

संख्या. पी-63013/26/2020/मोड-1/सीसुबल 2058-68
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 4 सितम्बर 2020

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 पुनः सूत्रीकरण किए एवं महानिदेशक सीमा सुरक्षा बल द्वारा पुनः अनुमोदित “**Hand Held Search Light**” के गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलग्न : उपरोक्तनुसार

(सतीश चन्द्र बुडाकोटी)

उप महानिरीक्षक (रसद) 4/9/2020

प्रतिलिपि :-

1. तकनीकी निदेशक
The Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र,
नोर्थ ब्लॉक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi
(द्वारा ई-मेल)
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mpsugandhi@nic.in)
 2. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address:
soit@nic.in)
 3. तकनीकी विंग, सीमा सुरक्षा बल
 4. रसद निदेशालय: आयुद्ध अनुभाग
- : आपसे अनुरोध है कि Hand Held Search Light के गुणात्मक आवश्यकता /परीक्षण निर्देशों को गृह मंत्रालय की वेबसाइट (पुलिस आधुनिकीकरण विभाग-गुणात्मक आवश्यकता) पर अपलोड करने का श्रम करें।
- : आपसे अनुरोध है कि Hand Held Search Light के गुणात्मक आवश्यकता /परीक्षण निर्देशों को गृह मंत्रालय की वेबसाइट (पुलिस आधुनिकीकरण विभाग-गुणात्मक आवश्यकता) पर अपलोड करने का श्रम करें।
- : आपसे अनुरोध है कि Hand Held Search Light के गुणात्मक आवश्यकता /परीक्षण निर्देशों को सीमा सुरक्षा बल की वेबसाइट पर अपलोड करने का श्रम करें।
- : आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु।

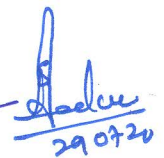
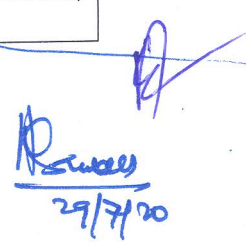
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REVISION OF QUALITATIVE REQUIREMENT OF HAND HELD SEARCH LIGHT (HHSL)

S.No.	Specification	Parameter
1.	Casing/Body	Casing/body of HHSL should be tubular heavy duty water resistant (IP65 or better). It should be light, impact proof and corrosion proof should be able to withstand impact from one meter on hard surface.
	a Maximum weight including the battery	Upto 02 Kg (max) including battery.
2.	Construction	
	a	Modular construction consisting of replaceable modules for ease of servicing/repairs.
	b	The lamp/LED module shall be replaceable at the user facility.
	c	The battery and electronic circuit shall be replaceable at the user facility.
	d	Colour of the casing should be preferably black or olive green or as per the user requirement.
	e	Makers name shall be clearly printed on the body of the cabinet. (Optional)
3.	Operating Temperature	Equipment shall be able to operate satisfactorily in the following temperature range with 95% RH at 40° C :- a) -20° C to 55° C b) -40° C to 55° C (To be decided by the user department at the time of indent)
4	Battery	Rechargeable battery to give minimum continuous operation of 120 minute or better in Maximum/full illumination mode and must be easily available in the market.
5	Housing of Battery	
	a	Housing for the battery should be provided in the cabinet/casing of equipment.
	b	The battery must be protected from over charging either by auto cut facility or by presence of a battery fuse with ease of replacement.
	c	Electronics should not be in direct contact with body of the battery.
	d	The housing is such that the battery could be replaced easily.
6	Circuit	
	a	Glass epoxy PCB.
	b	Electronic component nomenclature should not erase with the use.
	c	Wires should be of heavy duty.
	d	PCB should be easily removable for repairs/replaceable.
	e	Moulded modules should not be sealed at any stage.
	f	Electronic circuits should not be sealed at any stage.
	g	All circuit in a single PCB.
7	Switches/Selector	Suitable control for On/Off and function like flasher, dimmer and timer.





	Single selection switch for all following modes:- a) Maximum/full illumination mode b) Minimum 2 positions for dimmer to extend battery life to 3 and 5 hrs respectively. c) Flasher to give min 45 flashes (± 5) flashes as per minute. d) Timer 01 minute (The light will automatically cut off after 01 minute) e) Remote control (As an option to be specified by the user)	
8	Battery Status	There must be LED indication for:- i) Full battery charge ii) Low battery charge iii) Battery charging
9	Beam Distance/Range:- (In clear weather on levelled ground and in starlit condition)	i) High beam- 300 Mtrs ii) Low beam- 150 Mtrs (To be decided by the user department as per their requirement at the time of indent).
10.	Reflector	Parabolic reflector mounted in shock resistance cap.
11.	Front Glass	The glass should be of a good quality and should be heat and shock resistant. It should not crack when water droplets fall on it when used continuously.
12.	Shoulder Straps	Adjustable shoulder strap.
13.	Battery Charger	
	a	3 meter long power cord fitted with suitable adaptor which can easily fit with charging socket of the search light.
	b	Input voltages 90 to 270 volts, 50 HZ single phase AC.
	c	Charging time maximum 04 hrs for initial/first time charge or for fully discharged battery.
	d	Adequate protection shall be provided against short circuit, bty over charge, bty deep discharge and reverse polarity.
	e	HHSL must operate in all modes minimum upto 10 minutes or more after low battery indication and battery cut off.
	f	An auto cut feature to prevent the battery from over charging.
14	Resting Support	Should have provisions to facilitate stability on a flat surface.
15	OPTIONAL ACCESSORY (To be decided by the user)	
	a	Remote Control
	(i)	The transmitter should work on 9V/12V battery.
	(ii)	Dimension of Tx Unit :- 80 mm x 50 mm x 20 mm (± 10 mm)
	(iii)	Range minimum 100 meters.
	b	IR Filter :- Should have IR filter which can be attached or detached with ease. IR collar should be able to jack on the Hand Held Search Light.
	c	Specification of Wired Control :-
	(i)	Length of the cord 100 meters minimum
	(ii)	Cord shall be spooled on a plastic or metallic reel having knob for spooling and mounted in a powder coated metal frame.
	d	One spare battery.
	e	PCB.
16	a	User manual with operational instructions etc should be provided with each equipment.
	b	Technical manual including schematic diagram and spare parts list

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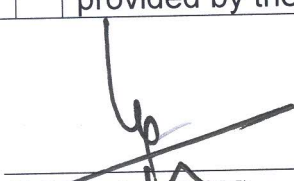
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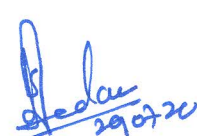
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	should be provided (Qty as specified by the user).
c	Battery life should be 18 months (Minimum)
d	Training on repair and maintenance of the equipment to be given by the firm. (Duration and number of trainees to be decided by the user department as per their requirement at the time of indent)
e	Spare parts- Backup of all spare parts of the equipment should be provided by the firm for a period of minimum 07 years.


(S S Chahal, VSM),
ADG (Log), BSF


(S C Yadav), DIG
SIW BSF


(T N S Reddy), Comdt
Prov-Ord, FHQ BSF


(R K Meel), DC
CISF

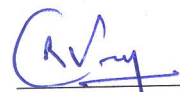

(A P Singh), DC
SIW BSF


(Lt Col Harish Chander)
Assam Rifles


(Dr. A Mukherjee), PSO (LS)
BPR&D


(Lalit Kumar), AC
SSB


(Insp/T Birendra Yadav)
ITBP


(SI/RM R S Rawat)
BSF

Approved/Not approved



Director General
Border Security Force

QUALITATIVE REQUIREMENTS AND TRIAL DIRECTIVES OF HAND HELD SEARCH LIGHT (HHSL)

S. No.	PARAMETERS	TRIAL PROCEDURE SUGGESTED FOR BOARD OF OFFICERS	RESULT EXCEPTED/DESIRED	COMPLIED/ NOT COMPLIED
1	Casing/Body :- Casing/body of HHSL should be tubular heavy duty water resistant (IP65 or better). It should be light, impact proof and corrosion proof should be able to withstand impact from one meter on hard surface. a Maximum weight including the battery : upto 02 Kg (max) including battery.	Should be checked physically. Drop the search light from the height of 1 meter on hard surface to check its sturdiness. Firm has to submit Government, national/ International accredited lab certificate in respect of the same. Measure the weight including the battery with the help of weighing machine.	The casing/body must be as per the requirements mentioned in the QRs. Weight of HHSL must be upto 02 kg including the battery.	
2.	Construction :- a Modular construction consisting of replaceable modules for ease of servicing/repairs. b The lamp/LED module shall be replaceable at the user facility. c The battery and electronic circuit shall be replaceable at the user facility. d Colour of the casing should be preferably black or olive green or as per the user requirement. e Makers name shall be clearly printed on the body of the cabinet. (Optional)	Check the equipment physically to ascertain the replaceable modules for ease of servicing/repairs. Should be checked physically whether the lamp shall be replaceable by unscrewing the front cover. Should be checked physically whether the battery and blown fuses can be replaced without disturbing electronic circuit. Should be checked physically by the BOO. Should be checked physically by the BOO.	Should be a modular construction consisting of replaceable modules for ease of servicing/repairs. The lamp must be replaceable by unscrewing the front cover. The battery and blown fuses must be replaced without disturbing electronic circuit. Colour of casing must be as per the requirements mentioned in the QRs. Makers name must be clearly printed on the body of the cabinet.	
3	Operating Temperature: Equipment shall be able to	Firm has to submit Government,	Must comply to	

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367

	operate satisfactorily in the following temperature range with 95% RH at 40°C :- a) -20°C to 55°C b) -40°C to 55°C (To be decided by the user department at the time of indent)	national/ International accredited lab certificate in respect of the same.	specification given at Srl No. 03.	
4	Rechargeable battery to give minimum continuous operation of 120 minute or better in Maximum/full illumination mode and must be easily available in the market.	Should be checked physically by the BOO.	The battery must give minimum continuous operation of 120 minute or better in direct light mode and must be easily available in the market.	
5	HOUSING OF BATTERY			
a	Housing for the battery should be provided in the cabinet/casing of equipment.	Should be checked physically by the BOO.	Housing for the battery must be provided in the cabinet/casing of equipment.	
b	The battery must be protected from over charging either by auto cut facility or by presence of a battery fuse with ease of replacement.	Should be checked physically by the BOO.	The battery fuse must be easily accessible from outside for ease of replacement.	
c	Electronics should not be in direct contact with body of the battery.	Should be checked physically by the BOO.	Electronic must not be in direct contact with body of the battery.	
d	The housing is such that the battery could be replaced easily.	Should be checked physically by the BOO by replacing batteries.	The housing is such that the battery must be replaced easily.	
06	Circuit			
a	Glass epoxy PCB.	Should be checked physically by the BOO.	The PCB must be made of Glass epoxy.	
b	Electronic component nomenclature should not erase with the use.	Firm has to submit Government, national/ International accredited lab certificate in respect of the same.	Must comply to specification given at Srl No. 6 (b).	
c	Wires should be of heavy duty.	Should be checked physically by the BOO. Firm has to submit	Must comply to specification given at Srl	

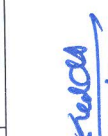
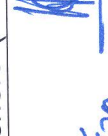
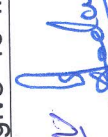






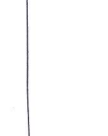

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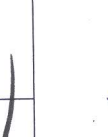
		Government, national/ International accredited lab certificate in respect of the same.	No. 6 (c).	
07	d	PCB should be easily removable for repairs/replaceable.	PCB must be easily removable for repairs.	
	e	Moulded modules should not be sealed at any stage.	Moulded modules must not be used at any stage.	
	f	Electronic circuits should not be sealed at any stage.	Electronic circuits must not be sealed at any stage.	
	g	All circuit in a single PCB.	All circuits must be in a single PCB.	
07	Switches/Select or	Suitable control for ON/OFF and function like flasher, dimmer and timer	Suitable control for ON/OFF and function like flasher, dimmer and timer must be complied.	
		Single rotary selector for all the following modes :-		
	a	Maximum/full illumination mode	Single rotary selector switch must have a position for 'continuous/direct light' mode	
	b	Minimum 2 positions for dimmer to extend battery life to 3 and 5 hrs respectively.	Single rotary selector switch must have minimum two positions for 'dimmer' function. Battery must operate the search light for minimum 2 hrs continuously in dimmer 1 position & 5 hrs continuously in dimmer 2 positions respectively.	
c	Flasher to give min 45 flashes (±5) flashes) per minute.		Single rotary selector switch must have position for 'flasher' function flasher must give 45 flashers (± 2	



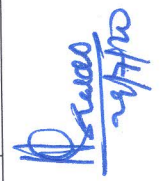
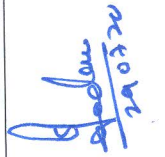
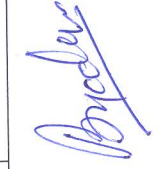
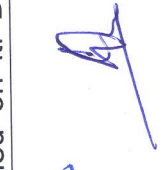
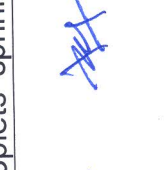
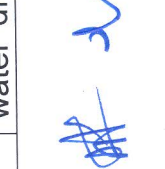
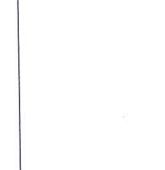
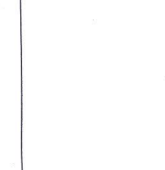
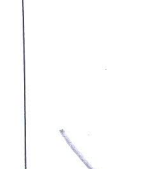
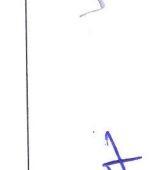




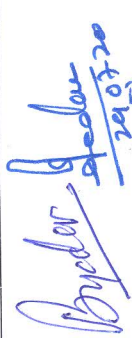
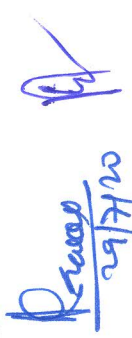

264

			flashes) per minute.	
d	Timer 1 minute (The light will automatically cut off after 01 minute)	Should be checked physically by BOO to select 'Timer' mode and observe the timer for 1 minute with the help of stop watch.	Single rotary selector switch must have position for 'timer' function and search light turn off after 1 minute.	
e	Remote control (As an option to be specified by the user).	Should be checked physically by the BOO.	Must comply to para 8 (e).	
08	Battery Status:- There must be indication for:- i) Full battery charge. ii) Low battery charge. iii) Battery charging	Should be checked physically by BOO.	There must be indicator provided in the search light for low battery & DC blown fuse.	
09	Beam Distance/Range:- (In clear weather on levelled ground and in starlit condition): - i) High beam- 300 Mtrs ii) Low beam- 150 Mtrs (To be decided by the user department as per their requirement at the time of indent).	This test will be conducted in the field during night time where 300 & 150 meters line of sight is available. Move a group of men (3-4) and check the movement from 300 meters by switching 'ON' the search light with (fully charged battery) in dimmer mode	Search light must be able to offer detection of movement of persons/ objects at a distance of 300 meters minimum.	
10.	Reflector : Parabolic reflector mounted in shock resistance cap.	Should be checked physically by opening the front cover of the search light and check the parabolic reflector mounted with shock resistance cap.	Parabolic reflector must be mounted in the shock resistance cap of good quality rubber.	
11	Front Glass : The glass should be of a good quality and should be heat and shock resistant. It should not crack when water droplets fall on it when used continuously.	Should be checked physically by switching 'ON' the search light continuously for 1 hours. During continuous operation of the search light check the glass for damage due to heat produced. Again, during continuous operation, check the glass for crack or damage when water droplets sprinkled on it. Drop	The glass used must be of a good quality and must be heat & shock resistant. The front glass must not get damaged or cracked when used continuously and water droplets sprinkled on it.	

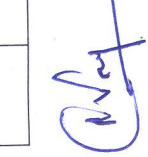
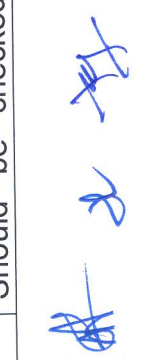
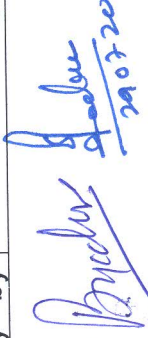
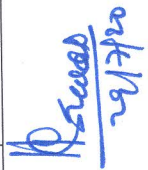

		the search light from the height of 1 meter on hard surface to check sturdiness of the front glass.		
12	Shoulder Straps : Adjustable shoulder strap.	Should be checked physically by BOO.	Shoulder strap must be adjustable.	
13	Battery Charger			
	a 03 meter long power cord fitted with suitable adaptor which can easily fit with charging socket of the search light.	To be checked physically by BOO.	Power cord and adaptor must be as per the requirement mentioned in the QRs.	
	b Input voltages 90 to 270 volts, 50 HZ single phase AC.	Should be checked physically by connecting search light with AC mains supply and vary the input voltage from 90 to 270 volt AC mains and check the charging voltage (output) of inbuilt.	The output i.e charging voltage must not be changed with the change in input voltage i.e 90 volt to 270 volt AC mains	
	c Charging time maximum 04 hrs.	Should be checked physically by connecting the search light having full discharge battery with the mains supply for charging and observe the charging time of battery to get full charge.	Charging time taken by the inbuilt battery charger must not be more than 03 hrs.	
	d Adequate protection shall be provided against short circuit, bty over charge, bty deep discharge and reverse polarity.	Should be checked physically by connecting the search light with the AC mains supply for charging the battery and check the charging status indications for charging & fully charged battery.	There must be an LED indication in the equipment for charging of the battery during charge and indication for fully charged condition.	
	e HHSL must operate in all modes minimum upto 10 minutes or more after low battery indication and battery cut off.	Check the following protections provided in the inbuilt battery charger by connecting the battery on charge :- Short circuit protection : short the output terminals of the battery	On shorting of the output terminals of the battery charger, circuit must not be getting defective. The charging current must be very less or ignorable	



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		charger output. Battery over charge protection : Measure the charging current after the battery gets charged fully. Battery deep discharge protection : Switch 'ON' the search light when the battery is fully exhausted. Reverse polarity protection : Connect the output of the charger in reverse polarity with the battery and observe the result. Should be checked physically by switching 'ON' the search light with DC regulated power supply source on 12 volt DC, decrease the voltage slowly till advance low battery indication appears and search light turn 'OFF' as the applied voltage decrease further. Should be checked physically by checking resting support provided on the body of the search light.	which will not over charge the battery. The search light must not switched 'ON' when battery fully exhausted /discharge to a specified level. On connecting the opposite terminals of the battery & output of the battery charger, the circuit must not be getting defective. An advance low voltage indication through LED must be given and battery must cut at 10.5 V ($\pm 0.2V$) Resting supports must be provide on front and back cover plates as well as on the body of the casing.
f	An auto cut feature to prevent the battery from over charging.		
14	Resting Support : Should have provisions to facilitate stability on a flat surface.		
OPTIONAL ACCESSORY (To be decided by the user)			
15	a	Remote Control	The dimensions of the Tx unit must be as per the dimensions mentioned at Para 16 (a) (ii). The unit must work on 9V or 12 Volt batteries.
	(i)	The transmitter should work on 9V/12V battery.	
	(ii)	Dimension of Tx Unit :- 80 mm x 50 mm x 20 mm ($\pm 10mm$)	
	(iii)	Range minimum 100 meters.	

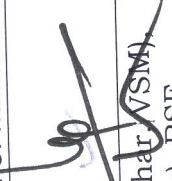
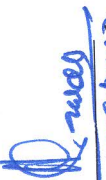
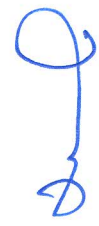
			operating the remote control search light from a distance of minimum 100 meters.	The search light must be operated/controlled from a distance of 100 meters.	
b	IR Filter				
	(i)	Should have IR filter which can be attached or detached with ease. IR collar should be able to jack on the Hand Held Search Light.	Fit an IR filter on to the search light front head and check for the method & ease to attach or detach it from search light.	Search light must have IR filter which can be attached or detached with ease.	
c	Specification of Wired Control :-				
	(i)	Length of the cord 100 meters minimum	Should be checked physically by measuring the length of the cord with the help of measuring tape.	The length of the cord must be equal or more than 100 meters.	
	(ii)	Cord shall be spooled on a plastic or metallic reel having knob for spooling and mounted in a powder coated metal frame.	Should be checked physically by checking the cord spooled on plastic or metallic reel and mounted on a power coated metal frame.	It must be spooled on a plastic metallic reel having knob for spooling and mounted on a powder coated metal frame.	
d		One spare battery.	To be checked physically by the BOO.	Spare battery must be as per the requirements mentioned in the QRs.	
e		PCB	To be checked physically by the BOO.	PCB must be as per the requirements mentioned in the QRs.	
16	Misc				
	a	User manual with operational instructions etc should be provided with each equipment.	Not applicable	At the time of supply.	
	b	Technical manual including schematic diagram and spare parts list should be provided (Qty as specified by the user).			
	c	Battery life should be 18 months (Minimum)			
	d	Training on repair and maintenance of the equipment to be given by the firm. (Duration and number of trainees to be decided by the user department as per their requirement at the time	Not applicable	At the time of supply.	


 Reviewer
 29/12/20


 Inspector

366

of indent)				
e	Spare Parts - Backup of all spare parts of the equipment should be provided by the firm for a period of minimum 7 years.	Not applicable	At the time of supply.	

 (S S Chahar), DC ADG (Log), BSF	 (S C Yadav), DIG SIW BSF	 (T N S Reddy), General Prov-Ord, FHQ BSF	 (R K Meel), DC CISF
 (A P Singh), DC SIW BSF	 (Lt Col Harish Chander) Assam Rifles	 (Dr. A Mukherjee), PSO (LS) BPR&D	 (Lalit Kumar), AC SSB
 (Insp/T Birendra Yadav) ITBP	 (SI/RM R S Rawat) BSF		

Approved/Not approved


Rakesh Asthana
Director General
Border Security Force