



# ASENSE



Building your optical  
and photonic solutions,  
from the ground up.



Expertise on:

- Newspace
- Science
- Industrial inspection
- Defense



# About ASENSE

## History

Founded in 2011, ASENSE is a Spanish company with extensive experience in integrated optical systems. The company started designing optical systems and has since evolved to the manufacturing of complete systems for cutting-edge applications.

## Mission

Design and develop customized, precision optical and optoelectronic systems with high technical performance and quality.

We help our customers to be leaders in their markets through our extensive knowledge in optical engineering and design and laser technologies.

In turn, through our activities, we contribute to increasing the value of each of our stakeholders and offer a stimulating, safe and enriching professional environment for our employees.

## Values and core strengths

- Custom optical design & engineering expertise
- High-Precision manufacturing capabilities
- Proven expertise in a wide range of applications
- Commitment to innovation and R&D
- Experienced and interdisciplinary team
- Rigorous in-house quality testing

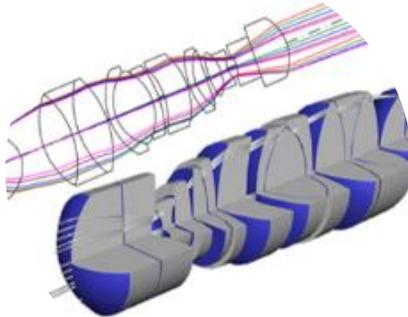


# Precision from concept to completion

A-SENSE designs, engineers, and manufactures optical and photonic systems tailored to the unique and demanding applications of New Space, industrial inspection, defense, aeronautics, and scientific research.

We offer comprehensive, end-to-end solutions, managing every stage from initial concept to final validated product. Our expertise encompasses optical design (covering UV to LWIR), robust optomechanical engineering, seamless electronic and software integration and sophisticated image processing. Crucial to validation, A-SENSE offers comprehensive and adaptable metrology and characterization services for various optical systems, including objective, scan, and laser lenses, and projection optics. We provide thorough performance analysis and reporting, with the capability to tailor measurement setups to specific needs.

A-SENSE's in-house facilities are fully equipped for rapid prototyping through to small series production, including dedicated assembly stations, test benches, advanced alignment and measurement systems, and calibration resources.

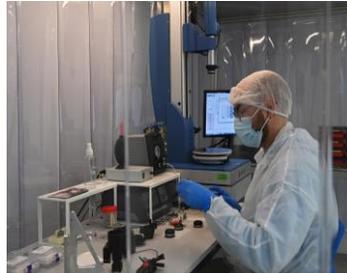
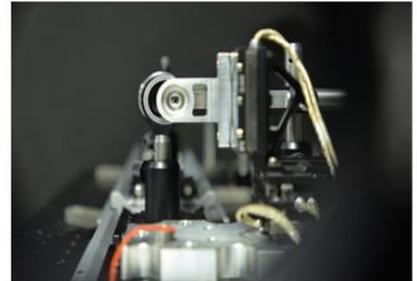
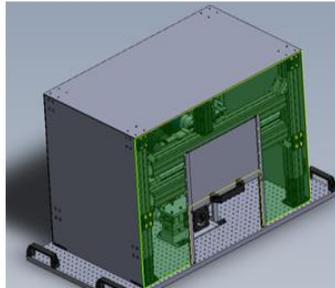


# Driving Excellence Through Quality

At ASENSE, quality is at the core of everything we do. Demonstrating this commitment, we have invested in state-of-the-art equipment, including advanced machinery like the ATS 100. Our Quality Management System is certified to ISO 9001:2015, encompassing all clauses without exclusion. This robust system is meticulously designed to guarantee that every product we supply precisely conforms to specified requirements, drive continual improvement across our QMS, and ensure the availability of all necessary information and resources.

## Capabilities and technical equipment

- Optical and mechanical simulation SW
- Characterization
- Verification and Validation



- Opticentric® 100
- OptiSurf® LTM
- Automated Turning System
- ImageMaster® HR characterization system
- MTF & WFE test bench
- Optical calibration (EFL, distortion)

## CLEAN ROOM ASSEMBLY AND CHARACTERIZATION AREAS

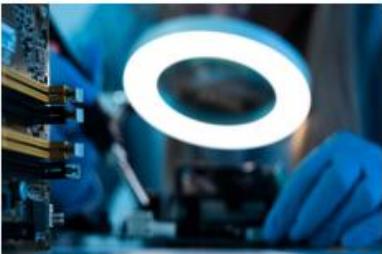


- Optical characterization laboratory: ISO8 - 100m<sup>2</sup>
- Clean room: ISO7 / ISO5 – 60m<sup>2</sup> Assembly of systems and lenses
- Electronics assembly area – 40m<sup>2</sup>
- IMAGE MASTER – Automated optical characterization bench
- iMetrics: Automated camera calibration and characterization bench (proprietary)

# Diverse applications, unified expertise

ASENSE provides bespoke optical solutions that drive innovation across a spectrum of demanding sectors. Our custom-engineered systems are trusted in cutting-edge scientific research, the pioneering New Space industry, critical industrial inspection processes, advanced synchrotron applications and the precision of modern medicine. This multi-sector expertise underscores our adaptability and deep understanding of diverse optical challenges.

## Industrial inspection



- Design and in series production of a non-contact inspection system with optics and electronics for an OEM
- Optronic system for nuclear inspection

## New Space



- Design and manufacturing of SWIR Objective for Earth Observation (already flying!)
- Development of the optical system for satellite-based farming monitoring service

## Defense and aeronautical



- Design and fabrication of the objective for Free Space communication  
<https://p2pfso.eu/>
- Compact long-range spotter for remote ground-based remote sensing

## Science



- Development and fabrication of Synchrotron lenses to focus visible light from X-ray scintillators
- In-vessel viewing system for ITER fusion reactor based LIDAR.

# Innovation and efficiency

ASENSE excels in bringing innovative optical and photonic products to life through a creative engineering process as well as a deep understanding of our clients' needs. We leverage pre-engineered optical system solutions to facilitate flexible and rapid development, ensuring efficiency without compromising quality. Our comprehensive depth of knowledge in the imaging chain and a broad understanding of cross-application innovation empower us to create unique and effective solutions. This is supported by our agile and flexible precision optical assembly capabilities and meticulous optical characterization, all rooted in the deep expertise and experience of our team.

**INNOVATION** + **PROCESS**

Our creativity in optics is exemplified by our involvement in R+D projects like:

- **MORERA:** An innovative system with an LWIR lens designed by ASENSE that enables efficient monitoring of irrigation and agricultural yields through remote sensing. This is the first Spanish project of its kind and could lead to a reduction of up to 30% in crop water use.
- **DONES-FLUX:** optimizing the efficiency of a large scientific fusion facility (IFMIF-DONES) by installing an intelligent energy management system and eliminating inefficiencies that jeopardize its operation and maintenance.
- **SKINSENS:** in partnership with a consortium of leading companies, ASENSE is leveraging advanced laser technology to develop SKINSENS, an innovative optical sensor utilizing advanced laser technology for real-time, non-invasive skin cancer diagnosis. This novel device will enable immediate and non-surgical detection, marking a significant step forward in the field.



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