

MYAH

Optical Biometry + Corneal Topography

Build, Manage and Grow
Your Myopia & Dry Eye Practice



Myopia greatly impacts the quality of life and personal development of children¹.

It has never been a better time to join the battle against the global myopia epidemic. MYAH is the perfect instrument for eyecare professionals interested in building, managing and growing a myopia service.

Overview of MYAH



Corneal Topography including keratoconus screening and pupillometry



Axial length measurement using optical low coherence Interferometry



Progression reports for analysing treatment efficacy



Comprehensive suite of dry eye assessment tools



Patient-friendly with rapid capture



Compact, space-saving, easy to operate



Exclusive axial length reference databases



Myopia and dry eye questionnaires

Axial Length Variation Trend

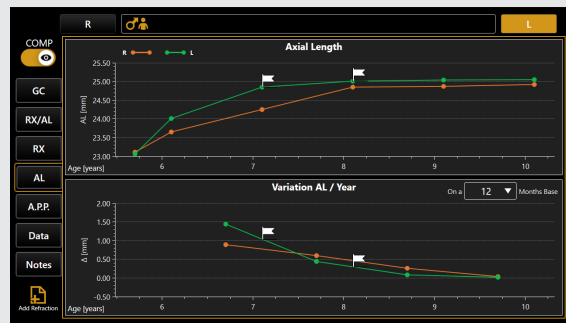
Measurement results obtained with MYAH, including changes in axial length, can be displayed as clear and intuitive trend graphs.

By visualizing axial length variation over time, practitioners can easily monitor longitudinal changes and support discussions on myopia progression. The graphical display helps explain measurement trends to patients in a simple and visual manner. It shows the trends for both eyes on the same graph, facilitating effective communication during myopia management consultations.



RX / AL

Shows trends in Refraction error Spherical Equivalent (S.E.) and axial length measurements.



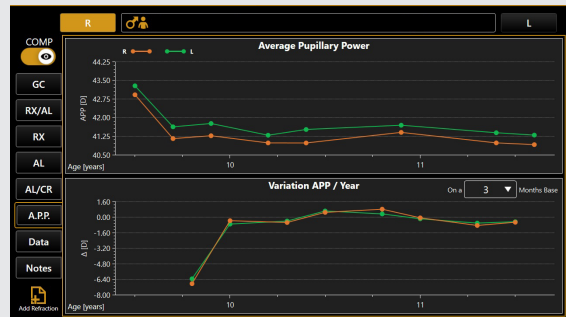
Variation AL

Shows axial length measurements and Axial length yearly variation (on 3, 6, 12 months basis).



AL / CR Ratio²

Shows trends in the axial length to corneal radius (AL/CR) ratio and refractive error.



A.P.P (Average Pupillary Power)

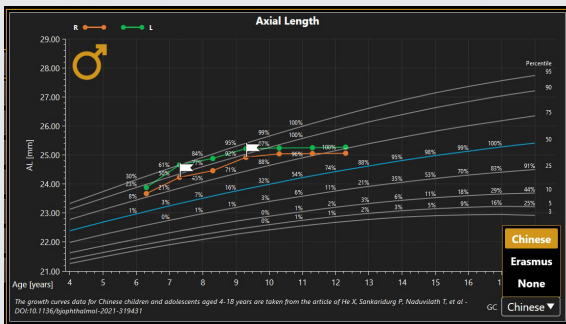
Shows trends in average corneal refractive power and yearly variation (on 3, 6, 12 months basis).

Introducing MYAH's Asian Growth Curves

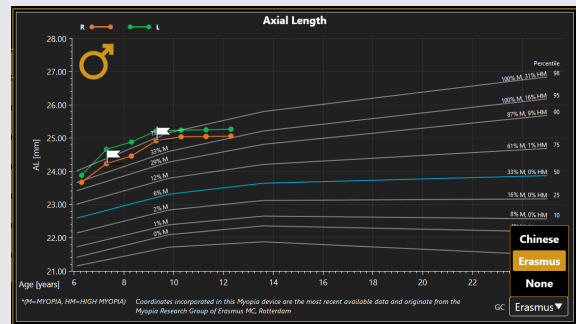
MYAH allows you to monitor the progression of myopia and compare measurements with the growth curves for axial length.

The majority of myopic eyes become myopic principally because of excessive axial elongation³. By using the extensive axial length dataset collected by Erasmus University (Rotterdam, NL)⁴, or the dataset on Chinese children (Shanghai)^{5,6}, now incorporated into MYAH, you can monitor axial length and then compare the patient's data with normative growth curves. You will thus be able to better understand a child's risk of myopia in adulthood.

You can now enhance your myopia management service with MYAH's growth curves.



Asian's Growth Curves



Erasmus's Growth Curves⁷

Parents/guardians tend to be familiar with growth charts in relation to their child's height and weight as a baby. Similarly, the axial length statistics in the above studies are displayed in percentiles, making it easier to communicate with the parents of myopic children.

This is particularly important for children with pre-and low myopia, where the urgency of intervention is difficult to appreciate based on refractive error alone.

Patient		Patient ID		Exam Date		性別					
R (Right eye)		L (Left eye)		R (Right eye)		L (Left eye)					
Exam Date	AL [mm]	SE [D]	K1x2 [D]	ALICR	Intervention / Note	Exam Date	AL [mm]	SE [D]	K1x2 [D]	ALICR	Intervention / Note
2020x05	24.22	-4.22	1.12	2.96		2020x05	24.22	-4.22	1.12	2.96	
2020x02	24.47	-4.05	1.08	2.96		2020x02	24.22	-4.22	1.12	2.96	
2020x09	24.47	-4.05	1.08	2.96		2020x09	24.15	-4.32	1.17	2.97	
2020x02	24.26	-4.26	1.17	2.94		2020x02	24.05	-4.50	1.18	2.94	
2020x11	24.26	-4.26	1.17	2.94		2020x11	24.05	-4.50	1.18	2.94	
2020x08	24.17	-4.34	1.23	2.94		2020x08	23.97	-4.63	1.24	2.95	
2020x05	24.09	-4.45	1.31	2.93		2020x05	23.84	-4.76	1.28	2.93	
2020x03	24.00	-4.54	1.38	2.93		2020x03	23.89	-4.81	1.31	2.97	

Notes:

① AL: Axial Length, is the length of the eye
 ② SE: Spherical Equivalent, is the refractive error of the measured eye
 ③ K1x2: The curvature of the cornea along the steepest and flattest meridians
 ④ ALICR: is the ratio between the axial length and the average corneal curvature
 ⑤ The SE reports a warning during the examination

① AL: Axial Length, is the length of the eye
 ② SE: Spherical Equivalent, is the refractive error of the measured eye
 ③ K1x2: The curvature of the cornea along the steepest and flattest meridians
 ④ ALICR: is the ratio between the axial length and the average corneal curvature
 ⑤ The SE reports a warning during the examination

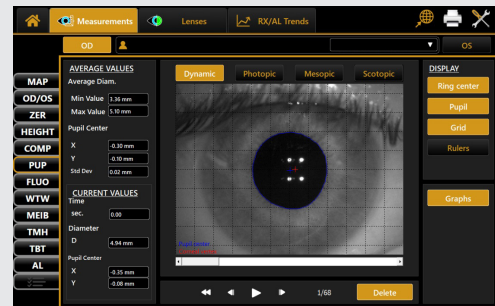
It's nice to see you again!
 Look at the orange and green lines to see how your eyes are growing. Continue wearing your Ortho-K lenses every night as prescribed.

TOPCON MYAH

Comprehensive Suite of Analysis

Dynamic Pupillometry

Provides clear information on the reaction time and size of the pupil, which may be useful to monitor low dose atropine compliance or to titrate the dose of atropine. The user can examine pupil centration and diameter over a range of light levels, which is useful for Ortho-K and multifocal lens fittings, and is also informative for pre- and post-refractive surgery.



Corneal Topography

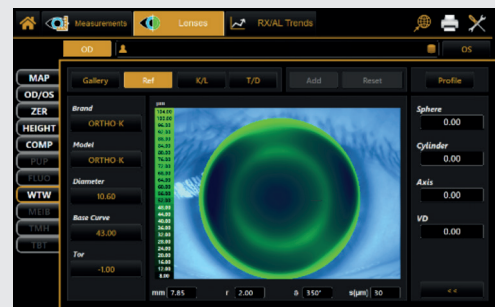
MYAH offers another range of tools to analyse the anterior cornea, including topographic maps, 3D maps, differential comparison maps, height maps, Zernike analysis and keratoconus screening.



Contact Lens Fitting

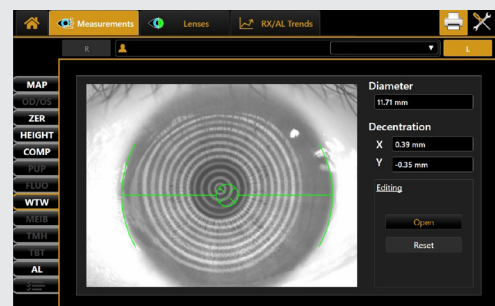
MYAH provides support for contact lens fitting, reducing the number of lenses that need to be trialed on the eye:

- Includes a database of conventional RGP and Ortho-K lenses.
- Export topography data to 3rd party calculators.
- Fluorescein simulation with ability to save and review data.



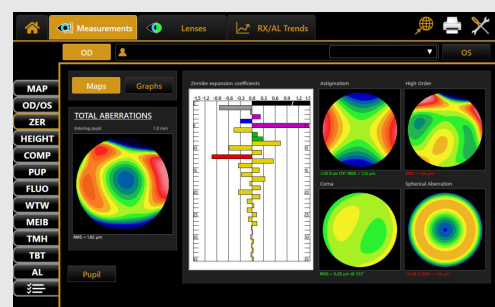
Corneal Diameter Measurement - White-to-White

Automatic White-to-White calculation provides measurement of the horizontal corneal limbal diameter and the decentration of the iris center relative to the fixation target.



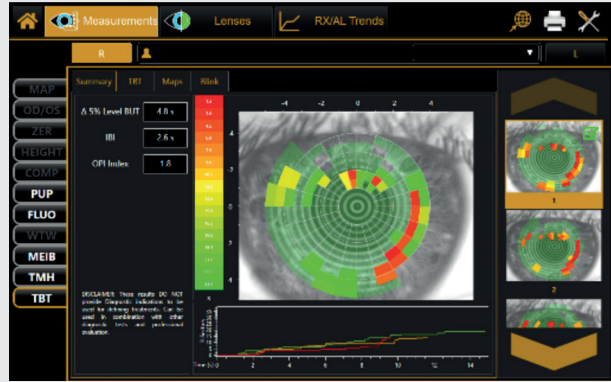
Corneal Aberration Summary

The Zernike expansion coefficient is used to determine which component(s) dominate the aberration structure of the cornea and to what degree. The anterior corneal Zernike summary consists of 36 polynomials up to the 7th order and provides a clear view of the optical irregularities that can impact the quality of vision.

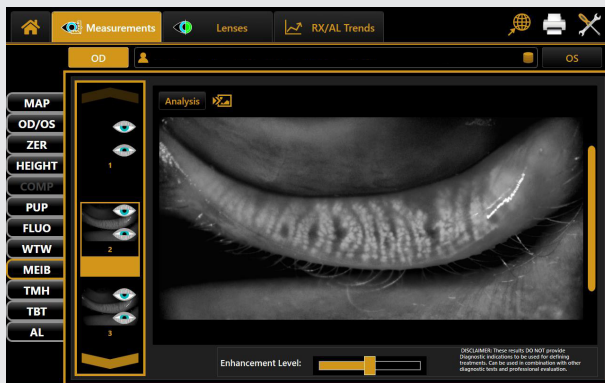


Dry Eye Assessment Tools

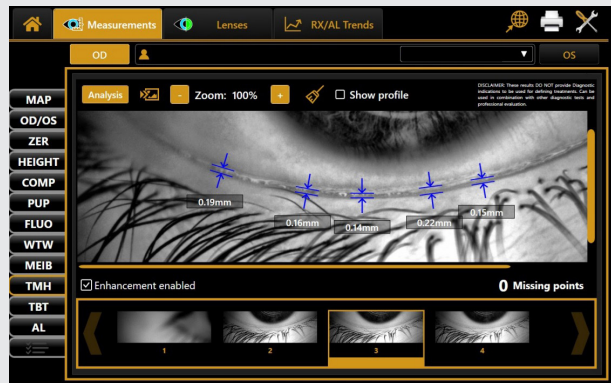
MYAH also offers a variety of features such as non-invasive tear breakup time (NIBUT), Meibomian gland imaging with the area of loss analysis, tear meniscus height analysis, blink analysis, real fluorescein imaging and its video acquisition. NIBUT function allows to capture and play the video of the time evolution of break up times. The sector is colored by time percentage. It enables to review results, to print and to export reports on network or USB.



NIBUT analysis



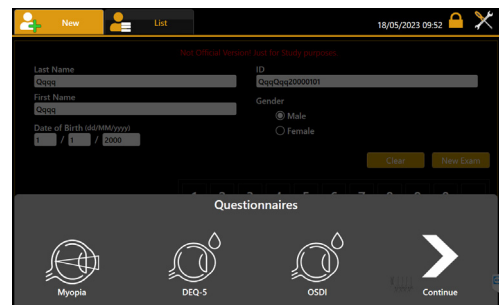
Meibomian Gland analysis



Tear Meniscus height analysis

Questionnaires on Myopia & Dry Eye

Discover the latest additions to MYAH's services: a new myopia questionnaire along with two comprehensive dry eye questionnaires: DEQ-5 and OSDI. These insightful questionnaires help systematically track data over time and are seamlessly integrated into our enhanced reports.



Myopia Questions

- Number of Myopic patients.
- Average hours per day spend on close work (reading, electronic devies, etc) - outside regular school work.
- Average hours per day spend outdoor - outside regular school work.

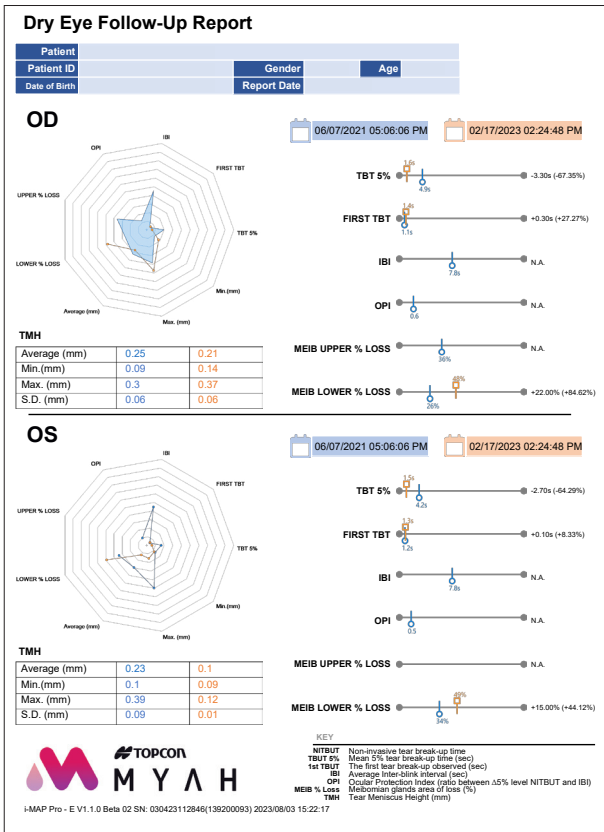
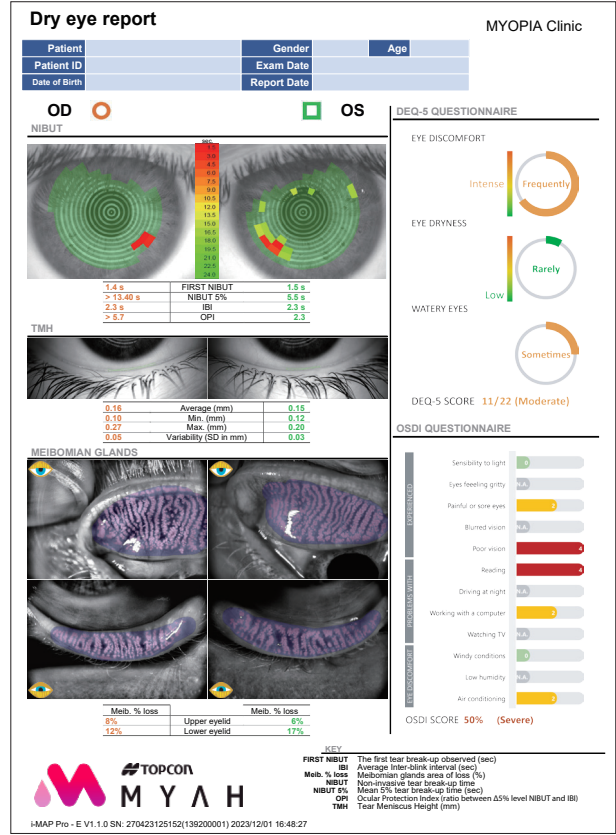
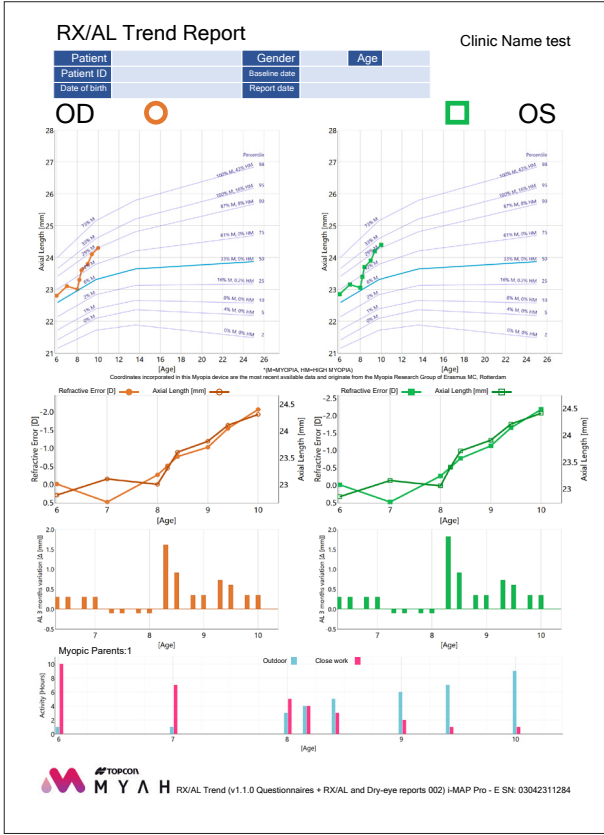
DEQ-5 Questions

- During a typical day in the past month, how often did your eyes feel discomfort?
- When your eyes felt discomfort, how intense was this feeling of discomfort at the end of the day, within two hours of going to bed?
- During a typical day in the past month, how often did your eyes feel dry?
- When your eyes felt dry, how intense was this feeling of dryness at the end of the day, within two hours of going to bed?
- During a typical day in the past month, how often did your eyes look or feel excessively watery?

OSDI Questions

- Have you experienced any of the following during the last week:
(Eyes that are sensitive to light?/Eyes that feel gritty?/Painful or sore eyes?/Blurred vision?/Poor vision?)
- Have problems with your eyes limited you in performing any of the following during the last week :
(Reading?/Driving at night?/Working with a computer or bank machine(ATM)?/Watching TV?)
- Have your eyes felt uncomfortable in any of the following situations during the last week :
(Windy conditions?/Places or areas with low humidity(very dry)?/Areas that are air conditioned?)

Comprehensive Reports with Questionnaires



MYAH SPECIFICATION

FEATURE	SPECIFICATION
Keratoscopic cone	24 rings equally distributed on a 43 D sphere
Analyzed points	Over 100,000
Measured points	Over 6,000
Corneal coverage	Up to 9.8 mm on a sphere of radius 8.00 mm (42.2 D with n=1.3375)
Axial Biometry	Low-coherence interferometry on optical fiber (SLED @ 820 nm)
Capture system	Guided-focus
Database	Internal
Pupillometry	Dynamic, Photopic, Mesopic, Scotopic
Fluorescein	Image, Video
Reports	Keratometry, comparison map, contact lens, height map, Zernike analysis, pupillometry, Meibomian glands, tear film break-up time, tear meniscus height, Rx/AL trend analysis, fluorescein, parental, dry eye summary & dry eye follow-up report
Working environment	10 °C – 40 °C, Relative humidity 8 – 75% (no condensing), Atmospheric pressure 800 – 1060 hPa
Power supply	AC 100 – 240 V 50/60 Hz
Power consumption	100 VA
Fuse Type	20 x 5 mm
Fuse Value	T 2.5 A H 250V anti-surge
Dimensions	320 mm (W) x 490 mm (H) x 470 mm (L), 18 Kg
Printing options	USB printer, Network printer, PDF on network shared folder, PDF on USB PDF or Image on network folder or on USB
Operating System	Windows embedded
Monitor	LCD 10.1 inch capacitive touch screen
RAM	At least 4 GB
Hard Disk	At least 500 GB
External connections	LAN integrated, 2x USB

INFORMATION ON MEASUREMENTS

MEASUREMENT	MEASURING RANGE	DISPLAY RESOLUTION	IN VIVO REPEATABILITY
Keratometry	Radius of curvature	5.00 – 12.00 mm	±0.02 mm
	Curve Radius in Diopter (D) (n=1,3375)	28.00 – 67.50 D	±0.12 D
Axial Length	15.00 – 36.00 mm	0.01 mm	±0.027 mm
Pupil dimension	0.50 – 10.00 mm	0.01 mm	N/A
Limbus (White-To-White)	8.00 – 14.00 mm	0.01 mm	±0.05 mm
IBI Index (Interblink Interval)	0.2 – 20.0 s	0.1 s	N/A
Non-invasive Break-Up Time (TBT)	0.5 – 30.0 s	0.1 s	N/A
Meibomian Glands area of loss	0 – 100%	1%	N/A
Tear Meniscus Height	0.10 – 1.00 mm	0.01 mm	N/A

Not all products, services or offers are approved or offered in every market, and products vary from one country to another. Contact your local distributor for country-specific information.

- Report of the Joint World Health Organization-Brien Holden Vision Institute. Global Scientific Meeting on Myopia. The Impact of myopia and high myopia. University of New South Wales, Sydney, Australia. 16-18 March 2015.
- This feature may not be available in all countries. Contact your local distributor for country-specific information and availability.
- (Gifford KL, Richdale K, Kang P, Aller TA, Lam CS, Liu YM, Michaud L, Mulder J, Orr JB, Rose KA, Saunders KJ, Seidel D, Tideman JW, Sankaridurg P, IMI - Clinical Management Guidelines Report. Invest Ophthalmol Vis Sci. 2019 Feb 28;60(3):M184-M203).
- Coordinates incorporated in this Myopia device are the most recent available data and originate from the Myopia Research Group of Erasmus MC, Rotterdam
- Courtesy of Prof. Xu Xun, MD
- He X, Sankaridurg P, Naduvilath T, Wang J, Xiong S, Weng R, Du L, Chen J, Zou H, Xu X. Normative data and percentile curves for axial length and axial length/corneal curvature in Chinese children and adolescents aged 4-18 years. Br J Ophthalmol. 2023 Feb;107(2):167-175
- At the percentiles for certain age groups, also the percentage of persons with Myopia and High myopia in this age-group has been indicated for Erasmus study only.

IMPORTANT In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation. Not all products, services, or offers are available in all markets. Contact your local distributor for country-specific information and availability.

TOPCON INSTRUMENTS (MALAYSIA) SDN. BHD.

(Regional Office for Topcon Healthcare SEA)
11A, Jalan TP7, Taman Perindustrian Sime Uep,
47600 Subang Jaya, Selangor, MALAYSIA
Phone: +603-766 16260 Fax: +603-766 16261
Email : mys_tim_marketing_sm@topcon.com
www.topconhealthcaresea.com

TOPCON SINGAPORE MEDICAL PTE. LTD.

100G Pasir Panjang Road, #02-18, Interlocal Centre,
SINGAPORE 118523
Phone: +65-68720606 Fax: +65-67736150
E-mail: med.sales.sg@topcon.com
www.topconhealthcaresea.com

TOPCON INSTRUMENTS (THAILAND) CO., LTD.

77/162 Sinnsathorn Tower, 37th Floor, Krungthonburi Rd.,
Klongtongsai, Klongsarn, Bangkok 10600, THAILAND
Phone : +66-02-440-1152 Fax : +66-02-440-1158
Email : tha_medical@topcon.com
www.topconhealthcaresea.com

MEHRA EYETECH PRIVATE LIMITED

801 B Wing, Lotus Corporate Park, Graham Firth Steel Compound
Goregaon (East) Mumbai 400063 Maharashtra, INDIA
Phone: +91-22-61285455
E-mail: sales@mehraeyetech.in
www.topconhealthcare.in

TOPCON (BEIJING) MEDICAL TECHNOLOGY CO., LTD.

Room 2808, Tower C, JinChangAn Building, No.82, Middle Section of
East 4th Ring Road, Chaoyang District, Beijing 100124, P.R. CHINA
Phone: +86-10-8794-5176
E-mail: cn_marketing@topcon.com
www.topcon-china.net/

TOPCON KOREA MEDICAL CO., LTD.

2F YK Building, 205, Dogok-ro, Gangnam-gu,
Seoul, Republic of Korea
Phone: +82-2-6959-7947
E-mail: tkm@topcon.com
www.topconhealthcare.kr/