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LEMT Scientific and Technical Centre of the BelOMO



JSC "Svet" Zhlobin Plant"

## COMBINATION OF A HIGH QUALITY TIME-PROVED LENSES AND A NEW MORE PERFECT DESIGN



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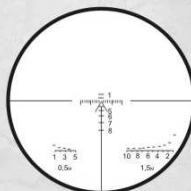
**PO 3,5x21P OPTICAL SIGHT (item 7407)****DESIGNATION**

PO 3,5x21P Optical Sight – the way of increase of combat efficiency of the small arms. The Sight is being used in field conditions by the second numbers of the sniper pairs, frontiers on frontier mountain posts, submachine gunners of the special sub-units and antiterrorist groups. PO 3,5x21P Optical Sight enables to conduct reconnaissance and to hit on the battlefield the most hard-to-detect targets, sustains any kinds of submachine gun fire with standard cartridges - 7,62x39 as well as 5,45x39. The Sight is equipped with reticle illumination.

At will of the customer the Sight can be equipped with various kinds of aiming reticles and marks (page 57). It is being mounted on AK74, AKMS submachine guns, «Utyos», RPK 74, PK M, RPK machine guns.

**PERFORMANCE CHARACTERISTICS**

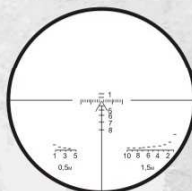
Visible magnification, ratio	3,5
Angular field of view, ang. deg.	12
Lens clear aperture, mm	21
Exit pupil diameter, mm	6
Eye relief, mm	48
Elevation/azimuth adjustment range, ang. m, min.	±36
Adjustment scale factor, ang. s	17 (1 cm at distance of 100 m)
Overall dimensions, mm, max.	195×94×166
Weight, kg, max.	1,1
Operating temperature range, °C	-50 ... +50
Types of the weapons on which it is being mounted	small arms

**PO 3,5x17,5P OPTICAL SIGHT with reticle illumination (item 6746-04)****DESIGNATION**

Supercompact and extralight, developed for commandoes and other mobile divisions. The given sight has been developed specially for SV 99 Sniper Rifle and is designated for aimed fire at day time and in the twilight (with reticle illumination), approximate measuring of a distance to the object. It is being also mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3. By means of transition brackets it is possible to mount it on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57). It is equipped with a bracket for TSL 02 Target Designator.

**PERFORMANCE CHARACTERISTICS**

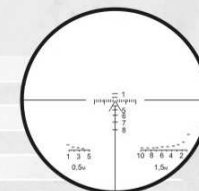
Visible magnification, ratio	3,5
Field of view, ang. deg.	5
Lens clear aperture, mm	17,5
Exit pupil diameter, mm	5
Eye relief, mm	50
Resolution limit within the field of view centre, s	10
Elevation/azimuth adjustment range, ang. m, min.	±30 (85 cm at a distance of 100 m)
Adjustment step in vertical and horizontal direction, ang. m, min.	(15 ±1) (7,5 mm at a distance of 100 m)
Fitting diameter, mm	25,4
Overall dimensions with an eye shade, (L×W×H), mm, max.	185×78×70
Weight with a bracket, kg, max.	0,37
Type of bracket mounting	"Picatinny rail MIL-STD 1913"
Operating temperature range, °C	
-without reticle illumination	-50 ... +50
-with reticle illumination	-20 ... +45
Brightness steps number of the reticle	11
Types of the weapons on which it is being mounted	small arms

**PO 4x24P OPTICAL SIGHT (item 6767)****DESIGNATION**

PO 4x24P Optical Sight is designated for targeting of automatic small arms at aimed fire at day time and in the twilight with reticle illumination. It is efficient at aiming and observation of the well camouflaged targets at medium and large distances. It can be mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3 which have a seat – a guide strip "Picatinny rail MIL-STD 1913", as well as by means of transition brackets (p.56) it is possible to mount them on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. It is recommended for installation on Minimi machine gun. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

**PERFORMANCE CHARACTERISTICS**

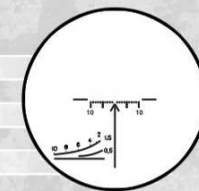
Visible magnification, ratio	4
Angular field of view, deg., min.	12
Exit pupil diameter, mm	6
Eye relief, mm	42
Eyepiece diopter adjustment range, dptr, min.	±4
Elevation/azimuth adjustment range, ang. deg., min.	±1
Adjustment step:	
elevation, cm/m	3/100
azimuth, cm/m	1/100
Reticle:	
Lateral correction scale factor, thousandth	0-01
Lateral correction range, thousandth	±0-10
Power source	1×AA
Overall dimensions of the sight, mm, max.	186×82×78
Weight with a power source, kg, max.	0,6
Types of the weapons on which it is being mounted	small arms

**PO 4x17 OPTICAL SIGHT (item 9959)****DESIGNATION**

PO 4x17 is designated for targeting of automatic small arms during aimed fire at day time and in the twilight with reticle illumination. It is efficient at aiming and observation of the well camouflaged targets at medium and large distances. It can be mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3 which have a seat – a guide strip "Picatinny rail MIL-STD 1913", as well as by means of transition brackets (p.56) it is possible to mount them on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. It is recommended for installation on Minimi machine gun. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	4
Angular field of view, ang. deg.	11
Exit pupil diameter, mm	4,2
Eyepiece diopter adjustment range, dptr.	-0,5... -1
Eye relief, mm	42
Elevation/azimuth adjustment range, ang. deg., min.	±1
Power source of reticle illumination	1×AA
Rated voltage, V	1,5 (1,2)
Overall dimensions, mm	210×60×65
Weight including the power source, kg, max.*	0,4
Operating temperature range, °C	-40... +55
Battery discharge indicator	optionally
* - the weight of the brackets varies depending on the type of the weapons.	





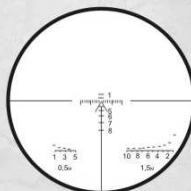
**PO 3,5x21P OPTICAL SIGHT (item 7407)****DESIGNATION**

PO 3,5x21P Optical Sight – the way of increase of combat efficiency of the small arms. The Sight is being used in field conditions by the second numbers of the sniper pairs, frontiers on frontier mountain posts, submachine gunners of the special sub-units and antiterrorist groups. PO 3,5x21P Optical Sight enables to conduct reconnaissance and to hit on the battlefield the most hard-to-detect targets, sustains any kinds of submachine gun fire with standard cartridges - 7,62x39 as well as 5,45x39. The Sight is equipped with reticle illumination.

At will of the customer the Sight can be equipped with various kinds of aiming reticles and marks (page 57). It is being mounted on AK74, AKMS submachine guns, «Utyos», RPK 74, PK M, RPK machine guns.

**PERFORMANCE CHARACTERISTICS**

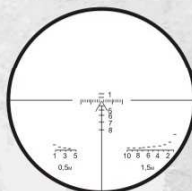
Visible magnification, ratio	3,5
Angular field of view, ang. deg.	12
Lens clear aperture, mm	21
Exit pupil diameter, mm	6
Eye relief, mm	48
Elevation/azimuth adjustment range, ang. m, min.	±36
Adjustment scale factor, ang. s	17 (1 cm at distance of 100 m)
Overall dimensions, mm, max.	195×94×166
Weight, kg, max.	1,1
Operating temperature range, °C	-50 ... +50
Types of the weapons on which it is being mounted	small arms

**PO 3,5x17,5P OPTICAL SIGHT with reticle illumination (item 6746-04)****DESIGNATION**

Supercompact and extralight, developed for commandoes and other mobile divisions. The given sight has been developed specially for SV 99 Sniper Rifle and is designated for aimed fire at day time and in the twilight (with reticle illumination), approximate measuring of a distance to the object. It is being also mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3. By means of transition brackets it is possible to mount it on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57). It is equipped with a bracket for TSL 02 Target Designator.

**PERFORMANCE CHARACTERISTICS**

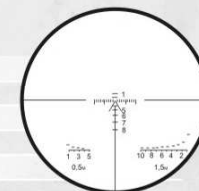
Visible magnification, ratio	3,5
Field of view, ang. deg.	5
Lens clear aperture, mm	17,5
Exit pupil diameter, mm	5
Eye relief, mm	50
Resolution limit within the field of view centre, s	10
Elevation/azimuth adjustment range, ang. m, min.	±30 (85 cm at a distance of 100 m)
Adjustment step in vertical and horizontal direction, ang. m, min.	(15 ±1) (7,5 mm at a distance of 100 m)
Fitting diameter, mm	25,4
Overall dimensions with an eye shade, (L×W×H), mm, max.	185×78×70
Weight with a bracket, kg, max.	0,37
Type of bracket mounting	"Picatinny rail MIL-STD 1913"
Operating temperature range, °C	
-without reticle illumination	-50 ... +50
-with reticle illumination	-20 ... +45
Brightness steps number of the reticle	11
Types of the weapons on which it is being mounted	small arms

**PO 4x24P OPTICAL SIGHT (item 6767)****DESIGNATION**

PO 4x24P Optical Sight is designated for targeting of automatic small arms at aimed fire at day time and in the twilight with reticle illumination. It is efficient at aiming and observation of the well camouflaged targets at medium and large distances. It can be mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3 which have a seat – a guide strip "Picatinny rail MIL-STD 1913", as well as by means of transition brackets (p.56) it is possible to mount them on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. It is recommended for installation on Minimi machine gun. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

**PERFORMANCE CHARACTERISTICS**

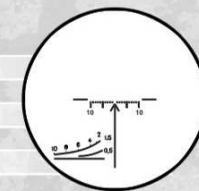
Visible magnification, ratio	4
Angular field of view, deg., min.	12
Exit pupil diameter, mm	6
Eye relief, mm	42
Eyepiece diopter adjustment range, dptr, min.	±4
Elevation/azimuth adjustment range, ang. deg., min.	±1
Adjustment step:	
elevation, cm/m	3/100
azimuth, cm/m	1/100
Reticle:	
Lateral correction scale factor, thousandth	0-01
Lateral correction range, thousandth	±0-10
Power source	1×AA
Overall dimensions of the sight, mm, max.	186×82×78
Weight with a power source, kg, max.	0,6
Types of the weapons on which it is being mounted	small arms

**PO 4x17 OPTICAL SIGHT (item 9959)****DESIGNATION**

PO 4x17 is designated for targeting of automatic small arms during aimed fire at day time and in the twilight with reticle illumination. It is efficient at aiming and observation of the well camouflaged targets at medium and large distances. It can be mounted on G36, FN submachine guns, pistols, machine guns of series MR5, M-16 rifles of all modifications and G3 which have a seat – a guide strip "Picatinny rail MIL-STD 1913", as well as by means of transition brackets (p.56) it is possible to mount them on AK47, AK74 and its modifications, RPK, PK machine guns and their modifications. It is recommended for installation on Minimi machine gun. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	4
Angular field of view, ang. deg.	11
Exit pupil diameter, mm	4,2
Eyepiece diopter adjustment range, dptr.	-0,5... -1
Eye relief, mm	42
Elevation/azimuth adjustment range, ang. deg., min.	±1
Power source of reticle illumination	1×AA
Rated voltage, V	1,5 (1,2)
Overall dimensions, mm	210×60×65
Weight including the power source, kg, max.*	0,4
Operating temperature range, °C	-40... +55
Battery discharge indicator	optionally
* - the weight of the brackets varies depending on the type of the weapons.	





## OPTICAL SIGHTS WITH RETICLE ILLUMINATION (POSP)

Optical sights are designated for conducting of shotgun aimed fire as well as for nature objects observation. Due to moisture resistance and anticorrosion property the sights are serviceable even in the rain and other extreme conditions. The reticle illumination allows to carry out aiming in the twilight. The sight is equipped with a range finder reticle which allows to carry out an approximate estimation of a distance to the object. There is a possibility to introduce angles of sight depending on the distance to the target and the lateral corrections (to wind, target movement). The hermetically sealed case of the Sight is filled with nitrogen which protects against weeping of the optical surfaces at temperature changes. Operating temperature range -  $\pm 50^{\circ}\text{C}$ .

**Spare Parts and Accessories (are being completed at will of the Customer):**

The light filter serves for improvement of visibility and contrast of the object being observed under insufficient visibility conditions (haze, fog etc.). Illumination system provides for operation of the reticle illumination at temperatures below  $-10^{\circ}\text{C}$  (nonworking temperature for power sources). A blend serves for protection of an eye of the observer against exposure of solar beams with small angulation (less than an angular field of vision of the Sight).

**Decoding of Signs in the name of the Sights:**

**V** – is designated for installation on the carbines of the type "Vepr", "Saiga";  
**T** – is designated for installation on the carbines of the type "Tigr";  
**W** – is designated for installation on the weapon with overhead guide strips of the type "Weaver", "Picatinny rail MIL-STD 1913";  
**L** – is designated for installation on the carbines of the type "Korshun", "Sobol", PZH-18NM;  
**L7** – is designated for installation on the carbines of the type "Los" and modifications;  
**L9** – is designated for installation on the carbines of the type "Los-9" and modifications;  
**D** – depending on the individual peculiarities of eyesight it is possible to adjust the eyepiece from - 3 to + 3 dptr;  
**M** – modernized distance measuring reticle;  
**S** – there is a possibility to choose the level of brightness of the reticle depending on the terrain illumination conditions;  
**Pro** – there is a possibility to execute more precise targeting;  
**Figures 1, 2...** – numbers of the reticle. All the modifications of the sights can be produced in "Lux" version; it differs in improved design, additional kitting-up.  
 The complete set includes additionally:

- light filter;
- lens cover;
- illumination system;
- wrench;
- eye shade;
- serviette.

## POSP 4x24 OPTICAL SIGHT (item 3099)

## DESIGNATION

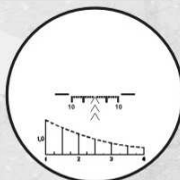
4x24V, 4x24M, 4x24T Optical Sights are intended for conducting of shotgun aimed fire, as well as for observation of the objects of nature. Reticle illumination allows to execute aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement). At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	4
Angular field of view, ang. deg.	6
Lens clear aperture, mm	24
Eye relief, mm	78
Exit pupil diameter, mm	12
Resolution power, ang. s	3
Rated voltage, V	2×AG13
Power source of reticle illumination	0,75
Weight, kg	0,9

## PECULIARITIES AND DIFFERENCES

	POSP 4x24V	POSP 4x24M, POSP 4x24T
Overall dimensions, mm	337×163×72	337×136×72
The types of carbines on which the sights are being mounted	"Vepr", "Saiga"	"Tigr", Self-loading Simonov carbine



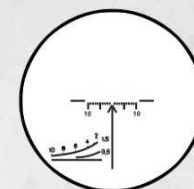
## POSP 6x24 OPTICAL SIGHT (item 3038)

## DESIGNATION

6x24, 6x24V Optical Sights are intended for conducting of shotgun aimed fire, as well as for observation of the objects of nature. Reticle illumination allows to execute aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement). At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	6
Angular field of view, ang. deg.	4
Lens clear aperture, mm	24
Eye relief, mm	68
Exit pupil diameter, mm	4
Rated voltage, V	3
Power source of reticle illumination	2×AG13
Overall dimensions, mm	368×165×78
Weight, kg	0,9



## PECULIARITIES AND DIFFERENCES

	POSP 6x24	POSP 6x24V
Overall dimensions, mm	337×136×72	337×163×72
The types of carbines on which they are being mounted		
Handwheel scale division value of lateral corrections and angles of sight at a distance of 100 m, m	"Tigr", SKS 0,5	"Vepr", "Saiga" 0,05

## POSP 6x42 OPTICAL SIGHT (item 3040)

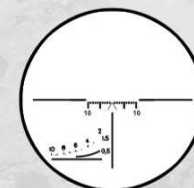
## DESIGNATION

**POSP 6x42, POSP 6x42 D, POSP 6x42 V, POSP 6x42 VD, POSP 6x42 VDS, POSP 6x42 W, POSP 6x42 WD, POSP 6x42 V Pro, POSP 6x42 M6 Pro, POSP 6x42 M6 D Pro, POSP 6x42 WD M6 Pro, POSP 6x42 M6 VDS Pro** are intended for conducting of shotgun aimed fire, as well as for observation of the objects of nature. Reticle illumination allows to execute aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement). They are hermetically tight, filled with nitrogen which prevents weeping of the optical parts at temperature difference.

They are being installed on the carbines of the type "Tigr", SKS, "Vepr", "Saiga", on the weapons with the overhead position of the guide strips of the type "Weaver", "Picatinny rail MIL-STD 1913". At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	6
Angular field of view, ang. deg.	4
Lens clear aperture, mm	40
Eye relief, mm	75
Exit pupil diameter, mm	6,7
Eyepiece adjustment (for D version), dptr.	$\pm 3$
Rated voltage, V	3
Power source of reticle illumination	2×Ag13 (CR2032 – for W)
Overall dimensions, mm	460×167×82
Weight, kg	1,1





## POSP 8x42 OPTICAL SIGHT (item 3184)

## DESIGNATION

**POSP 8x42, POSP 8x42 V, POSP 8x42 VD, POSP 8x42 VDS, POSP 8x42 Pro, POSP 8x42 M6 VDS Pro, POSP 8x42 V Pro, POSP 8x42 D, POSP 8x42 M6 Pro, POSP 8x42 M6 Pro with antiparallax, POSP 8x42 DM6 Pro, POSP 8x42 L, POSP 8x42 L7, POSP 8x42 L9, POSP 8x42 W, POSP 8x42 VD, POSP 8x42 VD M6 Pro Optical Sights** are intended for conducting of shotgun aimed fire, as well as for observation of the objects of nature. Reticle illumination allows to execute aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement).

They are hermetically tight, filled with nitrogen which prevents weeping of the optical parts at temperature difference. They are being installed on the carbines of the type "Tigr", SKS, "Vepr", "Saiga", on the weapons with the overhead position of the guide strips of the type «Weaver», "Picatinny rail MIL-STD 1913". At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	8
Angular field of view, ang. deg.	3
Lens clear aperture, mm	40
Eye relief, mm	75
Exit pupil diameter, mm	5
Rated voltage, V	3
Power source of reticle illumination	2×AG13 (Lr44, 357A) Cr2032 – for W
Overall dimensions, mm, max.	460×167×82
Weight, kg, max.	1,1



## POSP 8x42 Pro OPTICAL SIGHT (item 3184-12)

## DESIGNATION

POSP 8x42 Pro Optical Sight is intended for conducting of "Tigr" carbines, SKS aimed fire. Reticle illumination allows to execute aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement). They are hermetically tight, filled with nitrogen which prevents weeping of the optical parts at temperature difference.

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	8
Angular field of view, ang. deg.	3
Eye relief, mm	75
Exit pupil diameter, mm	5
Resolution power, ang. s	6
Range of introduction of angles of sight by a handwheel, m	1000
Rated voltage, V	3
Reticle illumination power source	CR 1/3N or CR123A
Overall dimensions, mm, max.	460×167×82
Weight, kg, max.	1,1



## POSP 8x42D OPTICAL SIGHT (2000) (item 3184-24)

## DESIGNATION

POSP 8x42D Optical Sight (2000) is designated for aimed fire with rifles of calibre up to 12,7 mm with a lateral bracket of "Dovetail" type. It is possible to conduct aimed fire under low illumination conditions at the cost of reticle illumination with brightness control. The Sight is filled with nitrogen which prevents weeping of the optical parts at temperature difference.

## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	8
Angular field of view, ang. deg.	3
Eye relief, mm	75
Exit pupil diameter, mm	5
Number of brightness gradations	8
Rated voltage, V	3
power source	1×CR1/3N
Overall dimensions, mm, max.	460×167×82
Weight, kg, max.	1,3



## POSP 2-6x24 OPTICAL SIGHT (item 3318)

## DESIGNATION

POSP 2-6x24 Optical Sight with variable magnification (and its modifications POSP 2-6x24 V, POSP 2-6x24W) are intended for conducting of shotgun aimed fire, as well as for observation of the objects of nature.

Reticle illumination allows to carry out aiming in the twilight. The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement).

They are hermetically tight, filled with nitrogen which prevents weeping of the optical parts at temperature difference. At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).



## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	2... 6
Angular field of view, ang. deg.	7,5... 4
Lens clear aperture, mm	24
Eye relief, mm	76... 73
Exit pupil diameter, mm	9,6... 3,6
Rated voltage, V	3
Reticle illumination power source	2×AG-13 (LR44, 357A) CR2032 – for W
Overall dimensions, mm, max.	420×165×78
Weight, kg, max.	0,9



## POSP 3-9x42 OPTICAL SIGHT (item 3268)

## DESIGNATION

POSP 3-9x42 Optical Sight with variable magnification (and its modifications POSP 3-9x42V, POSP 3-9x42W) are designated for observation of the objects of nature and small arms aimed fire under low illumination conditions at day time.

The sights are equipped with distance measuring reticles which allow to perform a rough estimation of a distance to the object. There is a possibility to set the angles of sights depending on a distance to the target and lateral corrections (for a wind, target movement).

They are hermetically tight, filled with nitrogen which prevents weeping of the optical parts at temperature difference.

At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).



## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	3... 9
Angular field of view, ang. deg.	5°... 2°30'
Lens clear aperture, mm	40
Exit pupil diameter, mm	11... 4,5
Rated voltage, V	3
Reticle illumination power source	2×AG13, CR2032 – for W
Overall dimensions, mm, max.	460×170×85
Weight, kg, max.	1,1

## POSP 4-12x42 TELESCOPIC SIGHT (item 3341)

## DESIGNATION

POSP 4-12x42 Telescopic Sight with variable magnification (and its modifications POSP 4-12x42V, POSP 4-12x42W, POSP 4-12x42 W M6 Pro) are designated for observation of the objects of nature and small arms aimed fire under low illumination conditions at day time. filled with nitrogen which prevents weeping of the optical parts at temperature difference.

At will of the customer the sight can be equipped with various kinds of aiming reticles (p. 57).



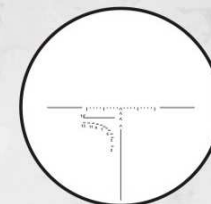
## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	4... 12
Angular field of view, ang. deg.	4° - 2°10'
Lens clear aperture, mm	40
Eye relief, mm	78... 110
Exit pupil diameter, mm	10... 3,3
Rated voltage, V	3
Power source	2×AG-13, CR2032 – for W
Overall dimensions, mm, max.	460×167×78
Weight, kg, max.	1,1

## POSP 12x50 TELESCOPIC SIGHT (item 7548)

## DESIGNATION

POSP 12x50 Telescopic Sight is designated for conducting of large-calibre sniper rifle aimed fire at a distance up to 1500 m. It gives the possibility of object focusing depending on the range of its position. It allows to execute diopter focusing within the reticle plane. It can be mounted on OSV-96 Sniper Rifle of calibre 12.7 which has a seat – guide strip of the type «Dovetail» or «Picatinny rail MIL-STD 1913» by means of a transition bracket (page 56). It is possible to conduct aimed fire under low illumination conditions at the cost of reticle illumination with brightness adjustment. The sight is filled with nitrogen which prevents weeping of optical parts at temperature difference.



## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	12
Angular field of view, ang. deg.	2
Lens clear aperture, mm	50
Resolution power, ang. s	4
Exit pupil diameter, mm	4,2
Eye piece adjustment, dptr.	±3
Linear value of field of view at a distance of 1000 m, m	36
Eye relief from the last surface of the eyepiece, mm	65... 82
Supply voltage of the reticle illumination electric circuit, V	3
Power source	1×CR123A
Overall dimensions with an eye shade, mm, max.	495×108×102
Weight, kg, max.	1,45



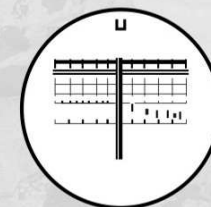
## PGO-7V3 GRENADE LAUNCHER OPTICAL SIGHT (item 0290)

## DESIGNATION

PGO-7V-3 Telescopic Sight for grenade launchers is designated for targeting of handheld antitank grenade launchers, conducting of aimed fire with use of ammunition PG-7VL, PG-7VM, PG-7VR and battlefield supervision.

Reticle of a sight allows to measure distance to the standard target, to take into account the ballistics of various ammunition, as well as to introduce lateral corrections to the boresight position.

Reticle illumination is provided for operation under low illumination conditions. Removable light filters improve visibility through a sight under various meteorological conditions. The tight case is filled with dry nitrogen for prevention of weeping of optical parts at temperature difference.



## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	2,7
Angular field of view, ang. deg.	13
Eye relief from the last surface of the eyepiece	
lens, mm	27
Exit pupil diameter, mm	4,5
Power source	1×AA
Rated voltage, V	1,5
Overall dimensions, mm, max.	140×180×62
Weight, kg, max.	0,62 (without spare parts and accessories and packing)





COD2 COMPLEX SIGHT (item 9728.50)

DESIGNATION

The design of the sight enables to carry out both close combat and rapid fire and at the same time to observe and to hit the camouflaged targets of primary importance at medium and long distances.



PERFORMANCE CHARACTERISTICS

Collimator Channel	
Visible magnification, ratio	1
Exit pupil diameter, mm, min.	22
Angular size of the aiming mark, ang. m., max.	3
Number of aiming mark brightness gradations	8
Optical Channel	
Visible magnification, ratio	4
Exit pupil diameter, mm, max.	4,2
Eye relief, mm, min.	42
Angular field of view, ang. deg., min.	11
Number of aiming mark brightness gradations	8
Adjustment range from zero boresight within two mutually perpendicular planes, ang. deg. , min.	±1
Adjustment step, ang. s	30 (1,5 cm/100 m)
Nonparallelism of optical axes of collimator and optical channels, ang. m., max.	2
Mounting seat on a weapon	Strip of the type «Picatinny rail MIL STD 1913»
Power source	1×AA with rated voltage of 1,5 V or Storage battery AA with rated voltage of 1,2 V
Overall dimensions (with an eye shade), mm, max.	208×63×95
Weight (with a power source), kg, max.	0,7
Operating temperature range, °C	-40... +50

PSO-1M2 and PSO-1M2-1 (item 0291)

DESIGNATION

Sniper Optical Sight is designated for Dragunov sniper rifle (SVD) and Special Sniper rifle (SSR) aimed fire. at various targets.



PERFORMANCE CHARACTERISTICS

Visible magnification, ratio, min.	4
Angular field of view, ang. degrees	6
Lens clear aperture, mm	24
Eye relief, mm	68
Exit pupil diameter, mm	6
Supply voltage, V	1,5
Overall dimensions, mm, max.	337×136×72
Weight, kg, max.	0,62

«SOKOL» BINOCULAR BORDER-LINE DEVICE (item 6876)

DESIGNATION

Due to rational optic scheme the device has high optical efficiency with small overall dimensions and weight characteristics.

It is ideal for terrain observation, target reconnaissance under day time conditions and at night in the projector light from stationary and temporary observation stations.

The device complete set includes a knapsack for carrying which allows to increase mobility of delivery of the device to the necessary place.



PERFORMANCE CHARACTERISTICS

Visible magnification, ratio, min.	15
Angular field of view, ang. deg.	6
Exit pupil diameter, mm	7
Entrance pupil diameter, mm	105
Interpupillary distance adjustment range, mm	59...70
Resolution limit of each tube of the device, ang. s	4
Overall dimensions, mm	335×340×285
Weight of the device, kg, max.	12,5
Weight of the device as a complete set, kg, max.	32





Collimator sights – modern, lightweight, the most simple and reliable in exploitation sights. They are designated for quick and accurate targeting of the weapons in the daytime and in the twilight. The collimator sight is an optical cross hair in which constantly visible red dot is being formed – the aiming mark. To carry out targeting it is necessary to match the aiming mark with the target without thorough positioning of the sight relative to eyes of the shooter. The hermetically sealed case of the sight is filled with nitrogen which protects against weeping of the optical surfaces.

## PK-01VI COLLIMATOR SIGHT (item 7464.30, 7464.30-01)

### DESIGNATION

PK-01VI Collimator Sight is designated for targeting of automatic small arms during shooting under any illumination conditions at day time, in the twilight, at night in combination with night vision devices (Night Vision Goggles of the type NV/G-14, Night Vision Monoculars of the type NV/M-19). The sight is being produced with two types of the aiming mark in the form of a dot and «T» shape. It is being mounted on Kalashnikov submachine guns of all modifications by means of brackets (p. 56), as well as on G36 submachine guns, FN machine guns, M-16 rifles of all modifications, G3 and other automatic small arms which have a seat – guide strip of the type «Picatinny rail MIL-STD 1913». The Sight of 7464.30-01 version has a seat for TSL-02 and TSL-02IR Laser Target Designators which can be completed additionally.



item 7464.30



item 7464.30-01

### PERFORMANCE CHARACTERISTICS

	item 7464.30	item 7464.30-1
Visible magnification, ratio	1	
Visible size of the aiming mark, ang. m, max.	2,5	
Exit pupil diameter, mm, min.	20	
Elevation/azimuth adjustment range, ang. deg., min.	±1	
Adjustment step, ang.s	40	
Power source	1×CR1/3N	
Supply voltage, V	3	
Continuous operation time without battery replacement under average illumination conditions, hrs., min.	50	
Aiming mark brightness step control	8 tripping positions	
	Positions 1, 2, 3 – for operation with NVD of the 3-rd, 2-nd and 1-st generation	
	Positions 4, 5, 6, 7, 8 – for operation in the twilight and in the daytime	
Attachment point size of the Sight (diameter), mm	30	
Mounting seat on a weapon	Strip of the type «Picatinny rail MIL-STD 1913»	
Overall dimensions, mm, max.	155×60×70	155×82×70
Weight, kg, max.	0,57	0,585
Operating temperature range, °C	-40... +50	

## PK-A COLLIMATOR SIGHT (item 7409)

### DESIGNATION

PK-A Collimator Sight is designated for automatic small arms targeting at shooting under any illumination conditions at day time, in the twilight, at night in combination with the Night Vision devices (Night Vision Goggles of type NV/G-14). The Sight is being produced with two types of the aiming mark in the form of a dot and in «T» shape. It is being mounted on AK submachine guns of all modifications and other automatic small arms which have a seat – guide strip of the type «Dovetail».

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Aiming mark brightness gradation number	8
Exit pupil diameter, mm, min.	20
Elevation/azimuth adjustment range, ang. deg., min.	± 1
Adjustment step, ang. s	40 (2 cm/100 m)
Power source	1xCR123A or CR1/3N
Supply voltage, V	3
Continuous operation time without battery replacement under average illumination conditions, hrs. min.	50
Seat on a weapon	Lateral strip of the weapon of the «Dovetail» type
Overall dimensions, mm, max.	165×90×142
Weight, kg, max.	0,65
Operating temperature range, °C	-40... +50



## SIGHTING COMPLEX FOR ANTI-AIRCRAFT SYSTEM -23-2 (item 7434)

### DESIGNATION

The Sighting Complex is designated for exploitation on duplex anti-aircraft system ZU-23-2. The range of operating temperature – from -30 °C up to + 55 °C. The Optical Sight is being mounted instead of standard T-3 Optical Sight and is designated for targeting of the system at ground target shooting.

The left collimator is being mounted on AS-23-2 instead of optical collimator of Left optical Collimator and are being used for guidance of the system at anti-aircraft targets shooting.

### PERFORMANCE CHARACTERISTICS

Optical Sight	
Visible magnification, ratio	3,5
Angular field of view, ang. deg.	5
Lens clear aperture, mm	17,5
Eye relief, mm	50
Overall dimensions, mm	175×53×53
Weight, kg	0,26
Left Collimator	
Exit pupil diameter, mm, min.	30
Reticle supply voltage (from the battery of the system), V	2,5
Overall dimensions, mm	116×117×132
Weight, kg	0,9





## PK-AW COLLIMATOR SIGHT (item 3329)

### DESIGNATION

PK – AW Collimator Sight is designated for precise targeting of the weapon at shooting under various illumination conditions (in the daytime, in the twilight, at night). The Sight is designated for installation on small arms with a bracket of «Weaver» type.

The Sight is an optical device with a sighting device of 1x magnification which enables to observe the target with both eyes open. Together with the target the shooter's eye registers the glowing aiming mark which is being formed of light diode emission and is being transferred by the optical system of the Sight to infinity.



### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Exit pupil diameter, mm	20
Number of reticle brightness gradations	5
Visible size of the aiming mark, ang. m	1
Adjustment step, MOA	1
Power source	1×CR 2032
Supply voltage, V	3
Overall dimensions, mm	170×85×65
Weight, kg	0,55

## COLLIMATOR SIGHT PK -01 VP (item 6766)

### DESIGNATION

Is designated for targeting of automatic small arms during shooting under any illumination conditions at day time, in the twilight, at night in combination with night vision devices (Night Vision Goggles of type NV/G-14, Night Vision Monoculars of type NV/M-19). It is possible to mount it on AK submachine guns of all modifications and other automatic small arms which have a seat on the cover of the shotgun receiver – guide strip of the type «Picatinny rail MIL-STD 1913». It is free from parallax.



### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Aiming mark angular size, ang. m.	2,5
Aiming mark brightness gradation number	8
Exit pupil diameter, mm, min.	20
Elevation/azimuth adjustment range, ang. deg., min.	±1
Adjustment step, ang. s	40
Power source	1×AA
Supply voltage, V	1,5
Continuous operation time without battery replacement, hrs., min.	1000
Overall dimensions, mm, max.	137×64×65
Weight, kg, max	0,35
Operating temperature range, °C	-40... +50

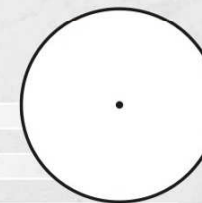
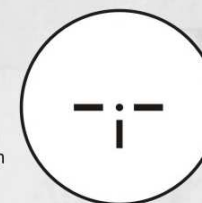
## PK-01 VM COLLIMATOR SIGHT (item 7997)

### DESIGNATION

The Sight is designated for targeting of automatic small arms at shooting under any illumination conditions: at day time, in the twilight, at night in combination with the night vision devices (night vision goggles of NV/G-14 type, night vision monoculars of type NV/M-19).

The Sight is being produced in 8 versions for guide strips of the type «Dovetail» (it is located on a lateral surface of the shotgun receiver) and «Picatinny rail MIL-STD 1913», and also with two types of aiming mark: in the form of a dot and in the form of «T».

It is being mounted on AK submachine guns of all modifications, as well as on G36 submachine guns, FN machine guns, M-16 rifles of all modifications, G3 and other automatic small arms which have a guide strip of the type «Dovetail» or «Picatinny rail MIL-STD 1913» by means of brackets (p. 56).



### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Visible size of the aiming mark of "dot" type, ang. m., max.	1,5
Type of the aiming mark:	dot
7997.00.00.000, -02, -03, -04	"T" form
7997.00.00.000-01, -05, -06, -07	8 tripping positions:
Step control of the aiming mark brightness	Positions III, II, I – for operation with NVD of the 3-rd, 2-nd and 1-st generations
	Positions 1, 2, 3, 4, 5 – for operation in the twilight and in the daytime
Exit pupil diameter, mm, min.	20
Elevation/azimuth adjustment range, ang. deg., min.	±1
Adjustment step, ang. s	40
Power source	1×AA
Supply voltage, V	1,2... 3
Battery gauge	available
Protection against incorrect installation of power cell	available
Continuous operation without battery replacement under medium illumination conditions, hrs., min.	250
Mounting of the sight to the weapon:	«Picatinny rail MIL-STD 1913»;
7997.00.00.000, -01	Lateral strip of the weapon of the "Dovetail" type
7997.00.00.000-02...-07	
Overall dimensions (without protective covers), mm, max.:	
7997.00.00.000, -01	145×65×70
7997.00.00.000-02, -05	145×75×155
7997.00.00.000-03, -06	145×75×170
7997.00.00.000-04, -07	145×75×175
Weight, kg, max.:	
7997.00.00.000, -01	0,55
7997.00.00.000-02, -05	0,65
7997.00.00.000-03, -06	0,66
7997.00.00.000-04, -07	0,67





**PK-D1VA COLLIMATOR SIGHT (item 7464.40)****DESIGNATION**

The Sight is designated for targeting of automatic small arms under any illumination conditions at day time and at night, in the twilight. The Sight is being mounted on the weapon by means of brackets and yokes. The seat of the bracket on the weapon – a guide strip located on the lateral surface of the shotgun receiver. The Sight is the optoelectronic device with a light-emitting diode with two types of the aiming mark in the form of a dot, in the form of "T" shape. It is being mounted on AK submachine guns of all modifications as well as on G36 submachine guns, FN machine guns, M-16 rifles of all modifications, G3 and other automatic small arms which have a seat on the cover of the shot gun receiver – a guide strip of the type "Dovetail" or "Picatinny rail MIL-STD 1913" by means of brackets (p. 56).

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	1
Visible size of the aiming mark of "dot" type, ang. m, max.	2,5
Exit pupil diameter, mm, min.	20
Elevation/azimuth adjustment range, ang. deg., min.	±1
Adjustment step, ang. s	40
Power source	Lithium cell CR1/3N
Supply voltage, V	3
Continuous operation without battery replacement under medium illumination conditions, hrs., min.	50
Step control of the aiming mark brightness	8 tripping positions Positions 1, 2, 3 – for operation with the NVD of the 3-rd, 2-nd and 1-st generations. Positions 4, 5, 6, 7, 8 – for operation in the twilight and at daytime
Attachment point size of the Sight (diameter), mm	30
Type of yoke/bracket	"Picatinny rail MIL-STD 1913"/"Dovetail" type
Overall dimensions, mm, max.	
- version 7464.40.00.000	155×83×174
- version 7464.40.00.000-01	155×83×168
Weight, kg, max.	
- version 7464.40.00.000	0,67
- version 7464.40.00.000-01	0,65
Operating temperature range, °C	-40... +50
Types of the weapons on which it is being mounted	Small arms with lateral strip

**PK-D1V COLLIMATOR SIGHT (item 7464.80)****DESIGNATION**

PK-D1V Collimator Sight is designated for targeting of automatic small arms during shooting under any illumination conditions at day time, in the twilight, at night with application of the night vision devices (NV/G-14 Night Vision Goggles). The sight is being produced with two types of aiming mark: in the form of a dot and in the form of "T" shape. It is being mounted on AK submachine guns of all modifications and other automatic small arms, they have a seat – a guide strip of the type "Dovetail"

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	1
Aiming mark visible size, ang. m, max,	2,5
Exit pupil diameter, mm, min	20
Elevation/azimuth adjustment range, ang. m, min.	±1
Adjustment step, ang. s	40
Power source	2×AAA
Supply voltage, V	3
Continuous operation time without battery replacement under average illumination conditions, hrs., min.	100
Step brightness of the reticle	8 tripping positions Positions III, II, I – for operation with NVD of the 3-rd, 2-nd and 1-st generations Positions 4, 5, 6, 7, 8 – for operation in the twilight and in the daytime
Fitting diameter of sight (diameter), mm	30
Seat on the sight	lateral strip of the type "Dovetail"
Overall dimensions, mm, max.	162×65×145
Weight, kg, max.	0,6
Operating temperature range, °C	-20... +50
Types of the weapons on which it is being mounted	small arms with lateral strip

**PK-42 COLLIMATOR SIGHT (item 9969)****DESIGNATION**

PK-42 Collimator Sight – is a modern sight with automatic brightness control of the aiming mark and switching of the type of the aiming mark.

It is intended for fast and accurate targeting with various types of weapon at shooting at day time and in the twilight, under conditions of low visibility and quickly changing illumination level.

The sight is the optoelectronic device with magnification 1x which ensures the possibility of observation of the target with both eyes open. At targeting the shooter simultaneously observes the target with the aiming mark applied on it with both eyes. For accurate hit at shooting it is necessary to match the aiming mark with the target.

It is being mounted on shotguns which have a seat – guide strip of the type «Picatinny rail MIL-STD 1913», guide strip of the type "Dovetail".

**PERFORMANCE CHARACTERISTICS**

Exit pupil diameter, mm	40±2
Number of aiming mark brightness gradations	8
Adjustment range, deg.	±1
Adjustment accuracy, s	40
Power source	1×AA
Supply voltage, V	1,5
Overall dimensions, mm, max.	160×100×85
Weight, kg, max.	0,9





**PK -01VS COLLIMATOR SIGHT (item 9950)**
**DESIGNATION**

The Sight is designated for targeting of automatic small arms. There is a possibility to conduct shooting at night in combination with NV/G-14 Night Vision Goggles. It is free from parallax. The aluminium tight case is filled with nitrogen. Convenient and fast ranging of the weapon (the open sight is seen within the field of view). It is being mounted on AK submachine guns of all modifications and other automatic small arms which have a seat – a guide strip of the type "Dovetail" located on the lateral surface of the shot gun receiver.

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	1
Aiming mark brightness gradation number	8
Exit pupil diameter, mm	20
Elevation/azimuth adjustment range, ang. deg., min.	±1
Power source	1×AA
Rated voltage, V	1,5 V (1,2 V)
Continuous operation time without battery replacement, hrs. min	400
Overall dimensions, mm	149×64×130
Weight, kg, max	0,4
Operating temperature range, °C	-40... +55
Battery discharge indicator	optionally
High Gloss	available


**PK P-2S COLLIMATOR PERISCOPIC SIGHT (item 9740)**
**DESIGNATION**

It guarantees targeting by direct pointing as well as aiming during shooting from behind the horizontal and vertical protective shelters (crests of entrenchments, corners of buildings, window sills, trunks of trees, stones etc.). In addition it can be equipped with the television sight with the secure radio channel, eye display with indication, adaptive butt of a special design. It is free from parallax.

The aluminium tight case is filled with nitrogen. Convenient and fast ranging of the weapon (the open sight is well seen within the field of view). It is being mounted on AK submachine guns of all modifications and other automatic small arms which have a guide strip of the type «Dovetail» located on the lateral surface of the shotgun receiver.

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	1
Aiming mark brightness gradation number	8
Elevation/azimuth adjustment range, ang. deg., min.	±1
Angle of rotation of the eyepiece attachment, ang. deg.	360
Angle between exit window optical axes, ang. deg.	45
Power source	1×AA,
Rated voltage, V	1,5 (1,2)
Continuous operation time without battery replacement, hrs. min	400
Overall dimensions, mm	212×120×173
Weight, kg, max	0,58
Operating temperature range, °C	-40... +55
Battery discharge indicator	optionally
High Gloss	available


**PK-AS COLLIMATOR SIGHT (item 6833)**
**DESIGNATION**

PK-AS Collimator Sight is designated for installation on a smooth-bore and rifled shotguns. The advantages of this sight consist in a handwheel convenient in exploitation (with a range measuring scale) which enables introducing of quick corrections for range and to carry out aimed firing.

**PERFORMANCE CHARACTERISTICS**

Visible magnification, ratio	1
Angular field of view at eye relief of 119 mm, deg.	13
Eye relief, mm	119±5
Exit pupil diameter, mm	15,5±0,8
Supply voltage of the Sight, V	2... 3 (2×STS 0,18 or 2×SR 44)
Range of angles of sight introduction, ang. s	0... 30
Angle of sight scale factor, ang. s	2
Adjustment range, ang. m, min.	
- azimuth	±30
- elevation	±15
Overall dimensions, mm:	
- PK-AS	132×52×130
- PK-AS-A	140×52×170
- PK-AS-W	125×52×90
Weight, kg:	
- PK-AS	0,45
- PK-AS-A	0,58
- PK-AS-W	0,4


**PS-07 SHOTGUN SIGHT (item 7720),  
PKS-07 COLLIMATOR SIGHT (item 3015)**
**DESIGNATION**

PS-07 Shotgun Sight is designated for installation on smooth-bore and rifled shotguns. The advantage of these sights – active red aiming mark. A well-seen red dot facilitates the process of sighting and increases the rate and accuracy of fire.

PKS-07 is being mounted on AK submachine guns of all modifications and other automatic small arms, VSK, SVD, AK-74, smooth – bore and rifled shotguns.

**PERFORMANCE CHARACTERISTICS**

	PS-07	PKS-07
Visible magnification, ratio	7	7
Angular field of view, ang. deg.	3	3
Exit pupil diameter, mm	4,7	4,7
Eye relief, mm	81	81
Eyepiece diopter adjustment range, dptry.	±3	-
Elevation/azimuth adjustment range, ang. m	±60	±60
Scale factor, ang. m:		
- for angles of sight	0,5	1
- for lateral corrections	0,67	0,87
Aiming mark brightness adjustment	Available	N/A
Supply voltage, V	3 (2SR44)	3 (2xSTS 0,18 or 2xAA)
Overall dimensions, mm	320×110×68	233×160×68
Weight, kg	0,93	0,88





## PK-AT COLLIMATOR SIGHT (item 3298-01)

### DESIGNATION

PK-AT Collimator Sight is designated for ensuring of accurate targeting of the weapons at shooting under various illumination conditions (in the daytime, in the twilight, at night). It is being mounted on various small arms.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Exit pupil diameter, mm	20
Number of aiming mark brightness gradations	8
Visible size of the aiming mark, ang. m	1
Power source	2×AG13
Supply voltage, V	3
Overall dimensions with a lateral bracket, mm	180×185×80
Weight, kg, max.	0,7



## PG-K COLLIMATOR SIGHT (item 6748)

### DESIGNATION

A modern, light, the most simple and reliable in exploitation, PG-K Collimator Sight is intended for fast and accurate targeting of the grenade launcher. It is equally effective in application with disposable and conventional grenade launchers of the type RPG-7. The Sight enables to conduct aimed fire in the twilight and at night. PG-K Collimator Sight is the only one of the existing sights which ensures the possibility of aiming in darkness in combination with the Night Vision Goggles of generation 2 and 3. The peculiarity of the Sight is two horizontal lines of the aiming mark symmetric relative to the red dot overlay of which on the target allows to measure the distance to the tanks and BMP irrespective of the aspect angle.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Exit pupil diameter, mm, min.	15
Diameter of adjustment of a zero boresight in two mutually perpendicular planes, ang. deg., min.	± 1
Azimuth adjustment step, ang. m	1±10"
Reticle brightness gradation number	8
Supply voltage, V	3
Power source	123A
Continuous operation time without battery replacement, hrs. min	20
Overall dimensions, mm, max.	210×75×140
Weight, kg, max	0,8
Operating temperature range, °C	-30... +50



## PK-06 COLLIMATOR ULTRA SIGHT (item 9973)

### DESIGNATION

PK-06 – is a modern sight with automatic brightness control of the aiming mark and switching of the type of the aiming mark. It is the upgraded mode of PK-05 Sight in which the drainage system is being applied which prevents moisture collection in the sight body. Besides the sight is being applied in combination with Night Vision Devices (goggles, monoculars). The invention of LEMT STC of BelOMA protected by the Eurasian patent № 003373 is being used in the sight design.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Exit pupil diameter, mm, min.	18
Number of types of the aiming marks	3
Elevation/azimuth adjustment range, ang. deg.	± 1
Power source	1×CR2032
Supply voltage, V	3
Overall dimensions, mm, max.	75×35×53
Weight, kg., max.	0,09



## RS-M COLLIMATOR SIGHT (item 9735)

### DESIGNATION

It ensures by 2-3 times more fast shooting at short and average distances. It is possible to conduct shooting at night in combination with the night vision goggles of the type NV/G-14, night vision monocular of the type NV/M-19. It is free from parallax. The aluminium tight case of the closed type is filled with nitrogen. It can be mounted on AK submachine guns of all modifications and other automatic small arms which has a guide strip on the shotgun receiver cover – the guide strip of the type «Picatinny rail MIL-STD 1913». In view of small overall dimensions it is recommended to mount it on submachine guns of various modifications.



### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	1
Reticle brightness gradation number	11
Elevation/azimuth adjustment range, ang. deg	±1
Power source	One lithium cell of type CR2032
Rated voltage, V	3
Continuous operation time without battery replacement (at maximum brightness of the aiming mark), hrs. min	100
Overall dimensions, mm	72×76×55
Weight, including a power source, g, max	180
Operating temperature range, °C	-40... +55
High Gloss	available





Contemporary night vision devices and night observation devices have compact size, small weight, are convenient in exploitation, resistant to the atmospheric effects which enables to use them for observation and getting one's bearings at night, to sight, to read the map, to drive transport vehicles. Some models have a built-in illuminator which enables to use night vision devices in complete darkness, enclosed spaces, caves, basements etc.

It is possible to use night vision devices together with the small arms equipped with IR laser target designator, as well as collimator sights the aiming mark brightness of which is minimum.

## NV/S-17M NIGHT SIGHT (item 7547)

### DESIGNATION

It is intended for effective detection of the target and aiming in darkness at a distance of a direct shot of small arms. The aiming mark brightness can be adjusted by the shooter and has a red luminescence colour. The sight bracket allows to mount it on a lateral surface of the shotgun receiver. The sight can be equipped with an image intensifier tube of generation 2+ as well as generation 3.

The item can be mounted on the following models of weapons: AK assault rifles of all modifications, AKS-74UN, "Bizon-2" submachine guns, RPKN, PKN, PKMN machine guns and others.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+ or 3
Visible magnification, ratio	3,5
Angular field of view, deg.	12
Eye relief, mm, min.	35
Eyepiece diopter adjustment range, dptr.	+/-4
Azimuth adjustment range, ang. m	±40
Elevation adjustment range, ang. m	24
Adjustment step, cm/100 m	110
Supply voltage, V	3 (rated)
Power source	2×AA,
Overall dimensions, mm, max.	265×96×175
Weight (without power sources), kg, max.	1,2
Operating temperature range, °C	-40... +50
Types of the weapons on which it is being mounted	small arms with lateral strip



## NV/S-21 NIGHT SIGHT (item 9954)

### DESIGNATION

NV/S-21 Night Sight is intended for targeting under conditions of natural night illumination at distances up to 1000 m at sniper rifles shooting (including 12.7 mm calibre), submachines, hand and uniform Kalashnikov machine guns of all modifications shooting which have lateral attachment point of the sights or a guide strip of the type "Picatinny rail MIL STD 1913", and hand grenade launchers (HGL) shooting. It is resistant to shock loads up to 1000 g.

### PERFORMANCE CHARACTERISTICS

Type of the lens	catadioptric
Visible magnification, ratio, min.	6
Angular field of view, deg., min.	6
Eyepiece diopter adjustment range, dptr.	±4
Eye relief, mm	50
Adjustment range, ang. m, min.	±40
Power source	2×AA
Brightness gradation number of reticle illumination	4
Indication of power sources discharge	available
Operating temperature range, °C	-40... 50
Overall dimensions, mm	270×120×185
Electronic protection of image intensifier tube against external flashes	available



## NV/S-18-80 NIGHT SIGHT (for AKM and RPG-7) (item 9957)

### DESIGNATION

It is being mounted on submachine guns, Kalashnikov machine guns, machine guns of all modifications and other automatic small arms which have a seat on a cover of the shotgun receiver - a guide strip of the type «Picatinny rail MIL-STD 1913» by means of a transition bracket (p. 56).

It can be adapted for mounting on grenade launchers (of type RPG-7).

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generations 2+ or 3
Visible magnification, ratio	3,5
Angular field of view, ang. deg.	12
Eyepiece diopter adjustment range, dptr.	±4
Elevation/azimuth adjustment range, ang. deg., min.	±1
Power source	AA 1,5 (1,2)
Overall dimensions, mm	232×85×75
Weight, kg	0,85
Operating temperature range, °C	-40... +50
Adaptation for grenade launchers	By means of a special bracket and reticle replacement
Aiming mark brightness gradation number (red colour, diode)	4
Control of power sources discharge	available
Electronic protection of image intensifier tube against external flashes	available



## NV/S-18-115 NIGHT SIGHT with 5x lens for SVD (item 9737)

### DESIGNATION

It is intended for effective target detection and targeting in the darkness at a range of direct shot of Dragunov (SVD) Sniper Rifle. The aiming mark brightness can be adjusted by the shooter and has a red luminescence colour. The sight bracket allows to mount it on a lateral surface of the shotgun receiver.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generations 2+ or 3
Lens focal distance, mm	115
Visible magnification, ratio	5±0,2
Angular field of view within the object space, at eye relief of 35 mm, ang. deg., min.	8
Range of detection/recognition under illumination conditions 3x10-3 lx, (figure of a man), m	400/300
Range of detection/recognition under illumination of 3x10-3 lx (light transport vehicle), m	500/400
Exit pupil diameter, mm	7
Eyepiece diopter adjustment range, min.	±4
Elevation/azimuth adjustment range from zero boresight, ang. m., min.	±40
Mean adjustment step, ang. s	36 (17,5 mm/100 m)
Power source	2×AA
Supply voltage, V	3,0
Overall dimensions of the sight (without brackets), mm, max.	305×95×95
Weight of the Sight, kg, max.	1,3
Operating temperature range, °C	-30... +50





## NS 4x52 M NIGHT VISION SIGHT (item 9964)

## DESIGNATION

NS 4x52 M Night Vision Sight is designated for finding one's bearings and shotgun shooting at night.



## PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+
Visible magnification, ratio	4
Angular field of view, ang. deg.	9
Eye relief, mm	50
Power of IR-illuminator, mW, min.	25
Lens focusing range, m	10... ∞
Eyepiece adjustment range, dptr.	±3
Power source	1×CR123A
Supply voltage, V	3
Continuous operation time without battery replacement, hrs.	72 (without IR illuminator)
Overall dimensions, mm, max.	270×110×80
Weight, kg, max.	1,2
Operating temperature range, °C	-20... +40

## «NS/XD» NIGHT VISION SIGHT (item 9963)

## DESIGNATION

"NS/XD" Sight is a night vision sight of the 1-st generation with built-in IR-illumination. The sight is intended for finding one's bearings and shooting with "Tigr", SKS, "Vepr", "Saiga" shotguns and their modifications under night illumination conditions. The range of vision of the target depends on the conditions of observation and the character of the target.

Application of IR-illumination is efficient at distances up to 70 m.



## PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	2,3
Angular field of view, ang. deg.	10
Eye relief, mm	50
Lens diameter, mm	52
IR illuminator power, min., mW	5... 30
Minimum lens focal distance, m	6
Diopter adjustment range, dptr.	±4
Power source	1×Cr123A
Supply voltage, V	3
Continuous operation with one battery without illuminator, h	170
Adjustment range, min., MOA	±36
Types of brackets	"Weaver", "Dovetail"
Overall dimensions, mm, max.	275×110×215
Weight, kg, max.	1,1
Operating temperature range, °C	-20...+40



## DNS-1 DAY AND NIGHT SIGHT (item 6737)

## DESIGNATION

Ensures round-the-clock observation and aiming.

The product can be mounted on the following models of the weapons: AK assault rifles of all modifications, AKS-74UN, "Bizon-2" submachine guns, RPK N, PK N, PK MN machine guns at alias.



## PERFORMANCE CHARACTERISTICS

	Day channel	Night channel
Visible magnification, ratio	2,9	2,9
Angular field of view, ang. deg.	11	12
Lens focal distance, mm		80
Eye relief, mm		30
Diopter adjustment range, dptr.		-5... +5
Adjustment range, ang. deg.		±1
Adjustment step, ang. min.		1 (3 cm at a distance of 100 m)
Supply voltage, V		3 (2x1,5)
Overall dimensions, mm:		
version 1		240×195×81
version 2		240×115×79
Weight with power source, kg		
version 1		1,3
version 2		1,2
Operating temperature range, °C		-40... +50
Types of weapons on which it is being installed:		
version 1		Small arms with lateral strip of "Dovetail" type
version 2		Small arms with a strip of "Picatinny rail MIL-STD 1913" type

## STV-50 THERMAL IMAGE SIGHT (item 9745)

## DESIGNATION

Excellent solution for various kinds of automatic small arms.

It ensures observation of the terrain and aiming in the day time as well as in the twilight and under low illumination conditions. It has an IR-illuminator.

It cannot be put out of operation by any light hindrances.

It is being mounted on AK submachines of all modifications as well as on G36 submachine guns, FN machine guns, M-16 rifles of all modifications, G3 and other automatic small arms which have a seat - a guide strip of "Dovetail" type or "Picatinny rail MIL-STD 1913" by means of brackets (p. 56).



## PERFORMANCE CHARACTERISTICS

Lens focal distance, mm	50
Visible magnification, ratio	4,5
Field of view, ang. deg.	5,5×4,0
Diopter eyepiece adjustment, dptr.	±5
Eye relief, mm, min.	35
Aiming mark	Crosshair with the possibility of adjustment
Accuracy of adjustment of the aiming mark, ang. s	30
Range of identification, m	Up to 1 000
Power source	3×CR123A
Supply voltage, V	3
Built-in IR- illuminator	
Overall dimensions, mm	230×73×80
Operating temperature range, °C	-30... +50



## PKN -03P NIGHT COLLIMATOR SIGHT (item 3018-01)

### DESIGNATION

PKN -03P Night Collimator Sight - successfully operates in real conditions without application of artificial light sources. It is intended for effective detection of the target and aiming in the darkness at a distance of a direct shot of the small arms. The aiming mark the brightness of which can be adjusted by the shooter has a red colour of luminescence. The built-in IR-illuminator enables to use this sight in full darkness. And the possibility of adjustment of the angle of divergence of the illuminator beam enables to choose the optimum size of the illuminated area on the terrain. The PKN-03P Night Collimator Sight is equipped with a high-quality optics with multilayer antireflection coating. Red dot facilitates the process of aiming and increases the rate of fire and the accuracy of fire. The product can be mounted on the following models of the weapons: AK assault rifles of all modifications, "Bizon-2" at alias.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube (IIT)	generation 2
Visible magnification, ratio	3
Angular field of view	9
Exit pupil diameter, mm	5
Eye relief, mm	50
Range of vision of the full height figure of a person, m:	
- in passive mode under standard conditions (background - green grass, natural night illumination - 0,005lx, Atmosphere transparency- 0,85)	350
- in active mode at natural night illumination less than 0,005 lx	350
Elevation/azimuth adjustment range, min.	±34
IR-illuminator	Light diode, laser
Supply voltage, V:	
- of the device	3 (2×AA)
- of IR-illuminator	3 (1×CR123A)
Overall dimensions, mm, max.	250×80×155
Weight, kg	1,33



## PNN-03 P NIGHT OBSERVATION DEVICE (item 3035)

### DESIGNATION

The special shape of the eye shade ensures:

- protection against lateral flashes;
- excludes decamouflaging effect of the luminous image;
- fixes the eyes of the observer in certain position.

The device can be used by the nature-lovers, tourists, sportsmen, security services, special subunits.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube (IIT)	generation 2+
Visible magnification, ratio	2,6
Angular field of view	10
Range of vision of the full height figure of a person, m:	
-in passive mode under standard conditions (background - green grass, natural night illumination- 0,005 lx, Atmosphere transparency - 0,85)	350
IR-illuminator	Laser
Supply voltage, V	
- of the device	3 (2×AA)
- of IR-illuminator	3 (1×CR123A)
Overall dimensions, mm	350×148×80
Weight, kg	1,4



## TV/S 25 (item 9830.00), TV/S 50 (item 9830.03), TV/S 75 (item 9830.06) THERMAL IMAGE SIGHTS

### DESIGNATION

- They ensure round-the-clock observation of the terrain and aiming.
- They cannot be put out of operation by any light hindrances.
- They can be mounted on the guide strip of the type "Picatinny rail MIL-STD 1913" or on the lateral strip (being stipulated in the order).
- The aiming reticles are being adapted for the weapons on demand of the customer. The ballistic corrections and reticle adjustment are being carried out by electronic method.
- The sights are equipped with the slot which enables to display the video being observed in the eyepiece on external devices, as well as to introduce to the field of view video information from the external sources. The sights can be equipped with the video registrar.
- Power supply of the sights is being carried out from two accumulator batteries of the type 18650.



TV/S 25



TV/S 50



TV/S 75

### PERFORMANCE CHARACTERISTICS

	TV/S 25	TV/S 50	TV/S 75
Visible magnification, ratio	1,4	2,8	4,2
Angular field of view, ang. deg.	18,0×14,4	9,2×7,3	6,2×4,9
Matrix format	324×256	324×256	324×256
Pixel size, mm	0,025	0,025	0,025
Lens focal distance, mm	25	50	75
Pixel angular size, mrad	1,00	0,50	0,33
Range (man/vehicle)			
- Detection	850 / 1250	1700 / 2500	2550 / 3750
- Recognition	300 / 400	570 / 830	850 / 1250
- Identification	150 / 200	280 / 400	425 / 625
Weight, kg, max.	0,9	1,3	1,5
Type of the weapon	Grenade launchers of the type RPG-7, RPG -29, RPG -32 etc.	Automatic small arms, including machine guns	SVD, OSV-96 and other kinds of sniper weapons



**TV/S 25M (item 9830.02), TV/S 50M (item 9830.05), TV/S 75M (item 9830.08), TV/S 100M (item 9827) THERMAL IMAGE SIGHTS**
**DESIGNATION**

- They ensure round-the-clock observation of the terrain and aiming.
- They cannot be put out of operation by any light hindrances.
- Rain, smoke, dust or fog do not effect significantly on the range of vision.
- They can be mounted on the guide strip of the type "Picatinny rail MIL-STD 1913" or on the lateral strip (being stipulated in the order).
- The aiming reticles are being adapted for the weapons on demand of the customer. The ballistic corrections and reticle adjustment are being carried out by electronic method.
- The sights are equipped with the slot which enables to display the video being observed in the eyepiece on external devices, as well as to introduce to the field of view video information from the external sources. The sights can be equipped with the video registrator.
- Power supply of the sights is being carried out from two accumulator batteries of the type 18650.


**TV/S 25M**

**TV/S 50M**

**TV/S 75M**

**TV/S 100M**
**PERFORMANCE CHARACTERISTICS**

	<b>TV/S 25M</b>	<b>TV/S 50M</b>	<b>TV/S 75M</b>	<b>TV/S 100M</b>
Visible magnification, ratio	1,0	2,1	3,1	4,2
Angular field of view, ang. deg.	23,5×19,2	12,3×9,9	8,3×6,6	6,2×5,0
Matrix format	640×512	640×512	640×512	640×512
Pixel size, mm	0,017	0,017	0,017	0,017
Lens focal distance, mm	25	50	75	100
Pixel angular size, mrad	0,68	0,34	0,23	0,17
Range (man/vehicle)				
- Detection	1250 / 1830	2500 / 3650	3750 / 5500	5000 / 7350
- Recognition	420 / 600	840 / 1220	1250 / 1830	1700 / 2450
- Identification	210 / 300	420 / 600	625 / 900	840 / 1225
Weight, kg, max.	0,9	1,3	1,5	1,7
Type of the weapon	Grenade launchers of the type RPG-7, RPG -29, RPG -32 etc. Automatic small arms	Authmatic small arms and light sniper rifles	Machine guns, large-calibre sniper weapons	Anti-aircraft rocket system of the type "IGLA" and other

**TV/S 25L (item 9830.01), TV/S 50L (item 9830.04), TV/S 75L (item 9830.07) THERMAL IMAGE SIGHTS**
**DESIGNATION**

- They ensure round-the-clock observation of the terrain and aiming.
- They cannot be put out of operation by any light hindrances.
- Rain, smoke, dust or fog do not effect significantly on the range of vision.
- They can be mounted on the guide strip of the type "Picatinny rail MIL-STD 1913" or on the lateral strip (being stipulated in the order).
- The aiming reticles are being adapted for the weapons on demand of the customer. The ballistic corrections and reticle adjustment are being carried out by electronic method.
- The sights are equipped with the slot which enables to display the video being observed in the eyepiece on external devices, as well as to introduce to the field of view video information from the external sources. The sights can be equipped with the video registrator.
- Power supply of the sights is being carried out from two accumulator batteries of the type 18650.


**TV/S 25L**

**TV/S 50L**

**TV/S 75L**
**PERFORMANCE CHARACTERISTICS**

	<b>TV/S 25L</b>	<b>TV/S 50L</b>	<b>TV/S 75L</b>
Visible magnification, ratio	2,0	4,0	6,1
Angular field of view, ang. deg.	12,9×9,9	6,5×5,0	4,4×3,3
Matrix format	336×256	336×256	336×256
Pixel size, mm	0,017	0,017	0,017
Lens focal distance, mm	25	50	75
Pixel angular size, mrad	0,68	0,34	0,23
Range (man/vehicle)			
- Detection	1250 / 1850	2500 / 3650	3750 / 5500
- Recognition	420 / 600	840 / 1200	1250 / 1800
- Identification	200 / 300	400 / 600	625 / 900
Weight, kg, max.	0,9	1,3	1,5
Type of the weapon	RPG-7, RPG-29, RPG-32, automatic small arms	Automatic small arms, including machine guns	SVD, OSV-96 and other types of sniper weapons



THERMAL IMAGING -TELEVISION COMPLEX WITH SOFTWARE TOOLS OF MOVING OBJECTS REAL-TIME TRACKING (without number)



DESIGNATION

The Complex consists of video camera and thermal imager and is designated for observation and detection of people, animals, transport facilities under various illumination conditions and under any wheather conditions. Remote control of the cameras and rotary device is being executed both in manual mode and by means of the bundled software of detection of movement ensuring automatic detection and tracking of the moving objects.

PERFORMANCE CHARACTERISTICS

Thermal Imaging Device on the basis of Uncooled Microbolometric Matrix 320x240 elements

Spectral region, $\mu\text{m}$	8... 14
temperature sensitivity, mK	80
Angular field of view with application of a lens, ang. deg.	8
Lens focusing	distantly, electric motor
Video output	CCIR or RS170, IEEE1394
Exposure and gain	Automatically or manually
Electronic magnification	x2, x4
Supply voltage, V	7... 9
Power consumption, W	4

Television Video Camera

Type of sensor	1/2" CCD matrix with a horizontal scanning
Resolution, TVL	570
Sensitivity, lux	0,16
Shutter	Automatic (1/50...1/500000), manual
Magnification	Automatic ( up to 28 Db), fixed level by choice
Lens	variable magnification zoom lens 12-240 mm, automatic diaphragm electric drive focusing
Supply voltage	12
Power consumption, W	4

Observation complex can be additionally equipped with: turntable for installation on the vehicle

Angles of rotation, ang. deg.	$\pm 360$
Tilt angle, ang. deg.	$\pm 30$
Rate of turn	2' /s... 65°/s
Supply voltage	+24 V / 6 A
Control	RS232; Ethernet; TCP/IP

Ranges:

For thermal imaging channel: range on car, min.: identification = 690 m, recognition = 1350 m, detection = 5100 m.

For television channel: range on car, min: identification = 1900 m, recognition = 3500 m, detection = 8600 m.

MT-K TELEVISION MODULE (item 9823)

DESIGNATION

MT-K Television module with a bracket (hereinafter referred to as the module) is designated for aiming and guidance of the guided missile, detection, recognition and identification of the military personnel, armoured vehicles and transport facilities under any weather conditions irrespective of the time of a day. It is being applied for armory of antitank complex.



PERFORMANCE CHARACTERISTICS

Television matrix, pixel	640x512
Television matrix pixel size, $\mu\text{m}$	17
Angular television matrix pixel size, mrad	0,11
Type of micro display	OLED
	800x600 pixel
Spectral range, $\mu\text{m}$	8... 14
Lens focal distance, mm	150
Angular field of view, ang. deg.	4,2x3,2
Visible magnification, ratio	1
Minimum temperature difference being registered, °K	0,04
Range of tank detection, m	6000
Range of tank recognition, m	4000
Overall dimensions of the device, mm, max.	390x250x280
Overall dimensions with a bracket, mm, max.	410x270x510
Weight of the device, kg, max.	8
Weight of the device with a bracket, kg, max.	14
Operating temperature range, °C	-40... +60



## PN-02 (item 9752), PN-03 (item 9753), PN-04 (item 9754) NIGHT SIGHTS

### DESIGNATION

They are designated for conducting of small arms and shotguns aimed fire under natural illumination conditions on the terrain from the moon and stars, as well as in complete darkness with application of additional IR-illuminator. The sights are notable for high reliability, mechanical strength, tight design, high quality optics with multi-layer antireflection coating, simple and compact design, light weight, ability to resist recoil at aiming depending on the distance to the target. The possibility of choice of the colour (red or yellow) and adjustment of the aiming mark brightness creates additional convenience, gives optimum contrast for dark and light targets and serves for increase of the efficiency of shooting under various conditions. Guide strips on the body enable to mount additional equipment. The sights are being produced in various versions depending on the type of weapons. They can be equipped with teleconverter and the aiming plate (iron sights), contact device.



### PERFORMANCE CHARACTERISTICS

	PN -02	PN -03	PN -04
Visible magnification, ratio	2/possible 4	4	6
Angular field of view, deg. min.	18/ possible 9	9,5	6,5
Exit pupil diameter, mm	10	10	10
Eye relief, mm	46	46	46
Image intensifier tube, generation	2+	2+	2+
Lens focusing range, m	-	10... ∞	25...∞
Eyepiece dioptre adjustment range, dptr., min.	±5	±5	±5
Elevation/azimuth adjustment range, ang. m, min.	±120/ possible ±60	±60	±45
Average adjustment step, ang. s	30/ possible 15	15	10
Supply voltage, V	3	3	3
Overall dimensions, mm, max.	285×95×85/380×95×85	330×95×95	390×95×95
Weight, kg, max.	1,0 /1,65	1,2	1,6

## NV/G-10M NIGHT VISION BINOCULARS (item 7523-40)

### DESIGNATION

The device is intended for observation and finding one's bearings, weapons targeting under low illumination conditions and in complete darkness, execution of various kinds of works (rendering of medical aid, reading, driving etc.). The difference between NV/G-10 Night Vision Goggles and NV/G-10M Night Vision Goggles consists in the fact that NV/G-10 M is equipped with the replaceable long-focal lenses with 3x, 4x, 5x magnification which allows to increase the range of vision. At will of the customer the Night Vision Goggles are equipped with the adapter for combat helmets of various modifications.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+ or 3	
Lens focal distance, mm	26	100
Visible magnification, ratio	1	4,2
Angular field of view, deg.	38...∞	10...∞
Lens focal distance, m	0,25...	5...
Diopter adjustment range, dptr.	-4... +4	
Interpupillary distance adjustment range, mm	58... 72	
Supply voltage, V	3 (2×1,5 B)	
Overall dimensions, mm	160×130×90	273×130×90
Weight (without helmet mask), kg	0,66	1,19
Operating temperature range, °C	-40... +50	



The lens with magnification 4x

## NV/G-14 NIGHT VISION GOGGLES (item 7541)

### DESIGNATION

The goggles are designated for observation and getting one's bearings, targeting under low illumination conditions and in complete darkness. The main advantage of the goggles – minimum length along optical axis and small weight which enables to decrease eye strain significantly during long period of operation, as well as **special design which enables to aim by means of a collimator sight**. The built-in IR-illuminator ensures additional illumination during operation in complete darkness – in dark premises, caves etc. The goggles enable to conduct small arms aiming by means of IR laser target designator and collimator sight. The hermetically tight case of the device is filled with dry nitrogen for protection against sweat of optical surfaces during drastic change of temperature. The device is being equipped with helmet mask, waist-belt bag, spare power sources. At will of the customer the night vision goggles are being equipped with an adapter for combat helmets and headpieces of various modifications.



### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+
Visible magnification, ratio	1
Angular field of view, deg.	36
Resolution power, ang. min.	4,6
Interpupillary distance, mm	66
Supply voltage, V	3 (of the type LR6 (AA))
Operating temperature range, °C	-40... +50
Overall dimensions(without helmet mask), mm	157×68×80
Weight (goggles/helmet mask), kg	0,54/0,28

## NV/G-16M NIGHT VISION GOGGLES (item 7414.50)

### DESIGNATION

NV/G-16M Night Vision Goggles are designated for observation and finding one's bearings, targeting of the weapon under low illumination conditions and in complete darkness, execution of various types of works (medical aid rendering, reading, driving etc.). NV/G-16M Night Vision Goggles can be equipped with a lens with 3x magnification, as well as can be mounted on the helmet, helmet-mask or can be kept in hands.



### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+ or 3	
Magnification, ratio	1	3
Angular field of view, deg.	30	10
Lens focusing range, m	0,25... ∞	
Eyepiece diopter adjustment range, dptr.	±4	
Interpupillary distance, mm	65	
Supply voltage, V	1,5V (AA) or 3V (CR123A)	
Overall dimensions without a helmet, mm	180×125×80	240×125×80
Weight without a helmet, kg	0,45	0,7
Operating temperature range, °C	-30 ... +50	



## NV-6X NIGHT VISION BINOCULARS (item 8207)

### DESIGNATION

NV-6X Night Vision Binoculars are designated for observation of the remote objects, detection of the targets under low illumination conditions and in complete darkness.

NV-6X Night Vision Binoculars can be mounted on the tripod or simply can be held in hands. There is the possibility to mount the IR-illuminator and the directional microphone.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generation 2+ or 3
Visible magnification, ratio	6
Angular field of view, ang. deg.	6,5
Dioptr adjustment range, dptr.	-4... +4
Power source	1,5V (AA) or 3V (CR123A)
Overall dimensions, mm	315×125×95
Weight, kg	1,5
Operating temperature range, °C	-30... +50



## NV/M-19 NIGHT MONOCULAR (item 6749)

### DESIGNATION

It is intended for use in law enforcement agencies, special subunits and other defence and law enforcement agencies for visual observation and targeting in combination with laser target designators or collimator sights under conditions of night illumination.

The Monocular can be mounted on a helmet, a helmet-mask or a support or simply can be kept in hands.

At will of the customer the Night Vision Goggles can be equipped with the adapter for army helmets of various modifications.

### PERFORMANCE CHARACTERISTICS

Image intensifier tube	generations 2+ or 3
Visible magnification, ratio	1
Angular field of view, ang. deg.	36
Dioptr adjustment range, dptr.	-4... +4
Power source	2×AA or 2×CR123
Overall dimensions, mm	150×50×70
Weight, kg	0,36
Operating temperature range, °C	-40... +50



## "SOVA" NIGHT VISION BOUNDARY-LINE DEVICE (item 6875)

### DESIGNATION

The basic characteristics of the night observation device are: range of vision and the field of view angle. "SOVA" Night Vision Boundary-line Device with high-quality fast optics and the image intensifier tube of generation 2+ enables to observe and to detect the objects at a distance over 1000 m. It is being used for observation of the terrain, reconnaissance under night illumination conditions from the stationary and temporary observation stations. The device provides for the possibility of connection to the eyepiece of video cameras and photographic cameras with a thread of M52×0,75 and M37×0,75 by means of an adaptor.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio, min.	6,5
Angular field of view, ang. deg.	6
Image intensifier tube	Generation 2+
Range of vision under standard conditions (background - green grass, natural night illumination - 0,005 lx, atmosphere transparency - 0,85):	
- full height figure of a person, m	1000
- tank located by side face to the observer, m	1200
Supply voltage, V	2,4... 3
High-aperture lens diameter, mm	152
Overall dimensions of the device, mm	440×172×168
Overall dimensions of the mechanism of position fixation, mm	405×70×220
Weight of the device, kg, max.	5
Weight of the mechanism of position fixation, kg, max.	3,5
Weight of the device in a case, kg, max.	27



## "KAPONIR" SECRET SERVICE MAN OBSERVATION DEVICE (item 9824)

### DESIGNATION

The Secret Service Man Observation Device includes thermal imaging, television and range finding channels, as well as the digital magnetic compass and GPS-receiver which will ensure receipt of the complete intelligence.

### PERFORMANCE CHARACTERISTICS

Thermal imaging channel	
Maximum distance of target detection of the type "man", m	2000
Maximum distance of recognition of the target of the type "man", m	1000
Angular field of view, ang. deg.	6,2×5
Visible magnification, ratio	4
Television channel	
Range of target recognition, m	1000
Angular field of view, ang. deg.	1,7... 26
Range finding channel	
Range of distances being measured, m	50... 2 500
Accuracy of distance measurement, m	2
Laser radiation wavelength, nm	905
Physical characteristics	
Weight of the device (with the batteries), kg, max.	6





Laser target designators are intended for extremely fast targeting of the weapon. They are especially efficient at short and average distances of shooting. The aiming mark - a laser radiation dot being formed on the target of ruby (670 nm) or orange (635 nm) colours. The laser target designator emitting at a wavelength of an IR-red range (830 ... 860 nm) is being applied together with the night vision goggles or other night vision devices.

## TSL-02 LASER TARGET DESIGNATOR (item 7403)

### DESIGNATION

TSL-02 – is a universal laser target designator being mounted on various models of small arms by means of special brackets. It can be mounted in combination with PK-01 Collimator Sight on small arms which have a guide strip on the lateral surface of the shotgun receiver.

### PERFORMANCE CHARACTERISTICS

Radiation wavelength, nm	635, 650, 670, 800-900
Dot size at a distance of 50 m, mm	35
Elevation/azimuth adjustment range, ang. deg.	±1,5
Laser radiation power, mW	0,2; 1; 3
Supply voltage, V (power source)	3 (1×CR123A)
Overall dimensions(diameter/length), mm	21×95
Weight (without package and accessories), g	65
Operating temperature range, °C	-10... +40
Type of switching-on	Toggle switch or key
Types of the weapons on which it is being mounted	guns, carbines, pistols



## TSL-IR/R TARGET DESIGNATOR (item 8212)

### DESIGNATION

TSL-IR/R Target Designator is designed for quick targeting of shotguns, sports guns and small arms under various illumination conditions. It has a red and IR radiation channel. Under low illumination conditions it is being used in combination with the night vision goggles.

### PERFORMANCE CHARACTERISTICS

Radiation wavelength, nm:	
- Red channel	650
- IR channel	880
Radiation power, mW, min.:	
- Red channel	3
- IR channel	0,6
Laser spot diameter at a distance of 50 m (on the level 1/e2), mm, max.:	
- Red channel	35
- IR channel	45
Elevation/azimuth adjustment range, deg. min.	±1,5
Deviation from the boresight after 100 shots at a distance of 25 m, mm, max.	25
Supply voltage, V/type of power source	3V/1×(CR1/3N)
Maximum consumption current, mA, max.	70
Type of switching on	key
Type of channel commutation	toggle switch
Seat on a weapon	guide strip of the type "Picatinny rail MIL-STD 1913"
Overall dimensions, mm	65×45×29,5
Weight (without packing and accessories), g, max.	120
Operating temperature range, °C	-20... +40



## TSL-30 IR/R TARGET DESIGNATOR (item 8212.30)

### DESIGNATION

TSL30-IR/R Target Designator is intended for quick targeting of shotguns, sports guns and small arms under various illumination conditions . It has red and IR radiation channels. Under low illumination conditions it is being used in combination with the night vision goggles.

### PERFORMANCE CHARACTERISTICS

Radiation wavelength, nm:	
- Red channel	650
- IR channel	880
Radiation power, mW, min.:	
- Red channel	3
- IR channel	0,6
Laser spot diameter at a distance of 50 m (on the level 1/e2), mm, max.:	
- Red channel	35
- IR channel	45
Elevation/azimuth adjustment range, deg. min.	±1,5
Deviation from the boresight after 100 Shots at a distance of 25 m, mm, max.	25
Supply voltage, V/type of power source	3B/1× (CR1/3N)
Maximum consumption current, mA, max.	70
Type of switching on	key
Type of channel commutation	toggle switch
Seat on a weapon	guide strip of the type "Picatinny rail MIL-STD 1913"
Overall dimensions, mm	93,5×43×49,5
Weight (without packing and accessories), g, max.	140
Operating temperature range, °C	-20... +40



## TSL-07W LASER TARGET DESIGNATOR (item 7516)

### DESIGNATION

It is being installed on any types of pistols equipped with standard seat of the type Picatinny (W-type). It is being delivered with removable modules: of visible rad radiation 635...650 nm and invisible IR radiation of 830...860 nm for shooting in combination with the night vision devices.

### PERFORMANCE CHARACTERISTICS

Radiation spot size at a distance of 50 m, mm, max.	35
Elevation/azimuth adjustment range, ang. deg.,	±1,5
Boresight deviation after 100 shots at a distance of 25 m, mm, max.	25
Power source	1×CR1/3N
Rated voltage, V	3
Weight, g	75
Operating temperature range, °C:	
- for visible radiation module	-10 ... +50
- for invisible radiation module	-40 ... +50
Dustproof and waterproof	available





LAD-18 LASER TARGET DESIGNATION (item 7447)

PERFORMANCE CHARACTERISTICS	
Wavelength, nm	850±10
Output radiation power (2 levels), mW	0,1; 0,005
Operating distance, m, up to	200
Radiation divergence, mrad	< 0,5
Radiation spot size depending on the distance, mm/m	25/50; 50/100
Elevation/azimuth adjustment range, mrad	±20 (±1°7')
Adjustment step	50 mm at a distance of 100 m
Adjustment accuracy after 1000 shots, mrad	0,5
Adjustment accuracy after 100 operations of reinstallation of the target designator on a guide strip, mrad	1
Power source	1×3 V of type CR123A
Consumption current, mA, max.	5
Continuous operation time without battery replacement, hours, min.	30
Seat on a weapon	Guide strip of the type "Picatinny rail MIL-STD 1913", lateral strip or a barrel with additional bracket
Overall dimensions, mm, max.	113×45×33
Weight, kg, max	0,25
Operating temperature range, °C	-40... +60



LAD-19 LASER TARGET DESIGNATOR-ILLUMINATOR (item 7419)

**DESIGNATION**

LAD-19 Laser Target Designator-Illuminator is designated for conducting of automatic small arms and grenade launchers of all types equipped with guide strip of the type "Picatinny rail MIL STD 1913" aimed fire under night illumination conditions in combination with the night vision goggles, night vision devices of various types, including monoculars. This sophisticated optomechanical device consists of two laser emitters of IR (invisible) range: target designator and illuminator placed in one case.



PERFORMANCE CHARACTERISTICS		
	Target designator	Illuminator
Wavelength, nm	830... 860	
Output radiation power (2 levels)		
Mode H (high power), mW	20	25
Mode L (low power), mW	1	2
Radiation divergence	1'	from 10' to 6°
Elevation/azimuth adjustment range	±1°10'	
Adjustment step, mrad	0,50	±0,05 (50 mm at a distance of 100 m)
Adjustment accuracy after 1000 shots, mrad	0,5	
Adjustment accuracy after 100 operations of reinstallation of the guide strip of the weapon, mrad	1	
Power source	1×3 V of the type CR 123 A	
Overall dimensions, mm, max.	122×81×41	
Weight, g, max.	300	
Operating temperature range, °C	-40... +50	

LAD-21T LASER MODULE (item 9734)

PERFORMANCE CHARACTERISTICS	
<b>Target Designator of visible (red) radiation</b>	
Wavelength, nm	635±10
Output laser radiation power, mW, min.	4,5
Laser radiation power divergence, mrad	0,4 (1')
<b>Target Designator of invisible (IR) radiation</b>	
Wavelength, nm	830±20
Output laser radiation power in a mode of increased power, mW, min.	20
Output laser radiation power in a mode of reduced power, mW, max	1
Laser radiation divergence, mrad	0,4 (1')
<b>IR Illuminator</b>	
Wavelength, nm	830±20
Output laser radiation power in a mode of increased power, mW, min	25
Output laser radiation power in a mode of reduced power, mW, max	2
Laser radiation divergence, mrad	2,8... 105 (10' ... 6°)
<b>General parameters</b>	
Elevation/azimuth adjustment range, mrad	±20 (±1° 10)
Adjustment step, mrad	0,50±0,05
Adjustment accuracy after 1000 shots, mrad	0,5
Power source	123A
Seat on a weapon	Guide strip of the type "Picatinny rail MIL-STD 1913"
Overall dimensions, mm	105×75×55
Weight without a power source, g	350







Laser range finders represent compact devices for quick and accurate measurement of a distance to the chosen object. Thanks to reliability of the design, tightness and resistance of the case to force laser range finders find wide application in the military, construction, topographic and navigation fields.

**"ARGOS" LASER RANGE FINDER (item 9933)****PERFORMANCE CHARACTERISTICS**

Range of distances being measured, m	150... 20000
Measurement error, m	±5
Radiation wavelength, μm	1,064
Visual channel	Monocular
Magnification of the vision channel, ratio	7
Angular field of view, deg.	7
Supply voltage, V	24
Overall dimensions, mm	230×172×88
Weight, kg	3,0
Operating temperature range, °C	-20... +55
The range finder has a connector for connection to RS 485 PC or other PC.	
It can be mounted on the support.	

**DL-2 M LASER RANGE FINDER (item 9721.50)****PERFORMANCE CHARACTERISTICS**

Wavelength, nm	905
Absolute distance measurement error, m	±2
Range of distances being measured, m	20... 2000
Distance measurement resolution, m	1
Quantity of the targets being registered simultaneously	2
Visible magnification of the sight channel, ratio	7
Angular field of view of the sight channel, ang. deg.	8
Range of dioptr adjustment of the eyepiece, dptr.	±5
Power source	4×AA
Rated voltage, V	6 (4×1,5)
Mounting on a rack	1/4"
Interface for data exchange and remote control	optionally, RS-232
Overall dimensions, mm	185×95×65
Weight (metal case), kg	0,96
Operating temperature range, °C	-35... +55
Protection of covers (casing)	IP54
It can be mounted on the support.	



Laser Range Finder Modules are intended for determination of a distance to the object which is within the limits of the field of vision of the coupling lens. The principle of operation of the product is based on measuring of the time of the light signal passage being radiated by the laser range finder module to the target and backwards.

**MLD-600/MLD-1000 LASER RANGE FINDER MODULE (item 6769)****DESIGNATION**

Laser range finder module is intended for measurement of a distance to remote objects which have reflective surface or which are equipped with a corner reflector.

The module is used as a range finder as part of various systems of civil designation for observation and control of the position of the object. The module has a guide strip of the type "Picatinny rail MIL-STD 1913". The time of distance measurement amounts to maximum 1 second.

**PERFORMANCE CHARACTERISTICS**

Range of distances being measured, m	20... 600 / 20... 1000
Type of target	By diffuse reflector / By angle reflector
Accuracy of measurement, m	±1 / ± 0,3
Radiation wavelength, nm	905
Power source	constant-current source with a voltage 6+0,5 V
Overall dimensions, mm	109×76×46
Weight, kg, max.	0,35
Operating temperature range, °C	-30... +55
Interface for data exchange and remote control	RS-485
Is extremely compact and light	

**DL-20 LASER RANGE FINDER MODULE (item 6785)****PERFORMANCE CHARACTERISTICS**

Minimum distance being measured, m	200
Maximum distance being measured*, m	20 000
Accuracy of measurement, m	±3
Wavelength, nm	1064
Frequency of measurement of a distance, Hz	1/5 (12 times per minute)
Supply voltage, V	12 (9÷15)
Overall dimensions, mm	240×130×60
Weight, kg	3,4
Operating temperature range, °C	-30... +55
Cooling system	Heat sink, free convection
Detects three targets	
Interface	RS 422

\* Parameter is being determined in the course of negotiation of the order





## MLR2500 LASER RANGE FINDER MODULE (item 9928)

### PERFORMANCE CHARACTERISTICS

Range of distances being measured, m	30... 2500
Measurement error, m	±2
Wavelength, nm	905
Visual channel	Removable optical viewing device
Magnification of the visual channel, ratio	3,5
Field of view angle, ang. deg.	5
Supply voltage, V	6 (external source)
Overall dimensions, mm	150×120×70
Weight, kg	0,88
Operating temperature range, °C	-35... +55
Interface for data exchange and remote control	RS-232



## "ZENIT" LASER RANGE FINDER MODULE (item 6787)

### PERFORMANCE CHARACTERISTICS

Minimum distance being measured, m	200
Maximum distance being measured*, m	20 000
Accuracy of measurement, m	±3
Wavelength, nm	1064
Frequency of measurement of a distance, Hz	up to 12,5
Supply voltage, V	24 (18÷32)
Overall dimensions, mm	432×202×198
Weight, kg	18
Operating temperature range, °C	-30... +55
Continuous operation time, minutes	up to 30
Method of cooling	Fluid
Detects three targets	
Interface	RS 422



## "LOTOS-M" LASER RANGE FINDER MODULE (item 6786)

### PERFORMANCE CHARACTERISTICS

Minimum distance being measured, m	200
Maximum distance being measured*, m	15 000
Accuracy of measurement, m	±3
Wavelength, nm	1064
Frequency of measurement of a distance, Hz	1... 5
Supply voltage, V	24 (18÷32)
Overall dimensions, mm	325×170×115
Weight, kg	5,6
Operating temperature range, °C	-30... +55
Cooling system	Heat sink, free convection
Detects three targets	
Interface	RS 422



\* Parameter is being determined in the course of negotiation of the order

## VKB-7 BINOCULARS (item 3172)

Binoculars are designated for observation of the remote objects at the open space as well as at the enclosed space. The Binocular is hermetically sealed. It is filled with dry nitrogen which prevents sweat of the optical surfaces during sudden temperature drop. The advantage of the given device is a distance-measuring reticle, separate focusing of eyepieces from -3 to +3 dptr., as well as vibration resistance of the binocular and its serviceability within the temperature interval from -50 to +50 °C. The reliable foldable housing, small size and weight – all these are the additional convenience in the course of exploitation.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	7
Angular field of view, ang. deg.	7
Eye relief, mm	9
Exit pupil diameter, mm	3
Separate focusing of each eyepiece	-3... +3
Overall dimensions, mm, max.	110×77×39
Weight, kg, max.	0,27



## BINOCULAR 7X42 (item 8602)

Prism binocular 7x42 is the device of wide application, including solution of various combat tasks. It is a reliable and convenient device of observation of remote objects with possibility of determination of their approximate angular dimensions. The handy rubberized case enables to safely hold the binocular and top protect it against shocks. The binocular has been developed with regard to special tightness requirements which allows to use this type of binocular under conditions of increased humidity. The case is filled with dry nitrogen which protects optical surfaces against sweat at sudden temperature drop. The great diameter of opening and coated optics ensure the possibility for long and convenient observation of the objects.

### PERFORMANCE CHARACTERISTICS

Magnification, ratio	7
Angular field of view, deg.	7
Lens diameter, mm	42
Exit pupil diameter, mm	6
Eye relief, mm	21,5
Resolution power, ang. s	10
Reticle scale division value, etc.	0-10
Interpupillary distance, mm	54... 74
Diopter adjustment range of eyepieces, dpnr.	-1
Light transmission, %, min.	70
Overall dimensions, mm, max.	160×170×80
Weight, kg, max.	1,250



## BKTS 7x18 COMPACT PRISM BINOCULAR (item 3009)

Binocular has the unique optical system for observation of remote objects, objects of wildlife, sports competitions and other mass shows at day time at the open space, in stadiums and large enclosed spaces. The binocular has the mechanism of central focusing. By means of a distance-measuring scale which is in the right eyepiece it is possible to determine the distance to the object of observation. The optical surfaces of the binocular are covered with the antireflection coating which ensures clear and bright image.

### PERFORMANCE CHARACTERISTICS

Visible magnification, ratio	7±0,35
Angular field of view, deg.	6±0,3
Resolution power within the field of view, ang. s	12
Eyepiece diopter adjustment range, dpnr.	-3... +3
Exit pupil diameter, mm	2,6±0,1
Eye relief, mm	9±0,9
Overall dimensions, mm	97×73×28
Weight, kg	0,21





## IR IL-1000M LIGHT SOURCE (item 6747.50)

### DESIGNATION

The IR Light Source is designated for large distances and provides for target designation and radar target for land forces and air force, for example, for signal injection and invocation of aviation blows: the beam of the given device is aerially perceptible at a distance of approximately several tens kilometres. Another field of application – counteraction to the night vision devices of the enemy.



### PERFORMANCE CHARACTERISTICS

Radiation wavelength, nm	810±10
Radiation mode	Continuous, pulse
Output power of continuous laser radiation (2 levels), mW	450 / 850
Voltage, V	1,5
Power source	4×AA
Seat on a weapon	Guide strip of the type "Picatinny rail MIL-STD 1913"
Overall dimensions, mm	235×75×55
Weight, kg	0,85
Methods of switching on	switch; remote control (contact device)

## IVG-500 ILLUMINATOR (item 9739)

### DESIGNATION

IVG-500 Illuminator is designated for target illumination and temporary blinding of the enemy (does not cause irreversible damage of the retinal), thus restricting, or making impossible, transport facilities driving, shooting and other aggressive actions. The efficiency of green laser amounts to approximately 300 m under conditions of bright sunny day and over 3 km under night illumination conditions.

### PERFORMANCE CHARACTERISTICS

Radiation wavelength, nm	532±10
Radiation mode	continuous
Output power of laser radiation, mW	250
Supply voltage, V	6
Power source	2×CR123A
Overall dimensions, mm, max.	185×45×60
Weight, kg, max	0,35



## LED TACTICAL LIGHT (item 8188)

### DESIGNATION

The LED tactical light is intended for detection and illumination of the target at observation and conducting shooting at night and under low illumination conditions, as well as for blinding of the enemy in close-in fighting. It is being mounted on AK submachine guns of all modifications and other automatic small arms by means of a bracket (p. 56) which is included in a complete set.



### PERFORMANCE CHARACTERISTICS

Range of operation, m	200
Divergence of focused light flux, ang. deg., max.	11
Supply voltage	3,7
Power source	Lithium cell 18650
Continuous operation time with a set of batteries in turbo mode, minutes, min.	90
Fitting diameter, mm	24,5
Overall dimensions (without side-mounted button) (diameter x length), mm, max.	47×160
Weight, kg, max	0,3

## INDIVIDUAL LED TACTICAL LIGHT (item 8310)

### DESIGNATION

The tactical light is designated for autonomous illumination at fire extinguishing, conducting of reconnaissance in smoke-filled premises and wrecking connected with these activity, as well as for designation of disposition of the fireman or salvor by means of red signal light. It can resist extremely high temperature up to +150 °C for 3 minutes. The design of the tactical light enables to illuminate both along the tactical light axis, as well as at angle of 90° to it. The tactical sight provides focusing of the light spot with adjustment of its size. The maximum size of the light spot - Ø0,8 m at a distance of 1 m. The tactical light is equipped with the electronic system of LED indication of the accumulator battery discharge level.



### PERFORMANCE CHARACTERISTICS

Light source	LED XP-G
Supply voltage, V	3,7
Power source	Lithium cell 18650
Continuous operation time, h., min.	5
Light flux, lumen, min.	100 (for focused beam) 35 (for scattered beam)
Class of watertightness	Ip×65
Overall dimensions, mm, max.	200×50×50
Weight, kg, max.	0,3



## DiaR-IR1 IR TACTICAL LIGHT (item 9751)

### DESIGNATION

DiaR-IR1 Infrared Tactical Light is designated for illumination of the field of view during work with the night vision sights and night vision devices under low illumination conditions and in complete darkness.



### PERFORMANCE CHARACTERISTICS

Wavelength, nm	805±5
Radiation power, mW (min.)	70... 100
Radiation divergence, mrad.	43... 174 (2,5°... 10°)
Radiation spot size, m	4... 17,5 m/100 m
Radiation source	Light diode
Supply voltage, V (power source)	3 (1×CR123)
Overall dimensions(diameter, length), mm	33×125
Weight without power sources, g	140
Range of vision of the device with the image intensifier tube of generation 1	
- divergence of radiation 10°, m, min.	150
- divergence of radiation 3°, m, min.	300
Range of vision of the device with the image intensifier tube of generation II+ at:	
-divergence of radiation of 10°, m, min.	200
-divergence of radiation of 3°, m, min.	400

## DiaR -IR2 LASER ILLUMINATOR (item 9767)

### DESIGNATION

The illuminator is designated for illumination of the objects of observation in dark hours during exploitation of the night vision devices and night hunting sights.

The illuminator is being produced in two versions:

–DiaR IR2 Laser Illuminator – without a bracket;

–DiaR IR3 Laser Illuminator – with a bracket for mounting on the guide strip of Weaver type.

The Illuminator is designated for exploitation within a temperature range from -40°C to +50°C.

Power source – one cell CR 123A.



### PERFORMANCE CHARACTERISTICS

Laser radiation wavelength, nm	850±10
Radiation power, mW	30... 45
Mode of operation	continuous
Radiation divergence angle adjustment range, ang. deg.	2... 8
Maximum consumption current, mA	80±15
Supply voltage, V	2,5... 3
Overall dimensions, mm:	
- DiaR IR2 (diameter, length)	25×157
- DiaR IR3 (width, height, length)	35×39×157
Weight (without power source), kg:	
- DiaR IR2	0,095
- DiaR IR3	0,135
Fitting diameter of the bracket, mm	20

## AZS-1-001 SPECIAL LED LANTERN (item 8309)

### DESIGNATION

The special LED lantern is designated for application during liquidation of the consequences of accidents, fires and other emergency situations as the portable light source of the local illumination of individual and collective use being carried by one person, conducting of reconnaissance as part of Gas and smoke protection service for estimation of the situation, life-saving and salvage, illumination of the place of works on liquidation of emergency situations.

### PERFORMANCE CHARACTERISTICS

Rated voltage, V	6
Capacity of accumulator battery, Ah	4,5
Mean life of accumulator battery (charge-discharge), cycles	500
Maximum time of recharging of the accumulator battery, h, max.	10
Adjustable time of continuous operation time without recharging in different modes, h, min.	5/8
Rated consumption current, A	0,9/0,3
Illumination at a distance of 1 m from the lamp, lx, min.	2500/1600
Angle of optical radiation, deg.	10
Range of light beam (at illumination of 1 lx), m, min.	50/40
Angle of turn of the lamp relative to horizontal axis, min.	110
Overall dimensions, mm, max.	258×103×180
Weight of the lantern, kg, max.	2,0
Service life, years, min.	10
Warning of battery discharge	Blinker light of the lantern
Indication of battery discharge	available
Protection against deep discharge of the battery	available
Body protection class	IP-65



## CHEEKPIECE SUPPORT (item 8155)

### DESIGNATION

The cheek support is intended for mounting on the folding metallic butt of AKS-74, AKS-74U submachine guns for assurance of high-speed fire.

Adjustment implies rotation of the supporting part by 180 degrees for convenience of carrying of a submachine gun with a folded butt and also the clamping device with a seat for mounting of a strip on the butt of the weapon.



### PERFORMANCE CHARACTERISTICS

Two positions of mounting at rotation of support by 180 deg.	Left Right
Overall dimensions, mm, max.	60×30,5×130
Weight (without package and accessories), kg, max.	0,15
Operating temperature range, °C	-40... +50





## 2A ADAPTIVE FOLDING BUTT (item 7530.10)

### DESIGNATION

Adaptive 2A folding butt is intended for assurance of AKS74, AK103, AK104 submachine guns aimed fire with the folding butt equipped with optical, night and RKP and RK-P2S Collimator Sights. The butt can change its length by 8 cm collimator sights and has three fixed positions of the angle of inclination in horizontal plane.

### PERFORMANCE CHARACTERISTICS

Butt length gradation number	8
Length adjustment range, mm	80
Overall dimensions in folded position in firing order, mm	260×40×110
Weight with a standard frame butt of the submachine gun, kg, max.	0,62



## BIPOD FOR KALASHNIKOV SUBMACHINE GUNS (item 8156)

### DESIGNATION

The bipod is designated for mounting on Kalashnikov submachine guns and serves for increase of efficiency of conducting of aimed fire at the expense of uniformity of stop on various bearing surfaces. The bipod has the possibility of rotation of a supporting part by 90 degrees for convenience of carrying of a submachine gun, as well as the seat for mounting on the cleaning rod with the forestock of AKM submachine guns.

### PERFORMANCE CHARACTERISTICS

Two folding positions:	
- operating	Fig. 1
- carrying	Fig. 2
Overall dimensions, mm, max.:	
- operating position	93×290×256
- carrying position	258×63×60
Weight (without package and accessories), kg max.	0,5
Operating temperature range, °C	-40... +50



Fig. 1

Fig. 2

## BIPOD FOR SVD (item 8215-30)

### DESIGNATION

The bipod is intended for installation on SVD and serves for increase in efficiency of conducting of aimed fire at the expense of uniformity of stop on various bearing surfaces.

The bipod has the possibility of rotation of a supporting portion by 90 degrees forward to forestock and by 75 degrees backward to the magazine for convenience of carrying of SVD, as well as adjustable height for each support depending on the position and the individual peculiarities of the shooter.

### PERFORMANCE CHARACTERISTICS

Three positions of folding:	
- carrying (to forestock)	Fig. 1
- carrying position (to magazine)	Fig. 2
- operating position	Fig. 3
Overall dimensions, mm, max.:	
- operating position	66×175...215×193...245
- carrying position (to forestock)	220...280×70×60
- carrying position (to magazine)	173...230×90×90
Weight (without packing and accessories), kg, max.	0,5
Operating temperature range, °C	-40... +50



Fig. 1



Fig. 2



Fig. 3

## DEVICE FOR GUIDE STRIP MOUNTING (item 7530.60)

### DESIGNATION

The device is designated for mounting of the guide strip on AK submachine gun at repair shops. The guide strip is being fastened on the lateral surface of the submachine gun receiver by means of rivets enclosed to the complete set of delivery of the guide strip.

### PERFORMANCE CHARACTERISTICS

Overall dimensions in a container	
(length, width, height), mm, max.	370x175x200
Weight in a container, kg, max.	5,0





Additional facilities are designated for adjustment of optical and optoelectronic sights being mounted on a weapon, adjustment of standard iron sights as well as for control of adjustment of the sights on the weapon after marches, landing, long term storage without check of operation by shooting. Application of bore sight collimators allows to save ammunition essentially.

## OPTICAL BORE SIGHT COLLIMATOR (item 7467.01)

Is designated for adjustment of optical, collimator and night sights on the weapon.

### PERFORMANCE CHARACTERISTICS

Collimator focal distance, m	200
Lens clear aperture, mm	35
Deviation of parallelism of an axis of a seat for barrel insert relative to optical axis of the collimator, ang. m, max.	±1
Center-to-center spacings between optical axis of the collimator and the axes of the seats for barrel insert, mm	42; 68
Overall dimensions, mm	133×98×45
Weight, kg	0,5
Supply voltage, V	3
Power source	1xCR1/3N



## LASER BORE SIGHT COLLIMATOR (item 7467.02)

Is designated for adjustment of the laser target designators or any other sights mounted on a weapon.

### PERFORMANCE CHARACTERISTICS

Laser radiation wavelength, nm	635
Output laser radiation power, mW, min.	3,0
Output laser radiation beam divergence, mrad, max.	0,5
Deviation from parallelism of the seat for barrel insert of the optical axis of the laser radiation beam, ang. min., max.	±1
Overall dimensions, mm	100×45×25
Weight, kg., max	0,15



## BORE SIGHT COLLIMATORS OF IRON SIGHTS (item 7544.20)

It is designated for adjustment of standard iron sights on a weapon. Composition: bore sight collimator of iron sight, device for foresight adjustment, barrel insert 7,62 mm, vertical adjustment key.

### PERFORMANCE CHARACTERISTICS

Lens clear aperture, mm	22
Distance between the optical axis and the barrel insert axis, mm	50
Elevation/azimuth adjustment range, ang. min.	± 30
Overall dimensions of the bore sight collimator of iron sight, mm, max.	140×81×43
Weight of a bore sight collimator of iron sights, kg, max.	0,35
Weight of the device for adjustment of a foresight	0,6



## BARREL INSERTS

### DESIGNATION

Barrel inserts are intended for installation of the bore sight collimators on the weapon. They are being produced with fixed calibres of 5,45 mm, 7,62 mm and smoothly adjustable calibres:

- A1 - 5,33 ÷ 6,86 mm
- A2 - 7 ÷ 8,58 mm
- A3 - 8,89 ÷ 10,41 mm



## DT-7,6 MUZZLE BRAKE (item 8202)

### DESIGNATION

The product is intended for mounting on AKM submachine guns for the purpose of increase of camouflage and decrease of the level of sound and flame at carrying out of combat fire, both in the daytime and at night. Mounting on "Saiga" carbines is possible.



### PERFORMANCE CHARACTERISTICS

Overall dimensions, mm	312×48×55
Weight (without a complete set of spare parts and accessories and packing), kg	1,2

## DT-5,4 MUZZLE BRAKE (item 8203)

### DESIGNATION

The product is intended for mounting on AK-74 submachine guns for the purpose of increase of camouflage and decrease of the level of sound and flame at carrying out of combat fire, both in the daytime and at night. Mounting on "Saiga" carbines is possible.



### PERFORMANCE CHARACTERISTICS

Overall dimensions, mm	270×48×62
Weight (without a complete set of spare parts and accessories and packing), kg	0,95

## CONTAINER 4-AAA (item 8120)

### DESIGNATION

It is an overall and electric analogue of 5D-0,55S storage battery, the power source in which are 4 primary power sources of dimension type AAA with a voltage of 1,5 V. They are used in optoelectronic items 1PN58, 1PN51.

### PERFORMANCE CHARACTERISTICS

Voltage, V	6
Overall dimensions, mm (øxH)	ø39×52
Weight without power sources, kg	0,08





## BRACKETS

item 7475-01



item 3035-10



item 7464-40-02



item 7475.55.00.000



item 7350



item 7464.30-00



item 7475.02-01-000



item 3069-16



## EYE SHADES

item 3034



item 3300



## LENS HOOD

item 3296



## LIGHT FILTER

item 3034



## LENS COVERS

item 3324



item 3301



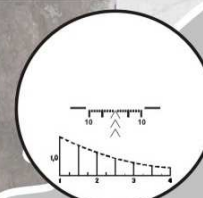
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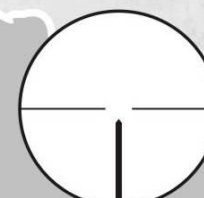
### AIMING RETICLES OF THE OPTICAL SIGHTS



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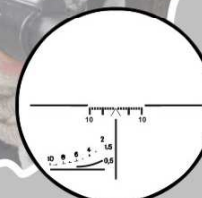
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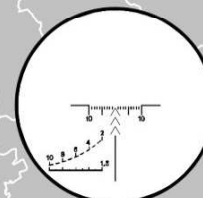
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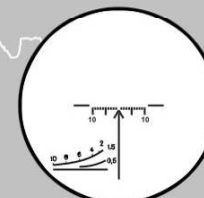
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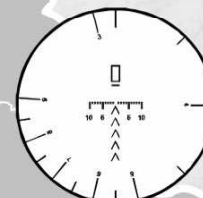
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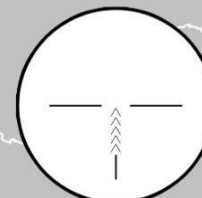
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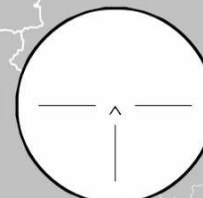
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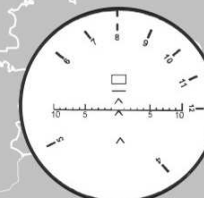
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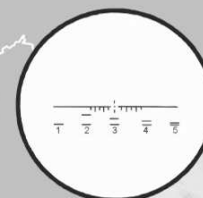
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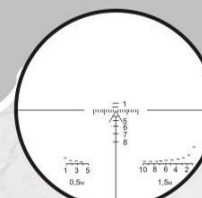
Reticle No 10



Reticle No 11



Reticle No 12



Reticle No 13



Reticle No 14



Reticle «Duplex»

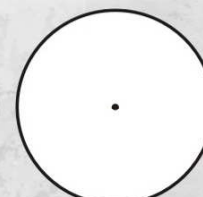


Reticle Mil. Dot

### AIMING MARKS OF THE COLLIMATOR SIGHTS



Mark No 1



Mark No 2



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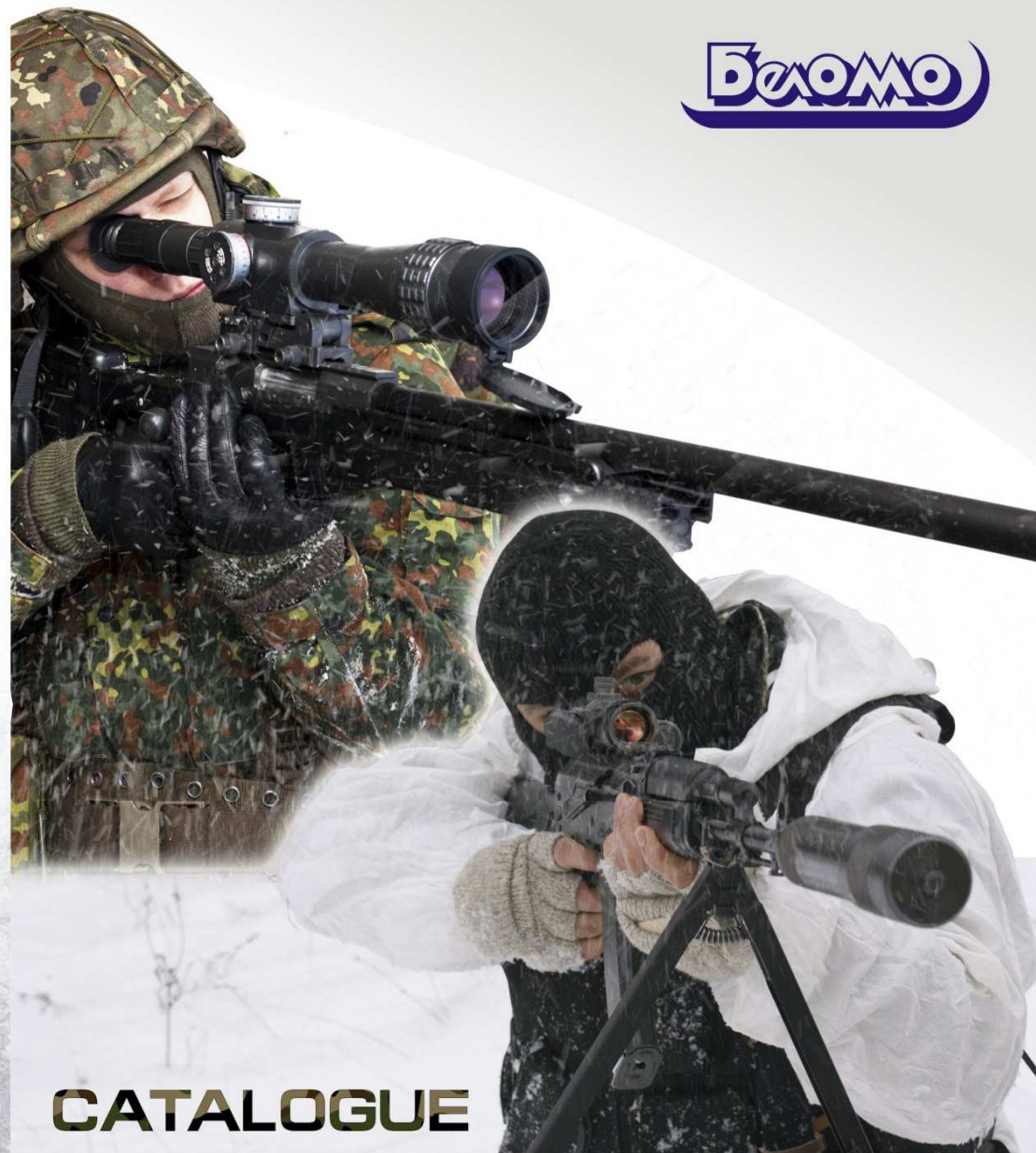


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