

European photonics excellence for next-generation defence systems

As an EU-based partner, we offer flexible production, from small-batch custom orders to dedicated lines for high-scale Defense OEM production.



Laser optics



Optical systems



Targeting



Rangefinding

Why choose EKSMA Optics



We are actively seeking strategic partnerships to invest and expand our manufacturing capacities to create dedicated production lines of optical components and assemblies for your tailor-made defense solutions.

100% vertical integration

From the cutting and grinding of optical raw materials to final flat optics polishing, spherical/aspherical surfaces CNC polishing, advanced coating and optical assemblies

7300 m² facility

New manufacturing facility, including >1000 m² ISO 7 class cleanrooms. Ready to Scale & Double manufacturing areas quickly.

40 years of expertise

More than 40 years of experience in manufacturing and supply of optical, crystal and electro-optical components and systems.

From concept to certified excellence



In-house design and R&D

Expert team: over 10 seasoned scientists with more than a decade of experience

- Optical systems design
- Optomechanical design
- Electronics design



Manufacturing and assembly

End-to-end traceability: full control over optical component production, from raw materials to final testing

- Optical materials processing
- Precision lenses manufacturing
- Advanced UV, VIS, NIR, IR coatings
- Specialized optics assembly



Quality control and testing

Multi-stage quality assurance: stringent procedures to ensure product excellence & reliability

- Environmental durability
- First Article Inspection (FAI)
- Innovative testing solutions

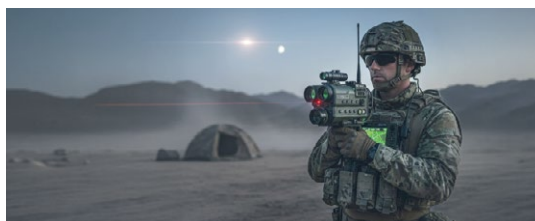


Directed energy weapons (DEWs)

High-Energy Lasers & Counter-Drone Systems for target neutralization.

EKSMA Optics offers:

- Extremely high LIDT, featuring very low absorption coatings for transmissive optics with LIDT >40 MW/cm² for 1 micron CW lasers.
- Laser mirrors with R $>99.95\%$ at 1 micron, featuring LIDT >7 MW/cm² under CW operation, with absorption less than 1 ppm.



Target designation & rangefinding

Precision targeting systems for accurate threat identification and distance measurement.

EKSMA Optics offers:

- Narrowband filters, precision lenses, beamsplitters, laser mirrors, and dichroic mirrors with top-notch spectral performance coatings.
- Laser beam collimation systems.



Countermeasures & sensor disruption

Electronic warfare systems to disrupt or deceive enemy sensors.

EKSMA Optics offers:

- Robustly built laser beam expanders with hard-coated optics.
- High LIDT and durable BBAR or HR/HT coatings for laser optical elements operating at around ~ 2.1 plus 3.0-to-5.0-micron ranges and in the 8-to-12-micron range.
- ZnGeP₂ crystals with durable hard coatings for enhanced mid-IR laser emission in DIRCM systems.



LIDAR & sensing

3D mapping, navigation, and chemical/biological detection systems.

EKSMA Optics offers:

- Super AR coatings featuring low reflection ($R < 0.001\%$ per surface) for optical lenses/windows in transmission losses sensitive optical systems operating at around ~ 1 and 1.55-micron ranges.
- High LIDT and durable BBAR coatings for laser optical elements operating at 2.0-to-4.0 or 3.0-to-5.0-micron range.



Communication systems

Free-space optical communication for secure data transfer.

EKSMA Optics offers:

- Dielectric hard coatings, applied through Ion Beam Sputtering (IBS) technology, designed for optical elements in space and vacuum laser applications, ensuring exceptional durability and performance.



Navigation systems

GPS alternatives and inertial guidance systems for precise positioning.

EKSMA Optics offers:

- Super mirrors offering 99.999% reflectivity at visible or near-infrared laser wavelengths, engineered with ultra-low loss for optimal performance in laser-based gyroscopes.

Quality assurance

Certified excellence and compliance for defense and aerospace applications.



Defense accreditation

- JOSCAR (Hellios) accredited for defense & aerospace
- Registered supplier, participating in NATO Support and Procurement Agency (NCAGE code: 016KR)

Supply chain

- Registered on Integrity Next Supply Chain platform
- Listed on Jaggaer.com as a supplier to leading photonics companies

ISO certifications

- ISO 9001:2015 certified
- ISO 14001:2015 certified



Ready to
partner with
EKSMA Optics?

Leverage our 40+ years of photonics expertise for your defense applications. From R&D prototypes to high-volume production.

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