OCULUS Myopia Master® Refraction, Axial Length and Keratometry







THE SOLUTION FOR THE FUTURE

Required Measurements and Follow-up of Myopia

The new Myopia Master[®] is the first device to combine the important measurement parameters and a software for making myopia management much easier and more reliable than ever.

Refraction

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A commonly used method for measuring myopia is by refraction. However, day-to-day measurement variability and the need to be able to perform refractions in children with induced cycloplegia require additional parameters for a professional myopia management.

Axial length

This can be measured accurately and independently of accommodation. Progression in axial length is a reliable indicator of progression in myopia. Axial length measurement is the gold standard for myopia management.

Keratometry

The central corneal radii, as the primary refractive component of the eye, can be automatically measured and clearly displayed. The reliability of each measurement is shown by the quality specification.

THE BEGINNING OF A NEW ERA

Myopia Management Redefined

Being able to detect myopia at an early stage before it develops is extremely important. In cooperation with the Brien Holden Vision Institute, the values measured are compared with age-related normative data derived from a database of more than 25 000 eyes. This will make it possible in future to estimate how an eye will develop. The earlier a trend is recognized, the more efficiently it can counteracted with appropriate measures.

Progression of myopia



The diagram shows both axial length and refraction (spherical equivalents) of an individual patient's measurement in an easy-to-understand way. The growth curves support the data interpretation.

A traffic light scale indicates the estimated risk of developing myopia.



INTUITIVE SOFTWARE

History-taking and Customer Education Made Easy with Software

Vital for your educational sessions: Influencing factors that can stimulate myopia development are documented in the software. A traffic light scale is provided to help visualize critical values.

AVODIA MASTER	,					Patient: F M 7/17/2014	Ane (today): 5Y ID:
	•						
Measurement Results				Data Evaluation	Risk-factors		
Donnersta	g, 19. September 2019 17:09:06, 6 Right 🔵	5 Years Left 🔵		Number of myopic parer	nts: 2		
Axial length		:=	5.1 Y	ears			Details >
	22.00 mm	21.91 mm		ÿ	1		2
Axial length				Outdoor activity time: 4	h/week	_	
Signal to Noise Ratio	28.9	37.4	5.1 Y	<pre>>10 h/week</pre>	5.5 h/week	P	Cetails) <1 h/week
objective refraction		:=					
Sphere	-0.46 D	-0.59 D		Near-Work activity in ad	dition to school / work: high risk	_	
Cylinder	-0.57 D	-0.91 D	5.1 Y	ears			Details)
Axis	180°	167°		low nsk	medium risk		high risk
SEQ	-0.74 D	-1.04 D					
Measurement-quality	8 / 9	8/9					
subjective refraction							
Keratometry		iii -					
mean keratometric radius	7.70 mm	7.71 mm					
Astigmatism	1.6 D	1.2 D					
Iris image		0					
horizontal radius	7.84 mm @ 0°	° 7.81 mm @ 169°					
vertical radius	7.56 mm @ 90)° 7.60 mm @ 79°					
HWTW	11.3 mm	11.2 mm					
	5.6 mm	5.2 mm					
Pupil diameter							

Details on influencing factors

With regard to near work, for example, the software inquires about the duration of and working distance involved in smartphone, tablet and computer use and displays the resulting influence in a graph.



MYOPIA MANAGEMENT

Evaluation-Based Action Recommendations

> Categorized action recommendations provide a basis for multiple treatment options. First steps toward success may be achieved through medication or special contact lenses.

> > Special spectacle lenses and further behavioural recommendations can also be selected.

The next routine appointment, based on the action recommendations, can be sent to your customer by email.

Myopia occurs when the eyeball is too long, relative to the refractive power of the cornea and lens of the eye. An extension of the eye by one millimeter, from 24 mm to 25 mm, produces about 2.7 dioptres of myopia.



CUSTOMER EDUCATION

A Report That Leaves no Questions Open

The customer is provided with a comprehensive, readily understandable report explaining the status quo.

In addition to the customer data and measurement results it presents the selected action recommendations and progression diagrams in an intuitive way.

Along with the customer information and evaluated influencing factors this makes excellent reading for refreshing the customer's memory.



PROGRESSION ANALYSIS

Follow-Up Examinations and Trend Analysis

Treatment strategy and success made easy to visualize

One or multiple treatment strategies can be selected with a simple click.

The effects of axial length growth on refraction with or without the selected treatment strategy can be intuitively illustrated in a diagram. Changes and extended options can be added as desired. Colour-coded representations explain the success of treatment to both parents and child.

> This provides the customer with an optimal overview of the individual stages as well as the overall duration of treatment.



Progression of binocular myopia in a 17-year-old after two years of treatment.

OCULUS Myopia Master® Technical Data

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



C in accordance with Medical Device Directive 93/42/EEC

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OCULUS is certified by TÜV according to DIN EN ISO 13485 MDSAP OCULUS Optikgeräte GmbH Postfach • 35549 Wetzlar • GERMANY Tel. +49 641 2005-0 • Fax +49 641 2005-295 Email: export@oculus.de • www.oculus.de

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