fitment), W- 50 mm	
2.	Weight: Should not exceed 300 gms inclusive of battery.	Measure the weight of the Laser Illuminator with the help of weighing machine.	The weight of the Laser Illuminator should not exceed 300 Gms inclusive of battery.	
3.	Range: Minimum range in IR illumination mode is 300 Mtr.	Switch 'ON' the Laser Illuminator in illumination mode and observe the area with the help of a night vision device along the direction of illumination up to a distance of 300 meters.	The Laser beam must be capable to illuminate the area of 300 meters minimum in illumination mode.	
4.	Power source: Rechargeable cells	To be physically checked by the BOO.	The system must function on rechargeable cells.	
5.	Life of battery: Minimum 3 hours continuous operation at the power output mentioned at Srl No. 7.	<ul style="list-style-type: none"> <li>➤ Switch 'ON' the equipment on cells provided with maximum power output of the equipment, continuously and note down the run time.</li> <li>➤ Again switch 'ON' the system on fully charged rechargeable cells with maximum power out and note down the time of</li> </ul>	The battery provided must be able to run the equipment continuously, for minimum 3 hours with maximum power output of the equipment.	

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		continuous run.		
6.	Battery: Battery Should be commercially available.	OEM to produce its certificate in this regard	OEM to produce its certificate in this regard	The Battery should be commercially available.
7.	Output power: Should be 60 mW maximum.	Firm to produce OEM certificate in this regard	Firm to produce OEM certificate in this regard	The out-put power must be upto 60 mW maximum.
8.	Beam wavelength: It should be invisible, infra-red & class 1 Eye safe.	Check the National / International accredited lab certificate / report submitted by the firm in respect of beam wavelength and class 1 eye-safe.	Check the National / International accredited lab certificate / report submitted by the firm in respect of beam wavelength and class 1 eye-safe.	The National/International accredited certificate/report must confirm the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.
9.	Nominal ocular hazard distance : At minimum and maximum divergence should be 0.00.	An OEM certificate/report confirming the same to be produced by the firms	An OEM certificate/report confirming the same to be produced by the firms	The OEM certificate/report must confirm the same.
10.	Mode of operation: Should have the facility of IR illumination mode with adjustable zoom lens enabling illuminator operation mode with a widely variable beam divergence of minimum 6 to 10 degree or better.	<ul style="list-style-type: none"> <li>➤ Check the system for the modes with adjustable zoom lens.</li> <li>➤ Check the Laser beam divergence angle in illumination mode in the SIW Lab.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The system must have facility of illumination mode with adjustable zoom lens.</li> <li>➤ The beam must have widely variable beam divergence of minimum 6 to 10 degrees or better.</li> </ul>	
11.	Mounting: Should be compatible with weapons like 5.56 INSAS, 7.62 MM, AK Series, 9 mm & MP 5 etc through picatinny rail/adapter on weapon.	Check the system for compatibility to mount it with picatinny rail/adapter on weapon.	Check the system for compatibility to mount it with picatinny rail/adapter on weapon.	Equipment/system should be easily mountable on weapon through picatinny rail/adapter.
12.	Features: Must have the following: (i) Convenient switch for operation.  (ii) Power-on indicator LED	<ul style="list-style-type: none"> <li>(i) BOO to physically check, convenient switch for operation.</li> <li>(ii) BOO to physically</li> </ul>	<ul style="list-style-type: none"> <li>• The system should have Convenient switch for operation.</li> <li>• The system should have</li> </ul>	

(ii) Power-on indicator LED

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<p>(iii) Should comply with Mil Std 810-G and IP 65 or better.</p> <p>(iv) Optional beam flashing configuration</p> <p>(v) IR illuminator must be compatible with night vision devices which are in use with security forces and enhance the viewing distance when used in combination.</p> <p>(vi) There must be a heat sink for dissipation of heat when the IR illuminator is used for longer time in operations.</p>	<p>check, Power-On indicator LED.</p> <p>(iii) The firm should submit National/International lab accredited / report in respect of Mil Std 810G and IP-65 or better.</p> <p>(iv) BOO to physically check, Optional beam flashing configuration.</p> <p>(v) The compatibility of IR illuminator shall be physically checked with the NVDs, in service with the user organization.</p> <p>(vi) A system for dissipation of heat, arising out of prolonged use of device, should be there so that the device does not get heated up and this should be physically checked by the BOO.</p>	<p>Power ON indication LED.</p> <p>System must confirm to Mil Std 810G &amp; IP 65 or better. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab</p> <ul style="list-style-type: none"> <li>System should have Optional beam flashing configuration.</li> </ul> <p>IR illuminator must be compatible with night vision devices which are in use with security forces and enhance the viewing distance when used in combination.</p> <p>There must be a heat sink for dissipation of heat when the IR illuminator is used for longer time in operations</p>
<p>(iii) Should comply with Mil Std 810-G and IP 65 or better.</p> <p>(iv) Optional beam flashing configuration</p> <p>(v) IR illuminator must be compatible with night vision devices which are in use with security forces and enhance the viewing distance when used in combination.</p> <p>(vi) There must be a heat sink for dissipation of heat when the IR illuminator is used for longer time in operations.</p>	<p>check, Power-On indicator LED.</p> <p>(iii) The firm should submit National/International lab accredited / report in respect of Mil Std 810G and IP-65 or better.</p> <p>(iv) BOO to physically check, Optional beam flashing configuration.</p> <p>(v) The compatibility of IR illuminator shall be physically checked with the NVDs, in service with the user organization.</p> <p>(vi) A system for dissipation of heat, arising out of prolonged use of device, should be there so that the device does not get heated up and this should be physically checked by the BOO.</p>	<p>Power ON indication LED.</p> <p>System must confirm to Mil Std 810G &amp; IP 65 or better. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab</p> <ul style="list-style-type: none"> <li>System should have Optional beam flashing configuration.</li> </ul> <p>IR illuminator must be compatible with night vision devices which are in use with security forces and enhance the viewing distance when used in combination.</p> <p>There must be a heat sink for dissipation of heat when the IR illuminator is used for longer time in operations</p>
<p>13. Engineering Support Package: The manufacturer of the device should provide Engineering Support Package including :- (a) Technical Literature in English (b) Training Manual and User Hand Book (c) Cleaning Kit</p>	<p>The firm should submit assurance certificate for the Engineering Support Package contents with details of the concerned parts / lists.</p>	<p>Assurance certificate must confirm the each and every sub-Para details of the QRs Para 11.</p>

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(d) List of Special Equipment/Special Maintenance Instruments/Test Jigs & fixtures for :-  
 (i) Repair and testing of main equipment at field level.  
 (ii) List of spares for four year for field level base level repairs and spares backup must be assured for at least 10 years.  
 (iii) Training aids-charts, slides, training brochure blow u diagram, video film and CDs.

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 Rajat Kumar D.S. Siv Dst  
 (Nb. sub. D.S. Sivast, AR)

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 R K MEEL  
 DC, CIST  
 (Mhuranam Lambay)  
 DC, CRPF

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 SHEKHAJ K. SINGHA  
 (Asst. COMOF, SSB)  
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 (Asst. RM S. K. Singh)  
 BSSF

30/3/17  
 (Srikanth .R., ampr., ITRP.)

RECOMMENDED / NOT RECOMMENDED

(K K SHARMA) IPS  
 DIRECTOR GENERAL  
 BORDER SECURITY FORCE