

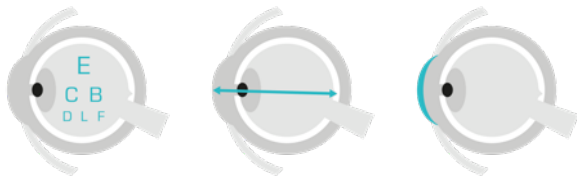
# OCULUS Myopia Master®

Refraction, Axial Length  
and Keratometry



## The All-in-One Device for Myopia Measurements

Refraction, axial length, and keratometry are the main measurements required for professional myopia management, but only in combination do they allow for individualized treatment and counselling. The measurement process is contactless and takes just two minutes.



## Reliable and Reproducible Results

The standard deviation of repeated measurements of axial length is about 0.02 mm equivalent to a refractive error change of 0.05 D.



**STAND  
ALONE**



## Exclusive Data Analysis

- Conduct fast, accurate analysis of initial risk, projected progression, and treatment efficacy
- Leverage growth curves calculated from exclusive data algorithms and normative data



Visually show parents how their child's visual health compares to the norm with educational displays. Use the customized report to reinforce the importance of myopia management and support your treatment recommendations.

# All You Need in 5 Steps

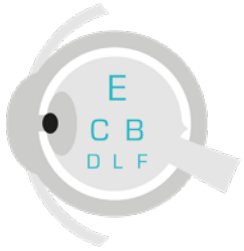
Easy and professional



# MYOPIA MASTER

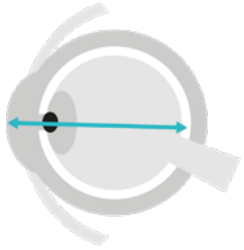
## 1

## MEASUREMENT



### Refraction

Determine the eye's refractive error in seconds as a fundamental component of myopia management. However, day-to-day changes in visual acuity and measurement variability require additional parameters for professional myopia management.



### Axial length

Axial length measurement is considered the gold standard for myopia detection and management. Progression in axial length is a reliable indicator of myopia progression and precedes prescription changes. The Myopia Master® measures axial length accurately and independently of accommodation.



### Keratometry

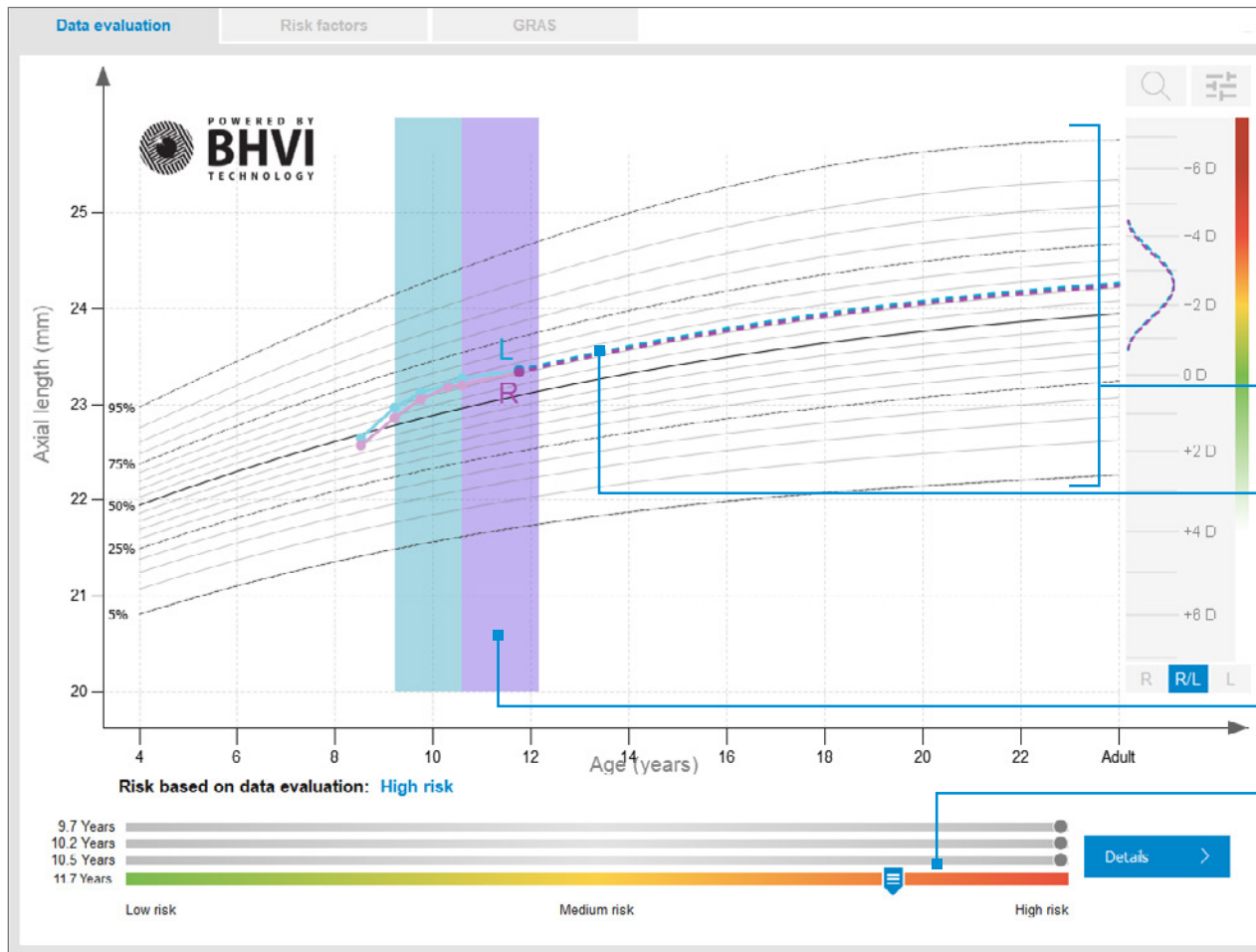
The central corneal radii represent the refraction of the cornea. Combining this with the axial length and the total refraction of the eye enables an even better understanding of the human visual system.

## One measurement process, three parameters



# 2

## DATA ANALYSIS



### Measurement Results Interpreted Based on BHVI Growth Curves

The patient data is compared with ethnicity and gender-dependent growth curves collected from more than 20,000 eyes. Exclusive algorithms from the Brien Holden Vision Institute (BHVI) now make interpreting the data easier than ever.

Normative growth curves by ethnicity and gender

Individual measurements compared to normative data provides you with insight to the potential refractive outcome. The points marked **R** and **L** represent the axial length of an individual patient's right and left eye at the time of the examination.

Color coding of the treatment

Individual risk evaluation based on data analysis

Binocular axial length measurements, plotted in normative growth curves, generated from BHVI

# 3 RISK ASSESSMENT



Data evaluation

Risk factors

GRAS

Near-work activity in addition to school / work

Explanation:

Myopia progression and myopia onset are associated with near work time and distance. The probability of myopia increases by 2% for every diopter-hour (DH) of near work per week. DH is defined as:

$$DH[D-h] = \text{near-work time [h]} \cdot \frac{1}{\text{near-work distance [m]}}$$

The more time spent on near-work, the faster the myopia progression and the earlier the myopia onset. Similarly, the shorter the near-work distance, the faster the myopia progression and the earlier the myopia onset.

[3, 8, 9]

Ø Distance

28 cm 4.5 h/day

Computer

40 cm 1.0 h/day

Book/Magazine

33 cm 0.0 h/day

Smartphone/Tablet

25 cm 3.5 h/day

Hide details

Near-work activity in addition to school / work: High risk

13.6 Years

Low risk

Medium risk

High risk

BACK

Detailed explanation of risk factor

Literature sources pop up on hovering

Color scale for fast risk identification

## Customizable Questionnaire to Assess Risk & Educate Parents

The Myopia Master® software provides a default questionnaire addressing the most important risk factors: hereditary, environmental, and lifestyle. All information used to assess the severity of risk is based on peer-reviewed papers.

- Customize the default questionnaire or add additional risk factors.

The Myopia Master® software assists the practitioner in educating children and their parents.



Prolonged near work predisposes patients to developing myopia



Myopic parents



Near work



Outdoor activity



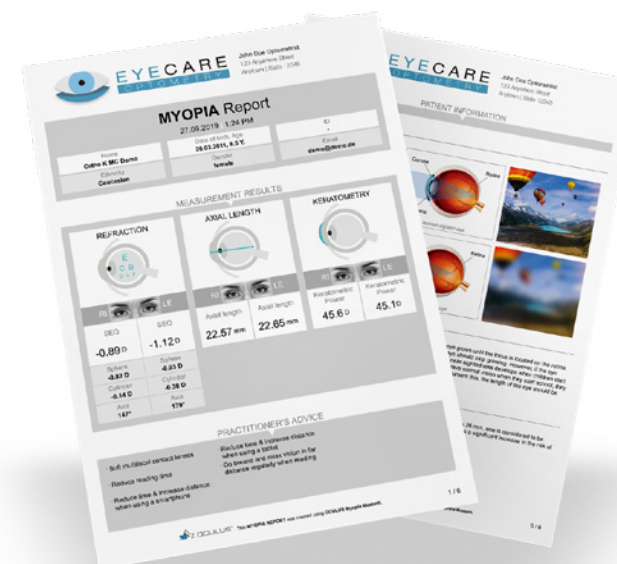
## Overview of the results analysis

The digital Myopia Report can be sent by email or printed out together with the next examination appointment.

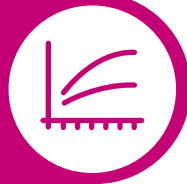
Easily select or type in individual treatment recommendations on medication, contact lenses, or lifestyle changes.

Based on an evaluation of the results the practitioner can select the appropriate treatment with a simple click or enter a personalized treatment. The Myopia Report for parents and children can then be shared via email or printed out together with the next examination appointment.

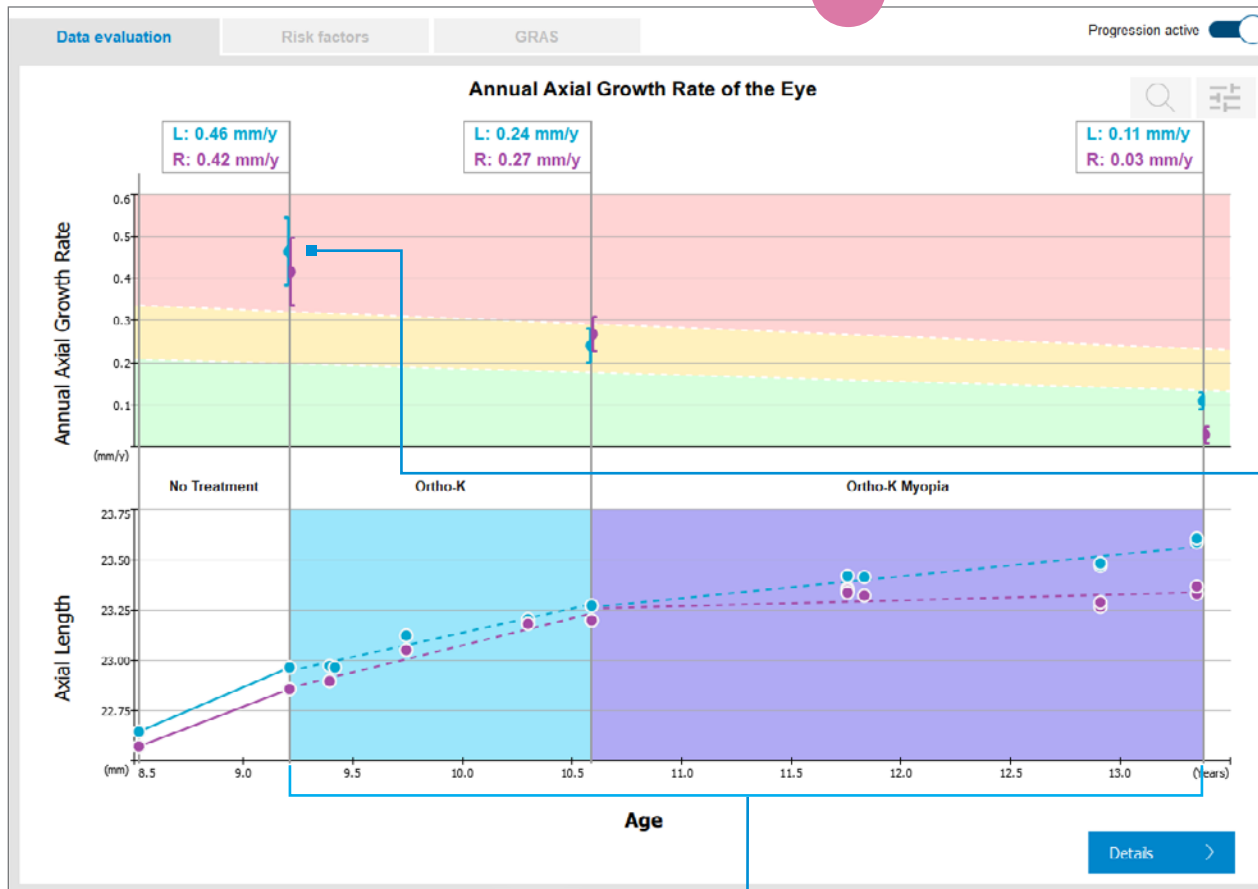
All of the results are clearly listed in the Myopia Report, which helps readers to understand their individual outcome.



# 5 GROWTH ANALYSIS



NEW



## Assess Individual Treatment Efficacy

The Growth Control module automatically calculates and visually compares a patient's axial length growth rate with age-adjusted normative data. Color-coded parameters support easy analysis and explanations to parents and patients about current treatment success or changes to recommendations.

The annual growth rate is automatically calculated from the measurements within the displayed interval and shown in the upper graph.

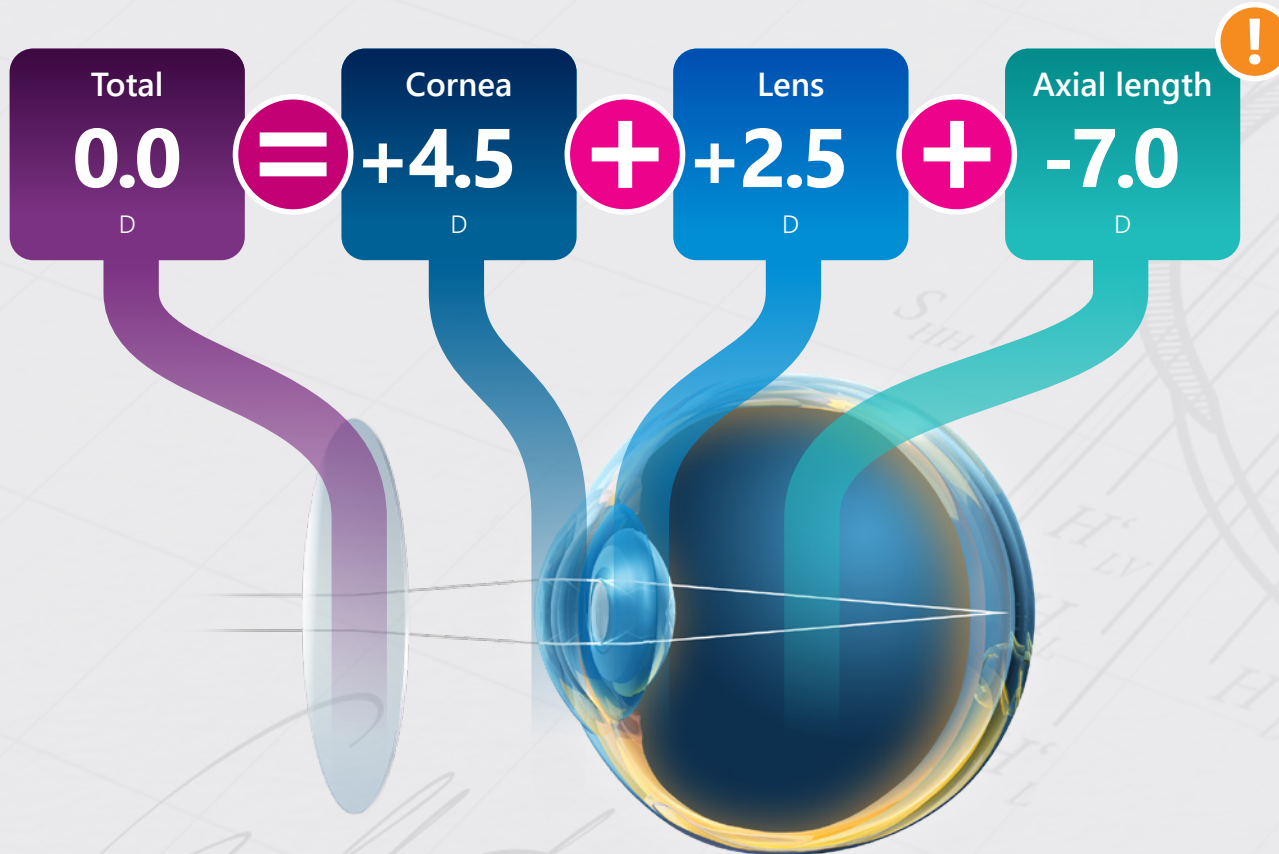
Assess each treatment type's impact on the total axial length for the duration of treatment.

# Identify early, prevent later effects

Myopia is a major risk factor for various eye diseases such as retinal detachment, macular diseases and glaucoma. This makes it essential to not only to treat the symptoms of myopia but also to slow down the progression of the disease. The Myopia Master® software offers you innovative tools to provide your patients with the very best care.



## OPTIONAL: GRAS MODULE

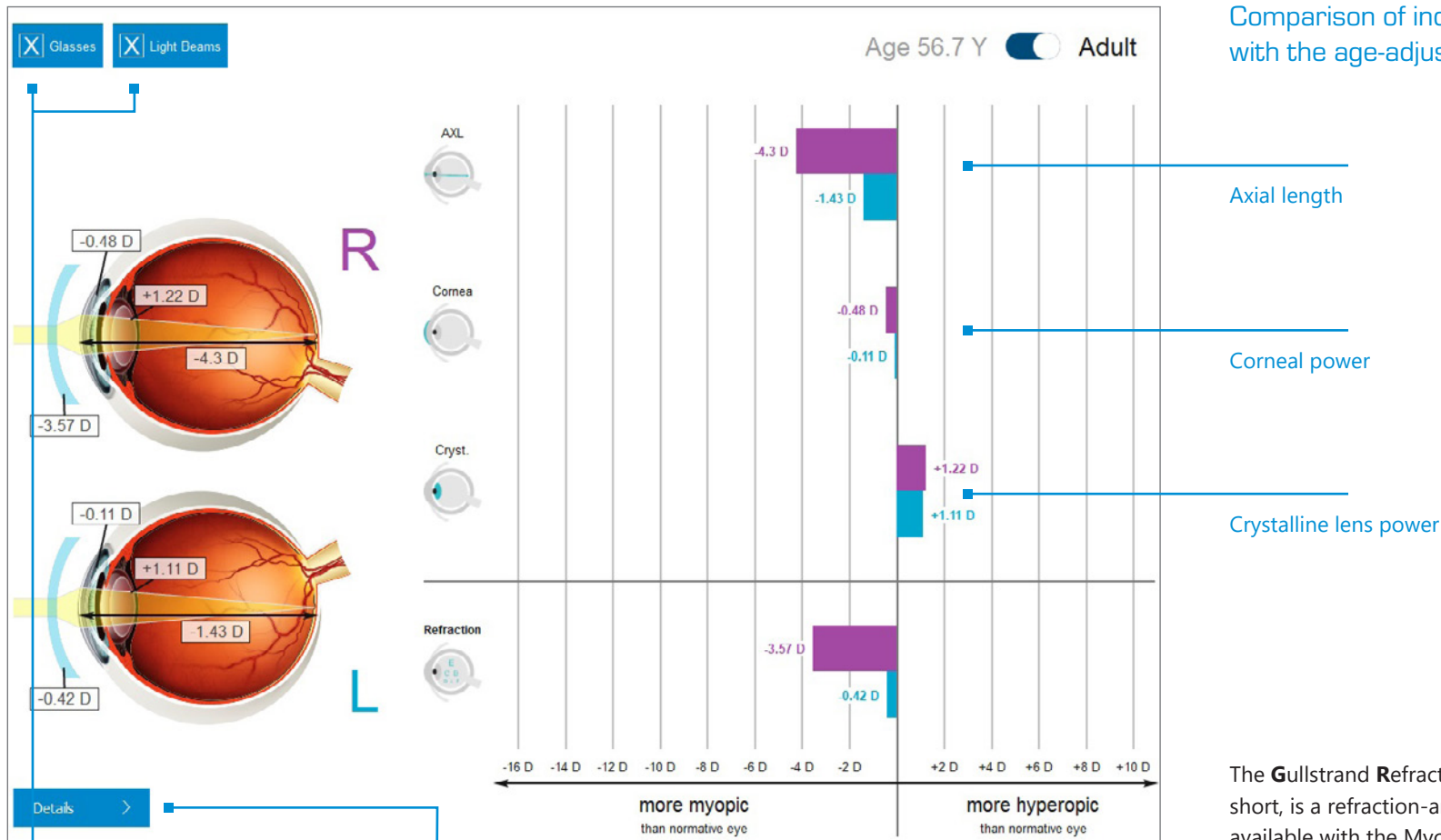


### Anything but 0.0. A New Understanding of Eye Development

Never has the interpretation of measurement results been as easy and reliable as with the new Myopia Master®. All individually measured refractive components of the eye are automatically matched with the Gullstrand standard eye model. This way you can always take your bearings by the gold standard. Not only does this save you time, but it also provides an ideal basis for explaining the results to your patients.

Best of all, OCULUS has introduced patient age as an additional variable, further improving reliability.

## Optional Module: Comparison with the Gullstrand Eye



### Comparison of individual optical components with the age-adjusted Gullstrand eye

The **Gullstrand Refractive Analysis System** or **GRAS** for short, is a refraction-analysis module that is optionally available with the Myopia Master®.

## Simulation of the optical beam path with and without glasses

Button for additional information  
about patient education

# OCULUS Myopia Master®

## Technical Data

| Axial length                           |                                                                        |
|----------------------------------------|------------------------------------------------------------------------|
| Measuring range                        | 14 - 40 mm                                                             |
| Autorefractor                          |                                                                        |
| Vertex distance (VD)                   | 0; 10.5; 12; 13.75; 15; 16.5 mm                                        |
| Sphere                                 | -20 - +22 D (VD = 12 mm)                                               |
| Cylinder                               | 10 D (DV = 12 mm)                                                      |
| Axis                                   | 0° to 180° (in 1° increments)                                          |
| Minimum measurable pupil diameter      | 2.5 mm                                                                 |
| Fixation target                        | hot air balloon over a landscape                                       |
| Keratometer                            |                                                                        |
| Measuring range of radius of curvature | 6 - 10 mm                                                              |
| Technical specifications               |                                                                        |
| Dimensions (W x D x H)                 | 266 x 538 x 493 – 523 mm (10.5 x 21.2 x 19.4 - 20.6 in)                |
| Weight                                 | approx. 12 kg (26.5 lbs)                                               |
| Voltage                                | 100 - 240 V AC                                                         |
| Frequency                              | 50 - 60 Hz                                                             |
| Interface                              | USB                                                                    |
| Recommended computer specifications    | Intel® Core™ i5, 500 GB SSD, 8 GB RAM, Windows® 11, Intel® HD Graphics |



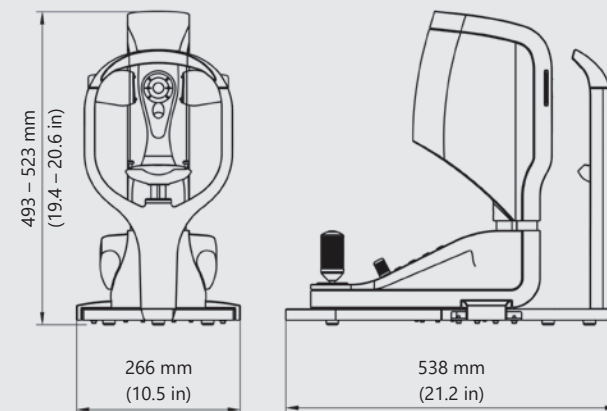
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The OCULUS QM system is certified in accordance with ISO 13485 (MDSAP) and (EU) 2017/745 (MDR)



Further information and news at:  
[www.myopia-master.com/us](http://www.myopia-master.com/us)

US version. The availability of products and features may vary by country. OCULUS reserves the right to change product specifications and design. All information is valid at the time of printing (02/25).

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