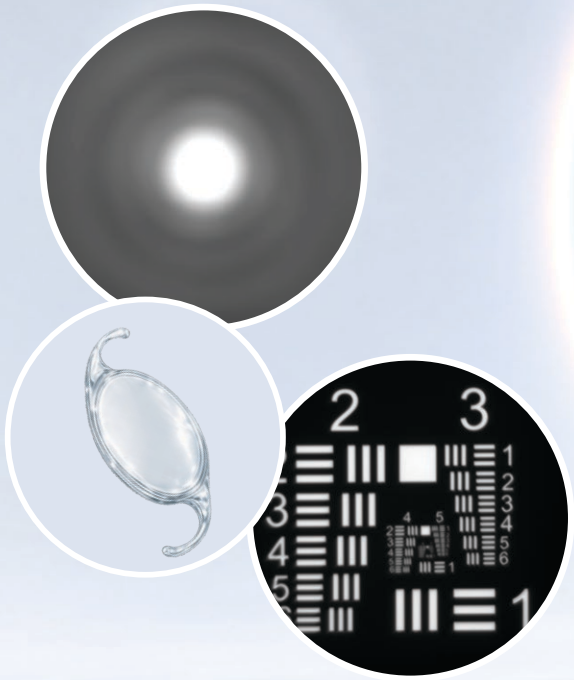
LUMI BENCH

BUILT TO SUPPORT

ISO 11979-2:2024

WHITE-LIGHT IOL CHARACTERIZATION

Purpose-built to support the latest ISO standard for pre-clinical IOL evaluation.





DESIGNED FOR
ANNEX C
ISO 11979-2:2024

LAMBDA-X OPHTHALMICS

A TURNKEY METROLOGY BENCH FOR IOL CHARACTERISATION

Next-Generation MTF Bench Metrology

Purpose-built white-light optical bench developed to measure lens performances in accordance with ISO 11979-2:2024 Annex C.

WHY CHOOSE LUMI BENCH

WHITE-LIGHT MEASUREMENT

Photopic white-light illumination for clinically relevant IOL characterization.



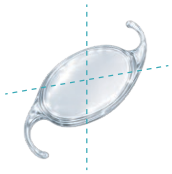
PHYSICAL CHROMATIC MODEL EYE

Interchangeable physical chromatic model eyes for optical evaluation.



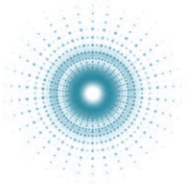
TILT & DECENTRATION

Precise positioning for repeatable tilt and decentration analysis.



HALO CHARACTERIZATION

Evaluate halo behavior across multiple optical conditions.



WHITE-LIGHT ILLUMINATION

Clinically relevant white-light illumination for IOL evaluation.

CHROMATIC MODEL EYE

Interchangeable model eye for chromatic testing.

TILT & DECENTRATION

Precise positioning for tilt and decentration analysis.

PREDICTED VISUAL ACUITY

Estimate expected visual performance under multiple conditions.



HALO CHARACTERIZATION

Quantify and visualize halos produced by multifocal and EDoF IOLs.

BUILT-IN USAF TARGET

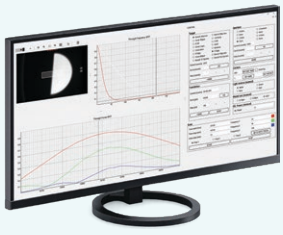
Integrated target for objective optical performance verification.

THROUGH-FOCUS MTF

Evaluate optical performance through-focus.

GREEN-LIGHT VERIFICATION

544 nm green illumination for monochromatic verification.



LUMI-MENTOR

Advanced Metrology Software

LUMI-Mentor is the dedicated software platform for LUMI Bench, transforming optical measurement data into meaningful insights for pre-clinical IOL evaluation.

- Instrument control & acquisition
- Automated measurement workflows
- Interactive data visualization
- Comprehensive reporting & export

ADVANCED
ANALYSIS & VISUALIZATION

From Measurement to Clear Insight

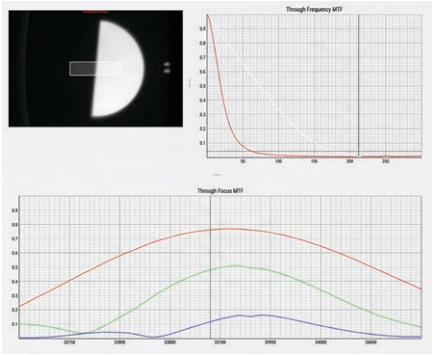
Designed to support ISO 11979-2:2024 Annex C, LUMI-Mentor transforms optical measurements into clear visual insights for analyzing through-focus performance, halo characteristics and image quality.

Representative analysis examples:

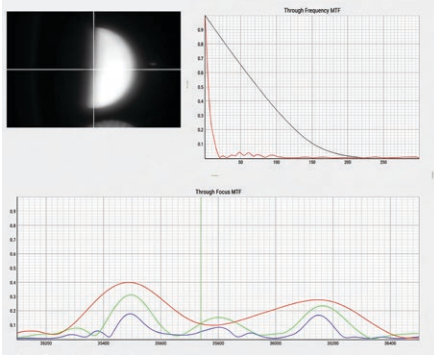
THROUGH-FOCUS MTF ANALYSIS

Visualize through-focus optical performance in accordance with ISO 11979-2:2024 Annex C.

MONOFOCAL EXAMPLE

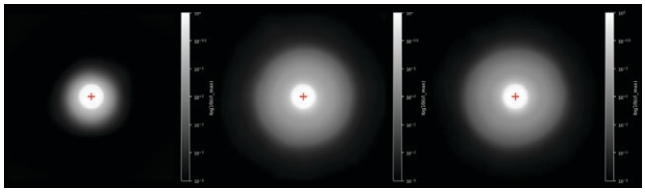


TRIFOCAL EXAMPLE



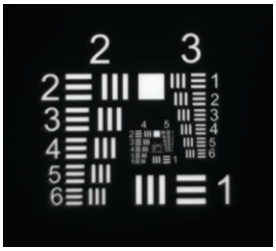
HALO CHARACTERIZATION

Quantify halo intensity and distribution for monofocal, multifocal , trifocal and EDoF IOLs.



USAF TARGET VERIFICATION

Evaluate image quality with the integrated USAF resolution target.



EXPORT & DOCUMENTATION

Export images, graphs and measurement data for documentation, publication and regulatory submissions.

- Graphs
- Images
- Data
- Reports

Displayed results are examples. Actual analyses depend on the selected IOL and measurement configuration.



BUILT TO COMPLY WITH
ISO 11979-2:2024

DESIGNED FOR
ANNEX C
ISO 11979-2:2024

TECHNICAL SPECIFICATIONS

LUMI BENCH

Built to support ISO 11979-2:2024

White-light IOL characterization



MEASUREMENT PRINCIPLE

IOL type	Mono, SVIOL (Multifocal, Trifocal, EDOF), non-toric & toric
Light source	Photopic (white light) and green 544 nm
Power range	–20 D to 40 D
Targets	Edges, Siemens, USAF, 5 arcmin Disk, Ring
Apertures (IOL plane)	2, 2.5, 3, 3.5, 4, 4.5, 5 mm

MODEL EYE

3 cornea models*	SA = 0.000 / 0.200 / 0.280 µm - others on request

ALIGNMENT

Tilt	0° and 5°
Decentration	0 - 0.5 mm

PERFORMANCE

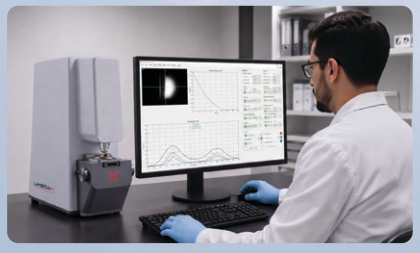
Measurement speed	100 points MTF Through-Focus in 60 sec
MTF repeatability	0.01 - preliminary
Power repeatability	0.1D - preliminary

SYSTEM

Standard configuration	LUMI-Mentor software
Installation	Tabletop instrument
Dimensions (H × W × D)	560mm x 250mm x 410mm
Weight	15 kg
Input power	115-230V, 50-60Hz, 45W

ALL IOL TYPES

Monofocal | Multifocal | Toric | EDoF | Phakic



The LUMI BENCH comes with **LUMI-Mentor software**, necessary **accessories**, and **documentation** to get started immediately.