Dear Customers,
Dear Partners,

Opticoelectron Group JSCo has more than 45 years long experience in production of optomechanical and optoelectronic devices and systems for military purposes.

Our focus has always been on providing you with high-quality products and solutions, and we work hard to ensure that our products and services have the features and functionality that best contribute to your success.

As always, customer service is our top priority. We appreciate your loyalty and look forward to serving you even better in the years to come.

Sincerely,

dipl.eng. Ivan Garchev
dipl.eng. Nikodim Kazandzhiev

Executive Managers of Opticoelectron Group JSCo
Opticoelectron Group JSCo is one of the most advanced companies specialized in optomechanical, optoelectronic and laser devices and systems for defence and security, medicine, device-building, machine-building. The company has more than 45 years of history and traditions, and it is considered as a leader of optical devices production in Bulgaria, as well as an international market leader.

It has a closed cycle of production starting from research and development going through production process to marketing, promoting and trading finished products. The company head office and its premises are in the town of Panagyurishte which is 90 km. south-east of capital city Sofia and 80 km. north-west of Plovdiv (the second largest city in Bulgaria). It is located in an Industrial Park of 260 000 sq.m. where 106 000 sq.m. of the total area are production plots.

Over 97% of total production goes on export to EU countries, North America and the Middle East. Opticoelectron Group JSC is ISO 9001, ISO 14001, ISO 18001 and ISO 27001 certified. Our NATO Commercial and Governmental Entity code (NCAGE) is 000DU. Opticoelectron Group JSC has obtained a Certificate for Registry in the field of international relations “NATO-SECRET” and a Certificate for access to operate with state classified information. The company also has a statute of supplier for US Government - DUNS Registration.

Key defence products in our portfolio are as follows: anti-aircraft and ground artillery sights for firing in daytime and in nighttime; day, night and thermal optical sights, SWIR lenses, laser range finders, laser target designators, optical systems for armoured vehicles, video observation and surveillance systems.

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**HI-TECH INDUSTRIAL PARK “OPTICOELECTRON”**

- **Total site area:** 260 000 m²
- **Total building footprint:** 50 100 m²
- **Total building area:** 106 500 m²
OS4XL (17X4)  
Optical Sight For Fire Arms  
NSN 1240-50-001-5145  

Description:  
Designed for battlefield observation and for performing fire during daytime, in disk and night on targets using 5.56 n 45 mm or 7.62 x 39 mm assault rifles.  

Technical characteristics:  
Magnification: 4 x  
Field of view: 6.3°  
Exit pupil distance: 34.7 mm  
Exit pupil diameter: 4.25 mm  
Resolution: ≤ 24” in the center  
≤ 35” at the end of view  
Zeroed at 300 m  
Parallax:  
Diopter adjustment (fixed): -0.6 dptr to -0.2 dptr  
Reticle: Ballistic and long range reticle  
Reticle illumination, LED: λ from 620 nm to 640 nm  
Adjustment range: ±1° in elevation and direction  
Adjustment accuracy: 1MOA  
Power supply source: 1 pc 3.6V LS14250 Lithium battery  
Operational time with 1 set: min 100 h  
Sighting mark brightness control: Manual with 4 level and automatic electronic control of the sighting mark brightness depending on the background illumination  
Weight without battery: Less than 0.280 kg  
Overall sizes (without eyecup): 150 x 70.6 x 70.5 mm  
Attachment: Picatinny rail
OS 6XL
Optical Sight For
Fire Arms

Description:
Designed for battlefield observation and for performing fire during daytime using 7.62 Light Machine Gun (LMG).

Technical characteristics:
Magnification: 6x +/- 5%
Field of view: 5°
Eye relief: 71 mm
Exit pupil diameter: 5 mm
Dioptr adjustment: Adjustable from -4 to +2
Parallax: Zeroed at 400m
Adjustment range (H/V): ± 8 mils
Adjustment accuracy: 0.125Mils (0.42MOA)
Reticule: Ballistic and long range
Reticule illumination, LED: λ from 620nm to 640nm
Aiming mark brightness control: Manual with 6 levels
Power supply source: Lithium battery 3.6V
Operation time with one battery: ≥ 100h
Overall dimensions (without eyecup): 290x90x75 mm
Weight without battery: 0.830kg
Rail Interface System: Picatinny (MIL STD 1913)
Operational temperature: from -40°C to +50°C
Storage temperature: from -50°C to +50°C
**Description:**

Designed for battlefield observation and for performing fire during daytime, in dusk and night on illuminated targets using fire arms AK-47H, AK-74N, PKN and RPK-74N. The sight provides determining of the maximum sighting range of fire arms and allows measuring of distances up to 1000 m. at base 1.7 m. Large field of view for a better target detection and even more precise aiming due to a prismatic optical system.

**Technical characteristics:**

- **Magnification:** 4 x
- **Field of View:** 8°
- **Exit pupil distance:** ≥ 35 mm
- **Exit pupil diameter:** ≥ 6.5 mm
- **Resolution:** ≤ 12"
- **Mechanism for inserting the fire distance:**
  - for AK-47N:
  - for AK-74N, PKN & RPK-74N: from 100 m to 800 m at intervals of 100 m from 300 m to 1000 m at intervals of 10 m
- **Corrections mechanism, artillery thousandths (1/6000):** ± 0 - 04
- **Operational temperature range:** ± 50°C
- **Power supply source:** Lithium battery SAFT S R-3.6V
- **Weight:** 0.8 kg
- **Size:** 180 x 80 x 240 mm
1 OM 8 or 1 OM 81
Telescopic Optical Sight
NSN 1240-50-000-9499 or NSN 1240-50-000-9500

Description of 1 OM 8:
Designed for target observation with magnification. Determining the approximate distance to the target and accurate target aiming. Increased fire efficiency. Mounted to the Anti-aircraft automatic sight ZAP-23, hunting rifles and combined battle and hunting guns.

Description of 1 OM 81:
It is used for target observation under magnification and for determining an estimated target distance and to increased fire efficiency. It is mounted together with collimating sight 1CM80 on the artillery 6U6 mount with heavy machine-gun HCB 12.7 mm.

Technical characteristics:
- Magnification:
- Field of View: 4°30’
- Exit pupil distance: 72 mm
- Exit pupil diameter: 6 mm
- Resolution: 17"
- Fire distance: 5000 to 2000 m
- Fire distance of 1 OM 81: up to 2000 m
- Value of a reticle division of the distance scale: 100 m
- Side corrections range, artillery thousandths (1/6000): ± 0 - 10
- Value of a reticle division of the side corrections, artillery thousandths (1/6000): 0 - 010
- Parallax: ≤ 2"
- Attaching diameter of the sight cylinder part: 26.5 mm
- Operational temperature range: n/a
- Operational temperature range of 1 OM 81: -45° C to +50° C
- Weight: 0.200 kg
- Size: 45 x 170 mm
RDS 22
Red Dot Sight

Description:
It is designed for fast and accurate fire at day, in dusk and night on the low illuminated targets with short barrel submachine guns and sporting guns.

Technical characteristics:

- **Magnification:** 1 ± 0.05 x
- **Clear aperture:** 22 mm
- **Type of the aiming mark:** reticle or dot
- **Eye relief:** from 10 mm to infinity
- **Inclination of the aiming mark:** ≤ 30°
- **Vizable size of the aiming mark:** ≤ 1-2 MOA
- **Color of the sighting mark:** red
- **Parallax:** from 0 to -0.02 D
- **Step control of the aiming mark brightness:** 4 steps

Automatic electronic control of the sighting mark brightness (opticon): depending on the background illumination

- **Power supply source:** AA or 1/2 AA Lithium battery
- **Current consumption at 100 Lx illumination:** ≤ 1 mA
- **Non-stop operation illumination:** more than 200 hours
- **Operational temperature range:** from -40°C to +50°C
- **Sizes:** 104 x 68 x 63 mm
- **Weight (without battery):** ≤ 0.250 kg
- **Color:** black
- **Coating:** antiglare coating
- **Range:** more than 100 m
- **Accuracy of adjustment in elevation and direction:** ± 15 mrad
- **Attachment:** Picatinny rail
MK 22
Red Dot Sight
NSN 1240-50-001-1727

Description:
Designed for fast and accurate fire at daytime, in dusk and night (with night vision goggles) on low illuminated targets using short barrel submachine guns and sporting guns.

Technical characteristics:
- Magnification: $1 \pm 0.05 \times$
- Clear aperture: 22 mm
- Reticle type: "T"
- Inclination of the reticle: $\leq 30'$
- Color of the sighting mark: red
- Parallax: from 0 to -0.02 D
- Automatic electronic control of the sighting mark brightness: depended on the background illumination
- Power supply source: 1/2 R6.3 V
- Current consumption at 100 Lx illumination: $\leq 0.360$ mA
- Non-stop operation at average illumination: up to 2600 hours
- Operational temperature range: $\pm 50^\circ$ C
- Size: 132 x 108.5 x 55 mm
- Weight: $\leq 0.140$ kg
MK 30
Red Dot Sight
NSN 1240-50-000-1576

Description:
Designed for fast and accurate fire at daytime, in dusk and night on low illuminated targets using short barrel submachine gun AR-M4SF (caliber 5.56 mm or 7.62 mm) with folding stock and other modifications of sub-machine gun AR-S. Designed for fast and accurate fire at daytime, in dusk and night (with night vision goggles) on low illuminated targets using short barrel submachine guns and sporting guns.

Technical characteristics:
Magnification: 1 ± 0.05 x
Clear aperture: 30 mm
Shape of the reticle mark: circle
Angle size of the sighting mark: 0.5 to 0.3 mrad
Color of the sighting mark: red
Parallax of the sighting mark: from 0 to -0.02 D
Automatic electronic control of the sighting mark brightness: depended on the background illumination
Power supply source: 1 pc Lithium battery 1/2 R6 3.6 V
Current consumption at 100 Lx illumination: ≤ 0.360 mA
Non-stop operation at average illumination: up to 2600 hours
Operational temperature range: ± 50°C
Size: 107 x 84.5 x 70 mm
Weight: ≤ 0.350 kg
QCS 22 UBGL
Red Dot Sight
NSN 1240-50-001-1728

Description:
Designed for fast and accurate fire at daytime, dusk and night against low illuminated targets using under barrel grenade launchers. Designed for fast and accurate fire at daytime, in dusk and night (with night vision goggles) on low illuminated targets using short barrel submachine guns and sporting guns.

Technical characteristics:
- Magnification: 1 ± 0.05 x
- Clear aperture: 22 mm
- Reticle type: "T"
- Inclination of the reticle: ≤ 30'
- Color of the sighting mark: red
- Parallax: from 0 to -0.02 D
- Ballistic scale: from 0 to 250 m at intervals of 50 m
- Automatic electronic control of the sighting mark brightness:
- Power supply source: 1pc Lithium battery 1/2 R6, 3.6V
- Current consumption at 100 Lx illumination: ≤ 0.360 mA
- Non-stop operation at average illumination: up to 2600 hours
- Operational temperature range: from -40° C to +50° C
- Storage temperature range: from -50° C to +60° C
- Size: 106 x 87 x 60 mm
- Weight: ≤ 0.180 kg
QCS22-MK
Quadrant Collimating Sight
For Underbarrel Grenade Launcher of “Milkor”
NSN 1240-50-001-1728

Description:
Designed for fast and accurate fire at daytime, dusk and night on low illuminated targets with under barrel grenade launchers MILKOR. Designed for fast and accurate fire at daytime, in dusk and night (with night vision goggles) on low illuminated targets using short barrel submachine guns and sporting guns.

Technical characteristics:

- Magnification: 1 ± 0.05 x
- Clear aperture: 22 mm
- Reticle type: “T”
- Inclination of the reticle: ≤ 30’
- Color of the sighting mark: red
- Parallax: from 0 to -0.02 D
- Ballistic scale: from 0 to 400 m at intervals of 50 m
- From 0 to 600 m, at increment of 75 m: 240 m
- Automatic electronic control of the sighting mark brightness: depended on the background illumination
- Power supply source: 1pc Lithium battery 1/2 R6, 3.6V
- Current consumption at 100 Lx illumination: ≤ 0.360 mA
- Non-stop operation at average illumination: up to 2600 hours
- Attachment: Picatinny rail
- Operational temperature range: from -40°C to +50°C
- Storage temperature range: from -50°C to +60°C
- Size: 106 x 107 x 60 mm
- Weight: ≤ 0.190 kg
KV-L Collimating Sight

Description:
It is used for sighting of ZAP 23 anti-aircraft automatic sight and other movable launchers on air targets.

Technical characteristics:
Value of a scale division, artillery thousandths (1/6000): 0 - 05
Parallax of the scale, artillery thousandths (1/6000): ≤ 0 - 01'
Operation temperature range: from -45°C to +50°C
Size: 120 x 133 x 140 mm
Weight: 0.09 kg

K10-T Collimating Sight

Description:
Designed for sighting of movable launchers to detect and engage air and ground targets.

Technical characteristics:
Objective Focal distance: 61.47 mm
Objective clear aperture: 40 mm
Value of a small division of the range-finder, artillery thousandths (1/6000): 0 - 10
Value of a big division of the range-finder, artillery thousandths (1/6000): 0 - 20
Angle value of the range-finder divisions of the small reticle ring: 4°36' (0-80 art. thousandths)
Angle value of the range-finder divisions of the big reticle ring: 6°53' (0-120 art. thousandths)
Exit pupil distance for the small reticle ring: 240 mm
Exit pupil distance for the big reticle ring: 155 mm
Parallax of the reticle: ≤ 4'
Inclination of the reticle: ± 30'
Inclination of the sighting line to horizontal plane: ± 1°
Operational temperature range: from -60°C to +55°C
Size: 120 x 82 x 90 mm
Weight: 0.48 kg
LASER TARGET DESIGNATORS

Series

H1-ILTD-1
Power Infrared Laser Target Designator

H1-RLTD-1
High Power Red Laser Target Designator

H1-GLTD-1
High Power Green Laser Target Designator

HRLTD-1
Power Red Laser Target Designator

HGLTD-1
Power Green Laser Target Designator

Description:
It is designed to create a light dot on a potential target. This dot indicates where the gun is directed. The target designator is designed for fixing the interface type “Picatinny rail.”

Technical characteristics:
- Infrared wavelength: 830 nm ± 2%
- Mode switching: Pressure switch
- Laser output: ≥ 30 mW
- Class of laser radiation: 3B
- Divergence of laser beam: 0.3 - 0.5 mrad
- Light beam/dot in night condition range: ≥ 2000 m
- Minimum clear aperture: 3.5 - 4 mm
- Accuracy of adjusting in elevation and direction: ± 20 mrad ± 10%
- Accuracy of adjusting: ± 0.5 mrad ±10%
- Consumption: < 100 mA / 3.6 V
- Power supply source: 1.5V, 3V, 3.6V or 3.7V AA battery

Protection against the wrong way of battery switching on: Yes

*Operational temperature range: -35°C to +55°C
Duration of operation with a battery (1.5V): > 10 h
Duration of operation with a battery (3.6V): > 20 h
Hermetic: 2 h in 1 m water depth
Weight without battery: < 0.250 kg
Size (L/W/H): 93 x 58 x 46 mm
Attachment: Picatinny Rail
Time for changing from march to battle position: < 1 min

* Operational temperature range corresponds to 3.6V Li type AA battery.
OE RIRW4
Red / Infrared Laser Pointer And Illuminator

Technical characteristics:
Main technical data
Dimensions: < 70 x 78 x 100 mm
Power supply source: Battery 18650 3.7V 3A
Operating temperature: from -20° C to +50° C
Storage Temperature: from -30° C to +50° C
Weight without battery: < 0.480 kg
Working time in HIGH mode:
with both modules: More than 4 h
Attachment: Picatinny rail
Body material: Aluminium alloy

Technical data of IR Illuminator:
Output power: > 500 mW
Beam Divergence: 1 - 100 mrad
Wavelength: 830 nm
Range: > 600 m
Current consumption in HIGH mode: < 120 mA / 3.7 V
Current consumption in LOW mode: < 30 mA / 3.7 V
Spot brightness at 5 m distance: > 150 Lux

Technical data of IR pointer:
Output power: 30 mW
Beam Divergence: 0.5 mrad
Wavelength: 830 nm
Range: > 600 m
Current consumption in HIGH mode: < 100 mA / 3.7 V
Current consumption in LOW mode: < 30 mA / 3.7 V
Beam size at 100 m distance: < 0.1 m

Technical data of White Illuminator:
Output power: > 2W
Beam Divergence: < 100 mrad
Range: > 50 m
Current consumption in HIGH mode: < 700 mA / 3.7 V
Current consumption in LOW mode: < 300 mA / 3.7 V
Beam size at 100 m distance: < 10 m
Spot brightness at 5 m distance: > 500 Lux

Technical data of Red Pointer:
Output power: 10 mW
Beam Divergence: < 0.4 mrad
Wavelength: 650 nm
Range: > 100 m
Current consumption in HIGH mode: < 100 mA / 3.7 V
Current consumption in LOW mode: < 30 mA / 3.7 V
Beam size at 100 m distance: < 0.1 m

Description:
OE RIRW4 is a combination of laser pointers and illuminators designed to create a light dot or spot on a potential target and indicate where the gun is directed. The device has four modules and it works in two main modes.

Modules: IR Illuminator, IR pointer, white illuminator and red pointer.

Two main modes: LOW and HIGH

The set includes: Device, case, O-rings, special keys, battery charger and battery.
LTD-Y
Laser Target Designator

Description:
It is designed to create a light dot on a potential target. This dot indicates where the gun is directed. The target designator is designed for fixing the interface type "Picatinny rail".

Technical characteristics:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrared wavelength:</td>
<td>830 nm ± 2%</td>
</tr>
<tr>
<td>Red wavelength:</td>
<td>650 nm ± 2%</td>
</tr>
<tr>
<td>Green wavelength:</td>
<td>520 nm ± 2%</td>
</tr>
<tr>
<td>Mode switching:</td>
<td>Pressure switch</td>
</tr>
<tr>
<td>Infrared laser output:</td>
<td>≥ 30 mW</td>
</tr>
<tr>
<td>Red or green laser output:</td>
<td>≥ 10 mW</td>
</tr>
<tr>
<td>Class of laser radiation:</td>
<td>3B</td>
</tr>
<tr>
<td>Divergence of laser beam:</td>
<td>0.3 - 0.5 mrad</td>
</tr>
<tr>
<td>Minimum clear aperture:</td>
<td>3.5 - 4 mm</td>
</tr>
<tr>
<td>Accuracy of adjusting in elevation and direction:</td>
<td>± 20 mrad ± 10%</td>
</tr>
<tr>
<td>Accuracy of adjusting:</td>
<td>± 0.4 mrad ± 10%</td>
</tr>
<tr>
<td>Consumption:</td>
<td>&lt; 100 mA / 3.6 V</td>
</tr>
<tr>
<td>Power supply source:</td>
<td>1.5V, 3V, 3.6V or 3.7V AA type of battery</td>
</tr>
<tr>
<td>Protection against the wrong way of battery switching on:</td>
<td>Yes</td>
</tr>
<tr>
<td>Operational temperature range:</td>
<td>-35°C to +55°C</td>
</tr>
<tr>
<td>Duration of operation with a battery (1.5V):</td>
<td>&gt; 10 h</td>
</tr>
<tr>
<td>Duration of operation with a battery (3.6V):</td>
<td>&gt; 20 h</td>
</tr>
<tr>
<td>Hermetic:</td>
<td>2 h in 1m water depth</td>
</tr>
<tr>
<td>Weight without battery:</td>
<td>&lt; 0.115 kg</td>
</tr>
<tr>
<td>Size (L/W/H):</td>
<td>135 x 32 x 32 mm</td>
</tr>
<tr>
<td>Interface system:</td>
<td>Picatinny rail</td>
</tr>
<tr>
<td>Time for changing from march in battle position:</td>
<td>&lt; 1 min</td>
</tr>
</tbody>
</table>

* Operational temperatere range corresponds to 3.6V Li type AA battery.
Description:
Designed to be mounted on pistols having standard interface according to MIL STD 1913. Combines the functions of a flashlight and a laser target designator which are built in a common metal body. Both devices work with the same batteries placed in the common body as well. This tactical laser-flashlight is compact and easy to use.

Technical characteristics:
Flashlight:
- Light source: LED
- LED color: white
- Spot shape: Circle / Ellipse
- Light beam size: 12/30°/45°
- Distance of illumination: ≤ 90m
- Duration of operation of the light source: 100000 hours
- Optimal size of the light spot at 10° beam: 12 m at distance 60 m

Laser target designator:
- Illuminator: Laser diode 635 nm
- Laser diode color: red
- Duration of operation of the light source: 8000 hours
- Distance of illumination: ≥ 120 m
- Optimal size of the light spot at 100 m distance: φ 14 mm
- Operational temperature range: from -20°C to +50°C
- Power supply source: Li-Ion rechargeable battery (type LIR 17335) 3.7 V
- Operation in continuous regime: > 100 minutes
- Overall dimensions: 48.2 x 51.6 x 47.4 mm
- Weight without power supply source: 0.096 kg
- Attachment: Picatinny rail