Optical Systems

Creator
Developer
Manufacturer

EPIC Online Technology Meeting on Ophthalmology

LAMBDA-X
MASTERS IN INNOVATION
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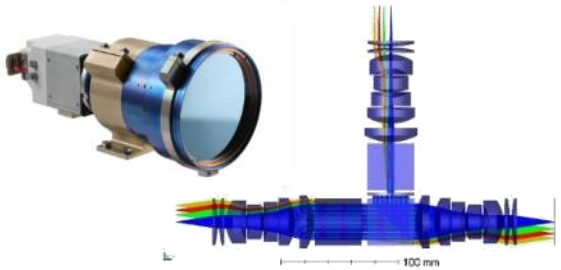
LAMBDA-X MASTERS IN INNOVATION

What we do

Project development



Conception & design of

Custom Optical Solution for SPACE INDUSTRY (Biomed – Security – general Ind.)

Supplier of engineering & consulting services

- Optical design
- Opto-mechanics
- Opto-electronics
- Software
- Algorithmics

Prototyping – Validation – Manufacturing

Contract Manufacturing

Optical based products

Facility: 1000m² of Clean Rooms

High precision tooling & metrology

Design services, certification

Cell-therapy
Digitial holographic microscope
Inline control of cell expansion

MIR spectroscopic sensor
in-line monitoring of fluid composition (Eng & Mfg)

Cell-therapy
Cell Transfection & imaging platform (Eng & Mfg)

Ophthalmic Metrology

World leader in ophthalmic Metrology

Comprehensive range of instruments for the control of ophthalmic lenses

- Contact Lenses
- Spectacles
- Intraocular lenses

information

Founded 1996

purely Space Applications

Spin Off ULB (Brussels)

Team of 45

EN 9100
BUREAU VERITAS Certification

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Breaking News – Tracks of Oxygen found in Mars' Atmosphere

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Royal Belgian Institute for Space Aeronomy

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ExoMars NOMAD spots unique green light at Mars

2020-06-15

The NOMAD instrument, developed at the Royal Belgian Institute for Space Aeronomy and currently in orbit around Mars on board ESA's ExoMars Trace Gas

The NOMAD instrument, developed at the Royal Belgian Institute for Space Aeronomy and currently in orbit around Mars on board ESA's ExoMars Trace Gas Orbiter, has detected a unique green glow of oxygen in the atmosphere surrounding the red planet (around 80 km altitude). This emission gives its characteristic colour to the terrestrial polar aurora and airglow, but was never observed before in other planetary atmospheres outside of the Earth. This light emission is created by the interaction between solar radiation and carbon dioxide, which is the major constituent of the Mars atmosphere. At Mars, as a big natural laboratory, we also succeeded to measure the two oxygen lines in the visible and ultraviolet ranges simultaneously, which clarifies a long-standing controversy between discordant quantum mechanics calculations and atmospheric measurements on Earth.

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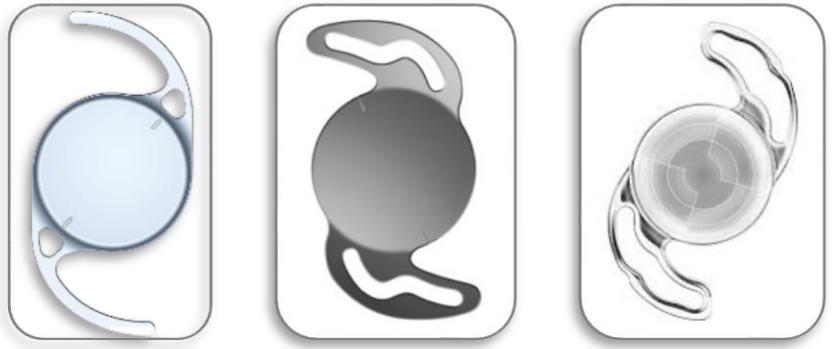
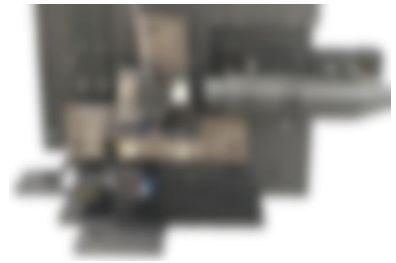
Ophthalmic metrology

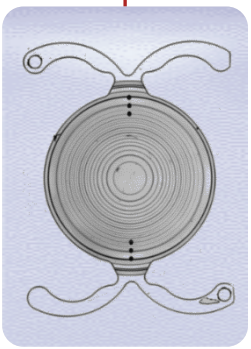
Contact lenses



Refractive intraocular lenses



Coming Soon...



Diffractive & refractive intraocular lenses

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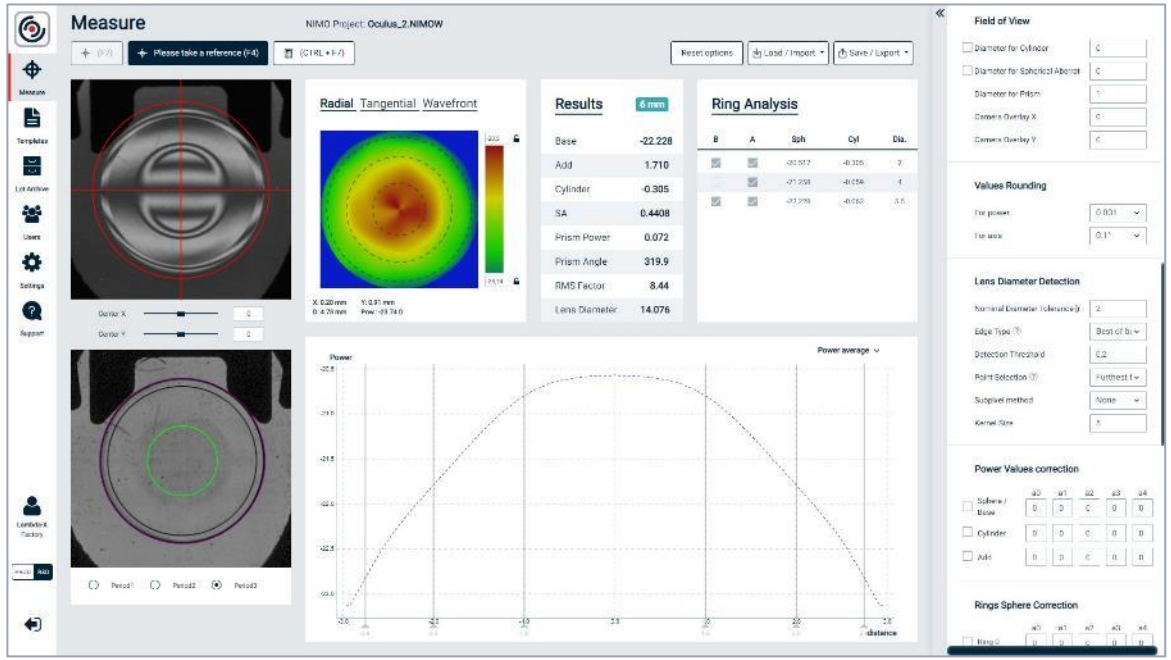
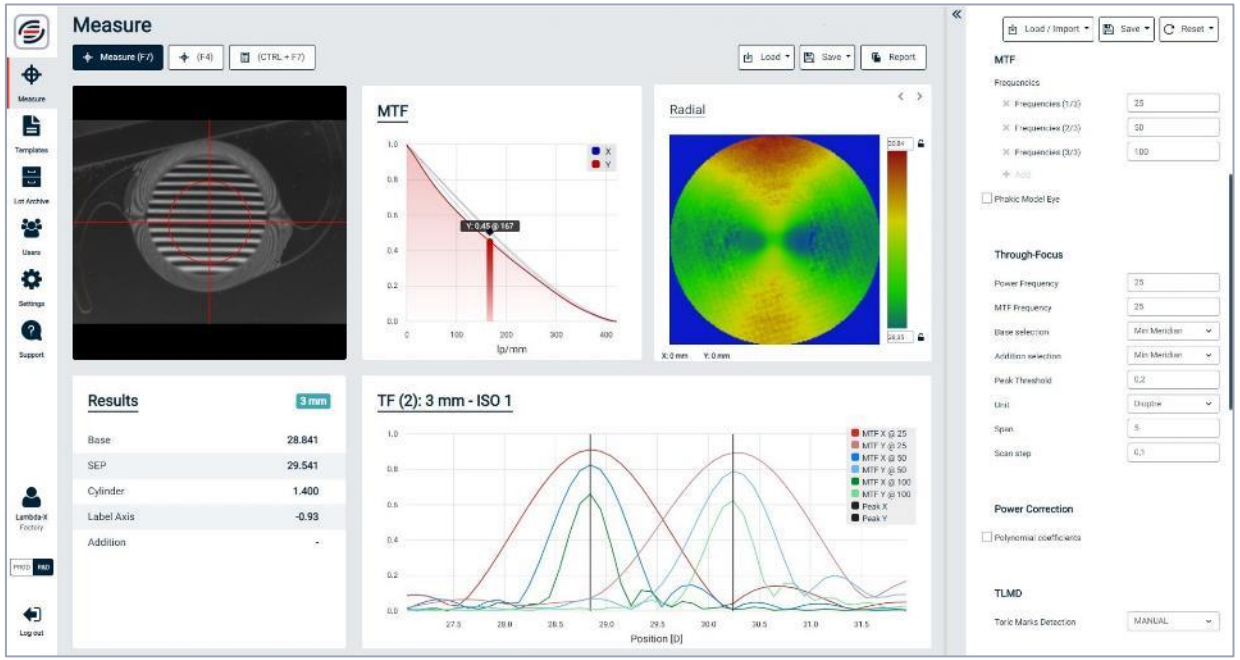
Software Development





SW structure

- Back-End / Front-End
- Database
- API
- 21 CFR part 11 compliant
- …

Algorithms

- Zernike
- Through Focus/frequency MTF
- Zonal analysis
- …

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Ophthalmic Instruments in Operation

- Europe (UK, DE, FR, NL, BE, CH, SP …)
- USA
- Canada
- Brazil
- Central America
- Australia
- Japan
- Taiwan
- China
- Singapore
- South Korea

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Thank you for your attention !

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