LENSTAR MYOPIA
THE comprehensive solution for myopia management

Look closer. See further.

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Launched in 2020, Lenstar Myopia is THE comprehensive solution for myopia management. It enables the eye care professional to monitor the progression of myopia, detect changes and take appropriate decisions on the course treatment.

A particular emphasis is placed on the easy-to-understand visualization of the status of myopia, and its progression. Lenstar Myopia is based on the established Lenstar 900 optical biometer, combined with powerful EyeSuite Myopia software. It boasts a comprehensive toolkit, which now includes the new Age-Matched Myopia Control (AMMC®) framework of Prof. Dr. Hakan Kaymak.

This new AMMC® framework, which is only available, as standard, in Lenstar Myopia, complements established methods, providing diagnostic support based on the eye's axial growth.

Myopia management from leading experts

Lenstar Myopia was developed in close collaboration between Haag-Streit and recognized experts and scientists from the field.

The most recent collaboration was with Prof. Dr. Hakan Kaymak. Using his AMMC® framework, Lenstar Myopia takes a big step forward and allows the eye care professional to visualize progression and make more accurate predictions.

Other leading myopia experts include Dr. Thomas Aller and Pascal Blaser of «myopia.care™» who have contributed to the continuous improvement and further development of the Lenstar Myopia since its launch in 2020.

Adopts Lenstar 900's proven technology

Lenstar Myopia adopts the Lenstar 900's proven Automated Positioning System (APS) technology. Simple and fast measurements at a single click of the joystick saves time and increases patient and user comfort, and is especially beneficial when measuring children's eyes.

This feature is combined with Lenstar's superior measurement technology, which provides a wealth of data to enable accurate predictions about the onset and progression of myopia. This includes precise axial length measurement, pupillometry, vitreous chamber depth, central corneal thickness, and keratometry.
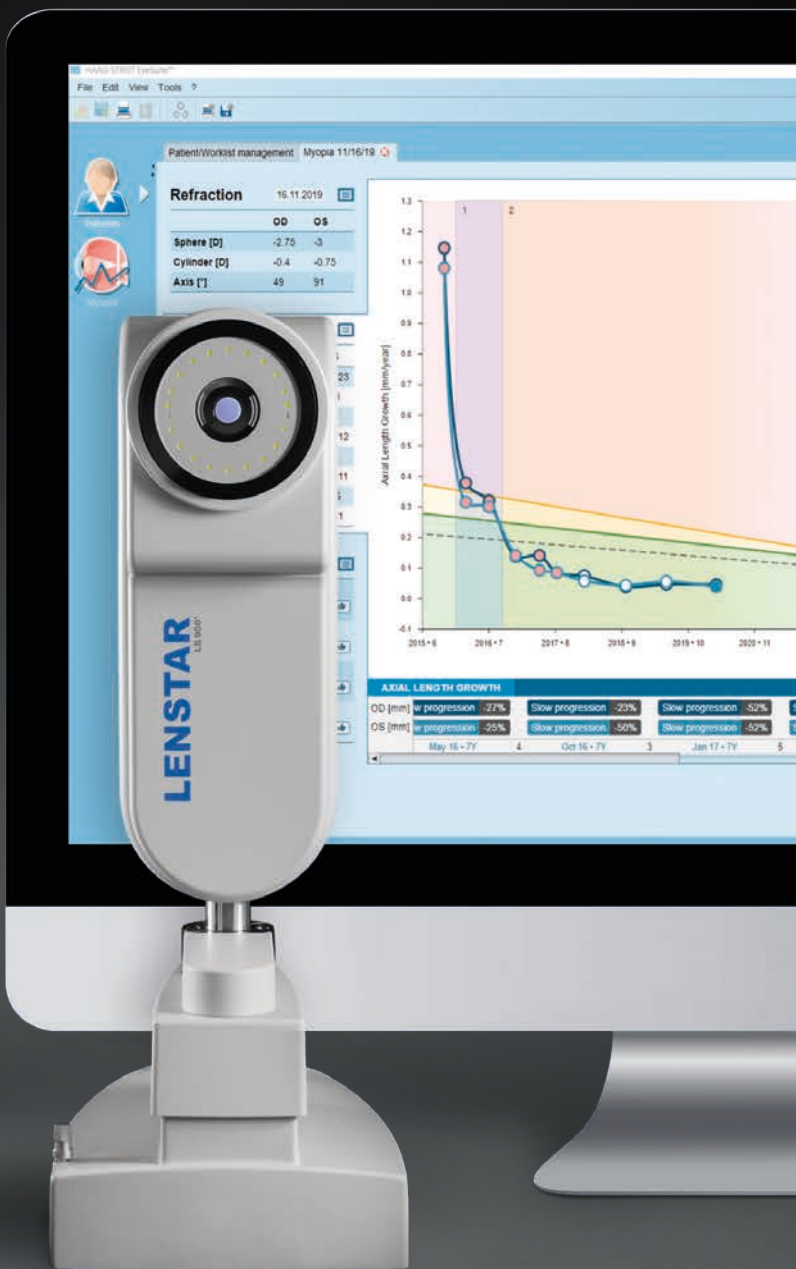
LENSTAR MYOPIA
State-of-the-art myopia management
& patient education

Lenstar Myopia provides state-of-the-art myopia management.
It enables the eye care professional to:

- Obtain fast, precise measurements and quickly and confidently interpret data to detect myopia

- Utilize this wealth of data to make an accurate diagnosis to confidently predict myopia's onset and progression

- Clearly communicate easy-to-understand information to facilitate true patient/parent education, allowing them to actively participate in the myopia management process

- Decide on a form of treatment, monitor its progress, adjust where necessary, and control myopia progression.

MYOPIA DETECTION

A powerful tool for myopia detection

Early myopia detection allows for conservative therapies, that may be more effective when started sooner. Implementing a comprehensive screening program for children can help in this regard.

The Lenstar Myopia is a particularly powerful tool for myopia detection due to its high-precision biometric data and fast measurement process. Eye care professionals can use this technology to identify onsetting myopia cases that would otherwise go undetected.
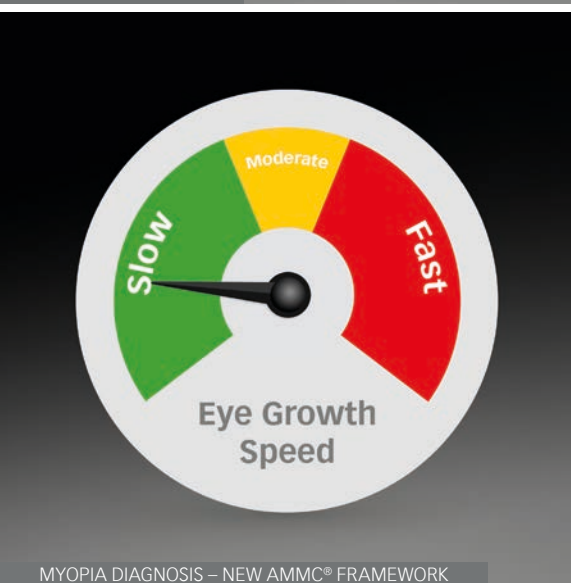
MYOPIA DIAGNOSIS – NEW AMMC® FRAMEWORK

MYOPIA DIAGNOSIS – NEW AMMC® FRAMEWORK

First-of-its-kind AMMC® framework

The new Age-Matched Myopia Control (AMMC®) framework provides excellent data on the eye's expected length growth considering age and gender. The eye care professional can compare axial length growth speed to a broad demographic database.

As axial length growth is perfectly normal at a young age, it is essential to quickly discern pathological axial length growth from emmetropic growth.

Pathologically fast eye growth can be rapidly identified using an easy-to-understand traffic light system, providing a clear indication for therapeutic action tailored to the age and state of the individual patient.

MYOPIA DIAGNOSIS - UNDERSTAND THERAPY EFFECTIVENESS

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Assess axial length growth over time

AMMC® allows the eye care professional to observe and assess axial length growth over time and overlay potential treatments. This makes it possible to understand therapy effectiveness rapidly, allowing the eye care professional to adjust the individual patient's therapy, as required.

Furthermore, AMMC® can help to uncover developing myopia based on excessive axial length growth before it becomes visible in refraction. Therefore, treatment can be administered even in pre-myopic children to keep axial length growth in a physiological range.

Axial length – an established method

Comparing axial length to axial length reference curves is a well-established method for the diagnosis of myopia.

EyeSuite Myopia uses the latest axial length growth curves from myopia experts at the Erasmus University Medical Center.

Lenstar Myopia provides powerful visualization, overlaying periodic axial length measurements with gold-standard normative studies*, and even adds custom reference curves.

MYOPIA DIAGNOSIS – AXIAL LENGTH

Axial length measurement made easy

With the Automatic Positioning System (APS) of the Lenstar 900, performing the axial length measurement is easier than ever.

As soon as the patient looks into the Lenstar, the APS tracks the patient's eye, and the measurement is taken with one click of the joystick. This is especially important when measuring children, who are sometimes impatient and have difficulty cooperating with the measurement process.
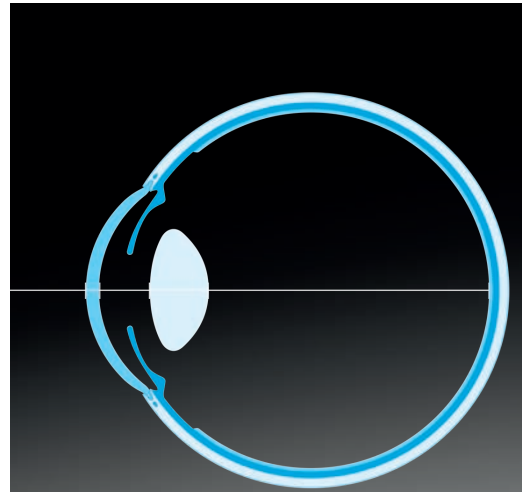

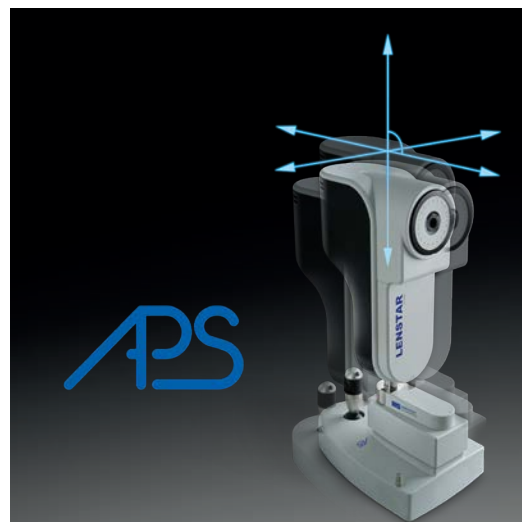AUTOMATIC POSITIONING SYSTEM (APS)

Refraction – a vital tool

Refractive assessment remains a vital tool for myopia diagnosis. By determining refraction, and its development in childhood, predictions can be made about the progression of myopia up to adulthood. EyeSuite Myopia overlays refraction and biometric data with normative value curves, showing possible treatment courses based on their appropriate control rates.

Treatment options can be customized to match the eye care professionals' experience and expanded to the newest insights from research.
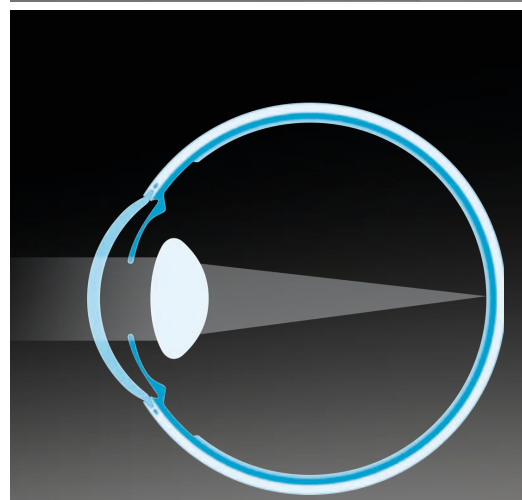

MYOPIA DIAGNOSIS - REFRACTION

* See Tideman et al., 2018 and Sanz Diez et al., 2019

MYOPIA MANAGEMENT - THERAPY

MYOPIA MANAGEMENT - THERAPY
Treat, monitor & optimize

Lenstar Myopia's diagnosis toolkit is complemented with extensive data visualization capabilities. This enables the eye care professional to identify myopia in children quickly, provides a tool to assess the child's health, decide on a form of treatment, monitor the chosen treatment's progress, and adjust or optimize the treatment regimen, if necessary.
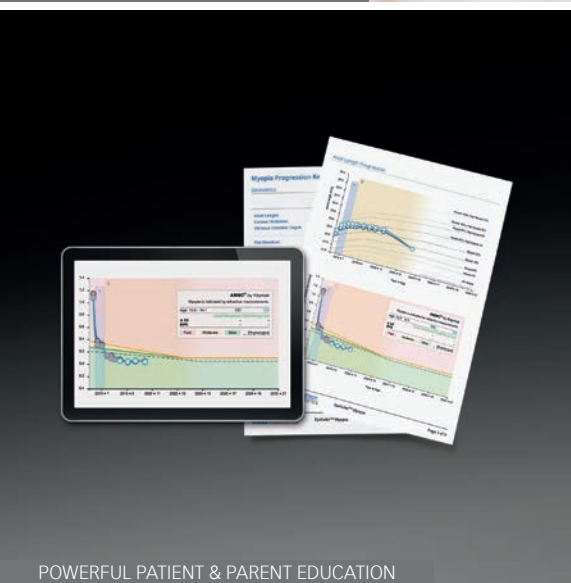

POWERFUL PATIENT & PARENT EDUCATION

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Easy-to-understand myopia report

Lenstar Myopia was the first myopia management solution in the market to truly facilitate patient and parent education. EyeSuite Myopia combines all collected data in a highly flexible and customizable report based on «myopia.care™».

The report provides parents with easy-to-understand information in familiar traffic light colors, enabling them to actively participate in the myopia management process and commit to and support the appropriate treatment for their child.
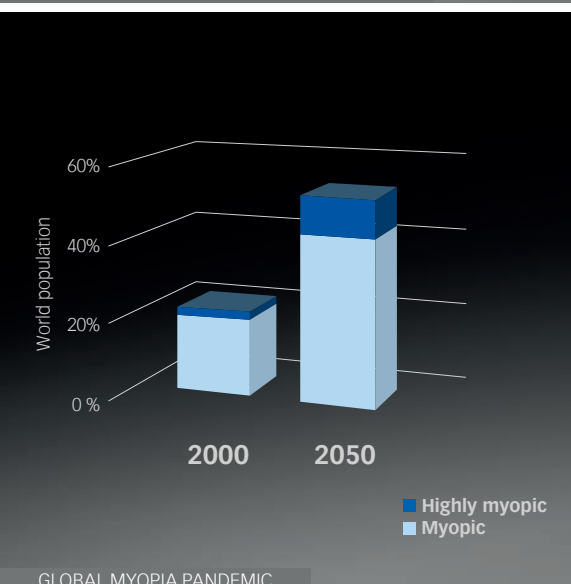
GLOBAL MYOPIA PANDEMIC

GLOBAL MYOPIA PANDEMIC
An increase in myopia cases worldwide

It is well-documented that the global myopia pandemic continues to progress rapidly. Most eye care professionals are familiar with the 'Report of the Joint World Health Organization – Brien Holden Vision Institute Global Scientific Meeting'* and the prediction that myopia will affect around 50% of the world's population by 2050. Furthermore, one in ten myopic people will likely develop high myopia, which, if left untreated, can have drastic consequences in adulthood.

With the increase in myopia cases worldwide, myopia detection, education, and management are in high demand. Lenstar Myopia is THE comprehensive solution for myopia management.

* https://myopiainstitute.org/wp-content/uploads/2020/10/Myopia_report_020517.pdf

Connectivity is key
## Seamless integration for optimal workflow

EyeSuite software is designed for efficient patient flow in busy practices. The Lenstar 900's Automated Positioning System's (APS) biometry acquisition is fast. Optical low coherence reflectometry (OLCR) captures axial dimensions of the human eye's optical structures in a single measurement.

Sophisticated capture and analysis algorithms – as well as the possibility to review measurement data of every parameter in detail to ensure correct measurement – result in full transparency and confidence that the biometry is accurate and precise.

With EyeSuite software, Lenstar 900 is fully networkable and allows full real-time access to all data in a practice.

Furthermore, the EyeSuite script language or standardized interfaces, such as GDT or DICOM, connect easily to almost any electronic medical record system (EMR).

EyeSuite's open data interface, combined with Lenstar 900's separate computer, allows auto-population of the data fields of refractive data from refraction measurement devices or your EMR. This not only saves valuable staff time, it also eliminates the risk of transcription errors.
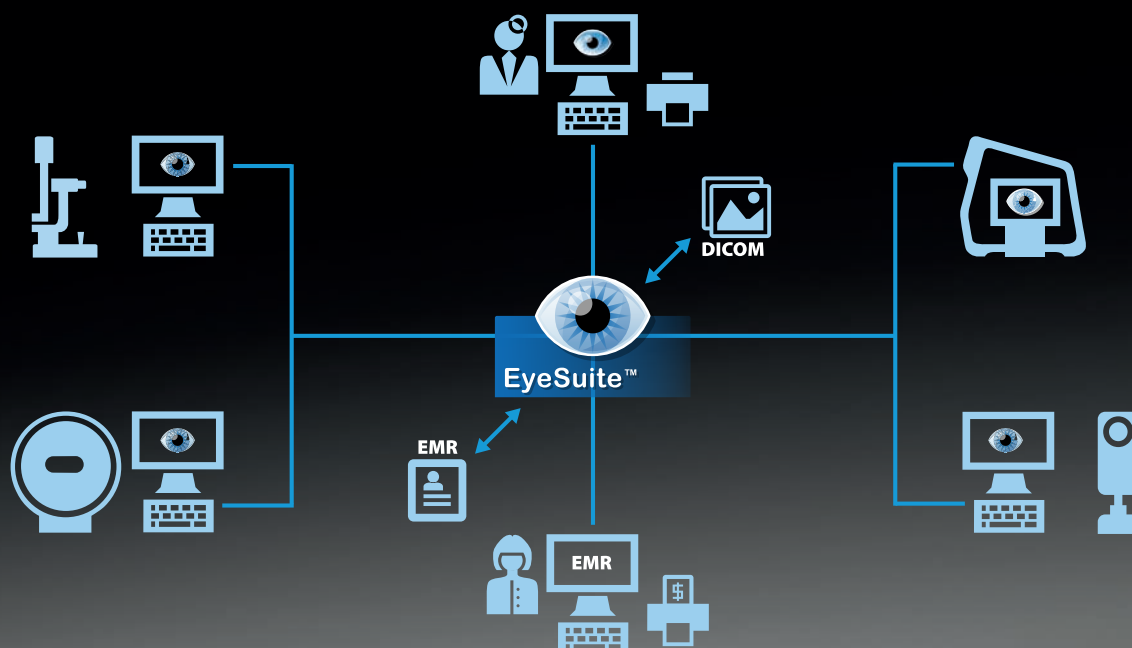
Technical specifications
Lenstar 900

Measured variables & modes

Axial length AL

Measurement range	14–32 mm
Display resolution	0.01 mm

Vitreous chamber depth VCD

Measurement range	1–30 mm
Display resolution	0.01 mm

Corneal thickness CT

Measurement range	300–800 µm
Display resolution	1 µm

Keratometry K

Measurement range for radius	5–10.5 mm
Display resolution	0.01 mm
Measurement range for axis angle	0–180°
Display resolution	1°

Pupillometry PD

Measurement range	2–13 mm
Display resolution	0.01 mm

Laser safety

Class 1 laser product

Electronic medical record system interfaces

- DICOM (SCU)
- EyeSuite Script Language
- GDT
- EyeSuite command line interface

The measurement ranges above are based on the device's standard settings for automatic measurement and analysis.

Technical specifications
EyeSuite Myopia

Features

Refraction

Visualization of individual refractive progression trends to support predictions about the outcomes of different treatment methods and compare them to the untreated course of myopia.

Overlay the patient's refractive progression with predictions calculated from literature based control rates, which can be adapted and supplemented by new control rates as they become available.

Biometry

Visualization of individual axial length progression trends to support myopia progression analyses by overlaying axial length growth curves of peer reviewed population-based studies using the AMMC® framework from Prof. Dr. Hakan Kaymak.

Complementary measurement data such as pupillometry, vitreous chamber depth, central corneal thickness and keratometry.

Environmental Factors

Visualization of customizable factors, such as myopic parents and time spent outside, and their potential effects on myopia progression.

Myopia Report

Highly flexible and customizable reports of all available data and visual curves in line with the well-known «myopia.care™» report while providing a basis for in-depth education and counselling of patients and parents.

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