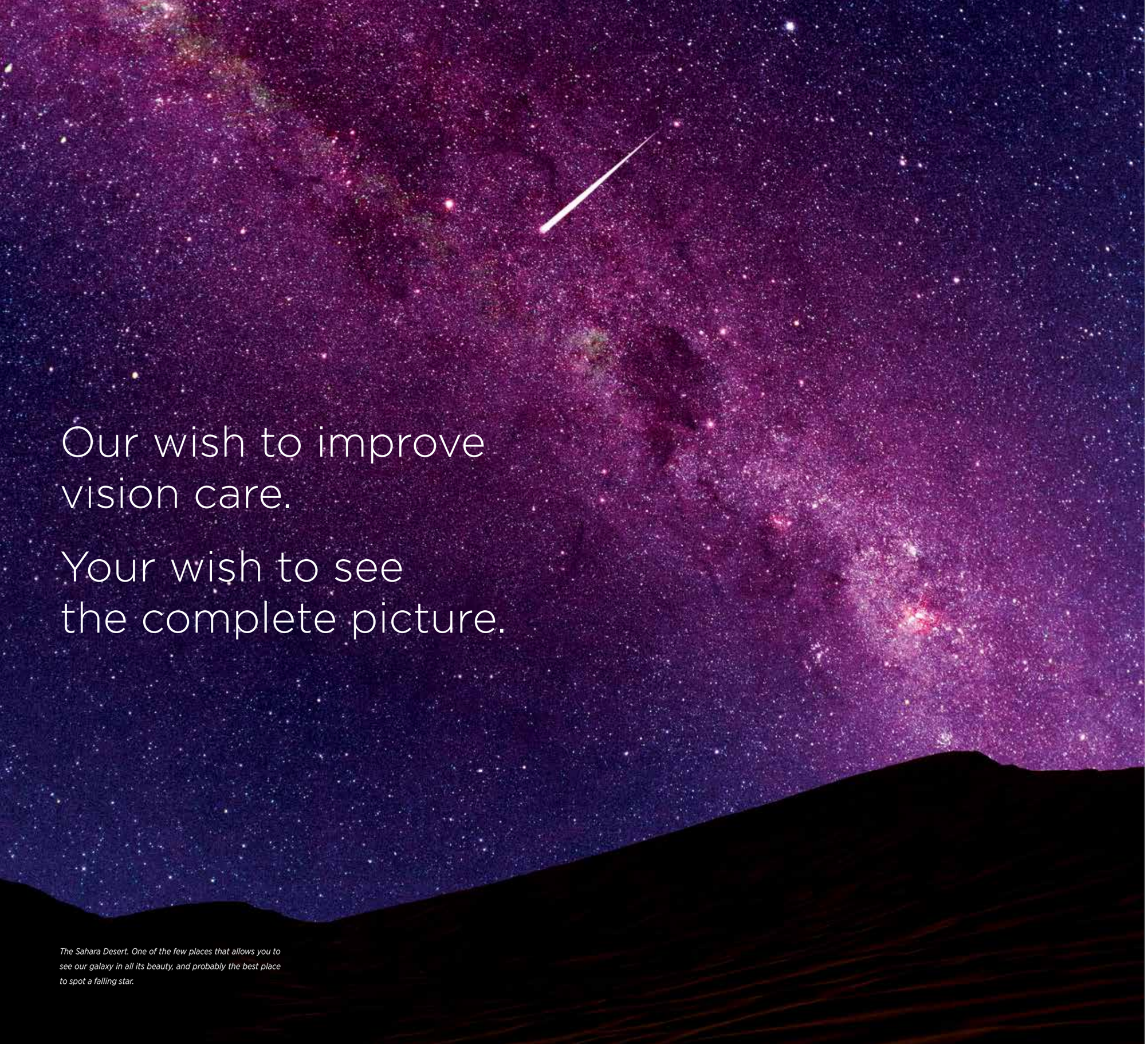
Optical Biometry & Topography System

ALADDIN

TOPCON
CONNECTING VISIONS



The Sahara Desert. One of the few places that allows you to see our galaxy in all its beauty, and probably the best place to spot a falling star.

OUR WISH TO IMPROVE VISION CARE

For over 80 years we have been Connecting Visions.

How everyone sees tomorrow.
How everyone sees true colours.
How everyone sees what's important.
How everyone sees natural beauty.

Everyone deserves good vision.
That is how we, at Topcon, see the world.

YOUR WISH TO SEE THE COMPLETE PICTURE

Today IOL-power is not enough anymore, the right optical result counts.

Implanting the right IOL for the individual patient, being able to better predict outcomes and improve results.

Your wish to see the complete picture comes true with ALADDIN.

TOPCON®
CONNECTING VISIONS

ALADDIN
The complete picture

Cataract surgery is one of the most routinely and accurately performed operative procedures worldwide. Patients and surgeons alike have very high expectations for the outcomes after cataract surgery, therefore modern cataract surgery is more and more a phaco-refractive procedure.

With increasing expectations, improved optical information is required. Where conventional optical Biometer provide accurate information for determining the spherical power of the IOL, they lack the information to completely understand the total refractive properties of the optics of the eye.

Topcon presents the complete picture with the new ALADDIN. ALADDIN supports the surgeon not only in his choice of the spherical power of the IOL, but also assists in the choice of the right premium IOL for each individual eye.

With ALADDIN Topcon provides an Axial Lenght ADD IN to their trusted topographers, combining well known 'Placido' topography with the very latest interferometry. Biometry results are complemented with anterior topography and pupillometry in one fast, accurate and easy acquisition.

You get the complete picture for all cataract surgeries. Whether you are performing standard cataract surgery or premium IOL implantation, you can be screening for corneal aberrations, previous corneal procedures and kerataconus all at once. ALADDIN only requires one acquisition.

The ALADDIN was developed with three key points in mind:

OUR WISH FOR HIGH SPEED

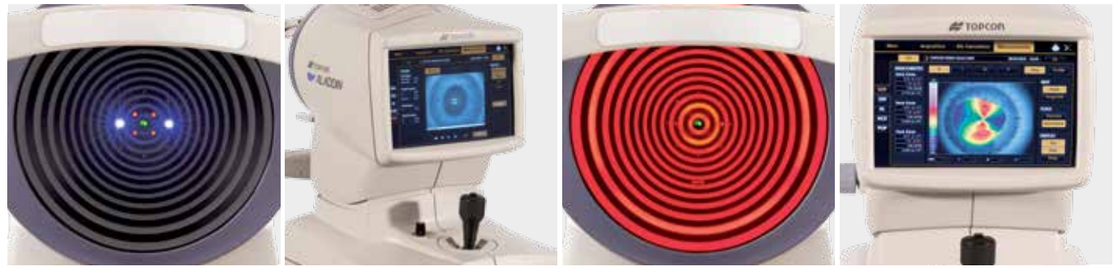
Point and shoot acquisition, all necessary measurements are taken in under 5 seconds.
Single measurements are supported for even faster ACD, AL or topography, as well as a separate full pupillometry.

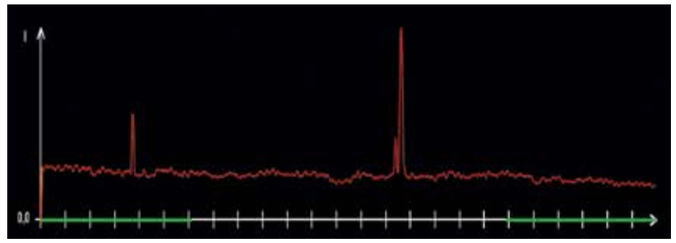
OUR WISH FOR ACCURACY

Proven Interferometry technology and the new Real Corneal Radii Technology provide extremely accurate axial length and corneal radii information for precise determination of IOL spherical and torical powers.

OUR WISH FOR EASE OF USE

The operator is only 3 clicks away from printing the ALADDIN report. The 10.1 inch colour touchscreen monitor with its wide angle of view is very responsive and comfortable to use. Connections to iBase provide easy patient access.





One device that gives you the complete pictures & provides you with the optimal workflow.

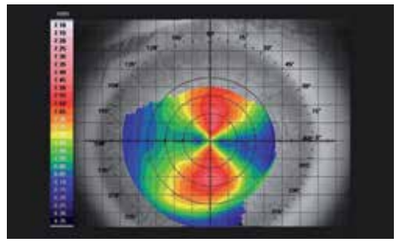
TRUSTED RESULTS EACH TIME:

- Providing Real Corneal Radii, measuring over 6200 points
- Adding keratoconus screening to biometry
- Visualizing post refractive procedures with topography
- Providing IOL-power calculation for post refractive eyes
- Multiple surgeon settings for optimal customisation
- Reduce preoperative screening times
- Adjusting for special eye conditions like aphakic and pseudoaphakic eyes
- Offering the full ULIB database, ready to customize and update
- Matching any goldstandard in the market today.*
- Providing the complete picture

*Data on file at Topcon Europe Medical

SOFTWARE

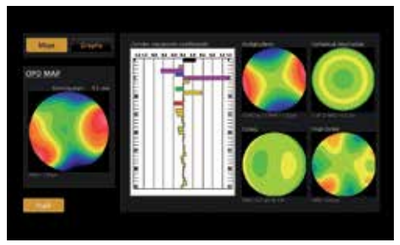
A picture says more than a thousand words



Full anterior topography provides much more information than just K-values, instantly distinguishing regular and irregular astigmatism.

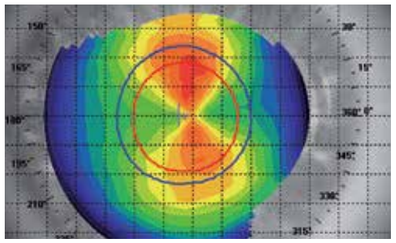
- Axial and tangential
- Absolute and Normalised
- mm and diopter

Assessing the likelihood of kerotoconus on screen and printout helps to easily screen patients, contributing to better outcomes without any extra effort



Zernike analyses of the topographic data provides the Optical Path Difference (OPD) and information on astigmatism, spherical aberrations, higher order aberrations and Coma for various pupil sizes.

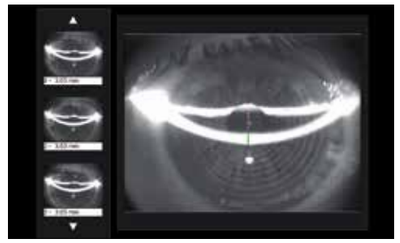
Using newest technology in interferometry and signal processing, ALADDIN achieves Axial length measurement with high signal-to-noise ratio and is able to penetrate even high grade dense cataracts



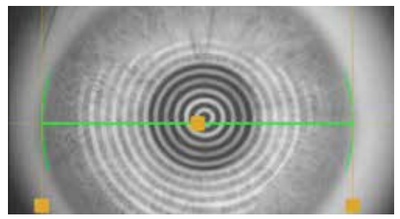
During Placido evaluation pupillary response is observed to assess a pseudo photopic and pseudo scotopic pupil size, indicating response and normal range of the pupil

Full pupillometry screening assists to evaluate eyes for multifocal IOL implantation or refractive surgery.

- Dynamic
- Photopic
- Scoptopic

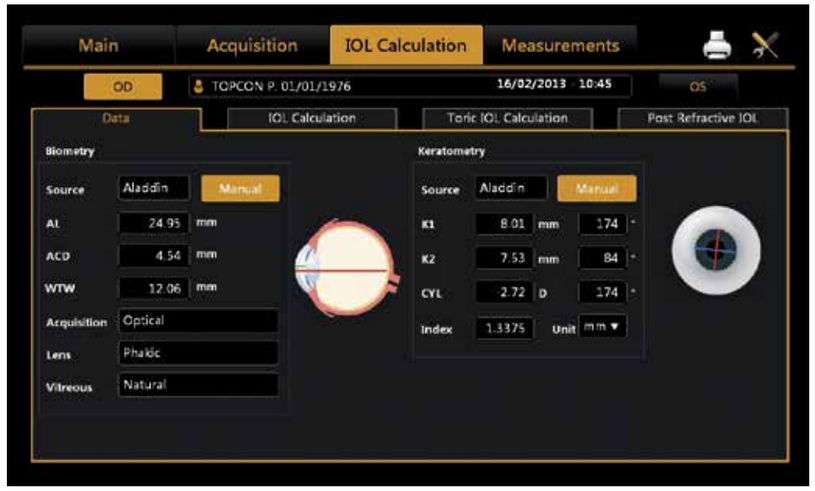


ACD measurement provides a slit lamp image of the anterior chamber for easy control and validation



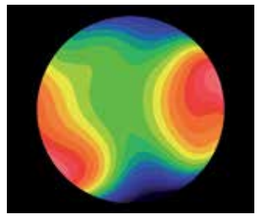
Manual control of white to white measurement give you reliable results and the option to assess the presence of irregularities like pterygium

ALADDIN
Choose the right IOL for every patient

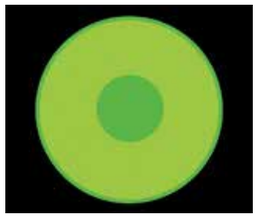


Any time you perform refractive cataract surgery in patients who can see 20/20 before surgery, means they will not be happy unless they achieve a UCVA of 20/20 afterward. There is no exception, and this is the reason to choose ALADDIN. With a built-in topographer, you can get very accurate refractive results.

On top of regular biometry measurements ALADDIN provides keratorefractive indices, Zernike analyses and topographical maps, all valuable in premium IOL-implantation.



OPD, rms 1.17 µm

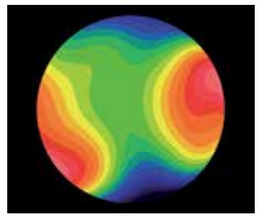


Sph. Ab. rms 0.23 µm

ASPHERIC AND SPHERIC IOLS

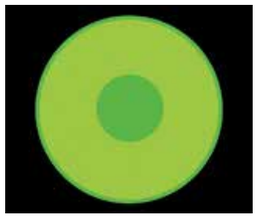
IOL manufacturers produce aspherical IOL's with standardized spherical aberration correction. When topography is not performed to measure the actual spherical aberration, the choice for the individual best lens cannot be properly made.

When using the actual Spherical Abberation provided by Zernike analysis, you can select the appropriate IOL according to the patient's individual required spherical aberration correction.

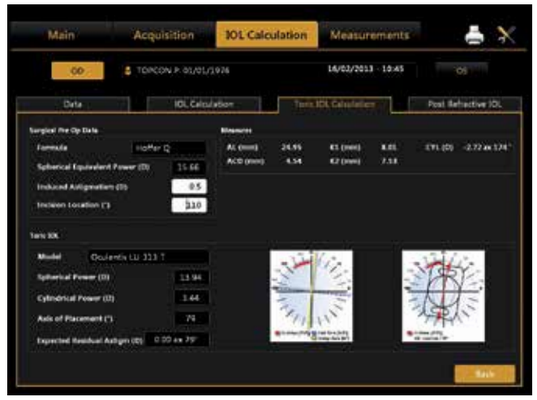


OPD, rms 1.17 µm

Coma, rms 1.17 µm



Sph. Ab. rms 0.23 µm



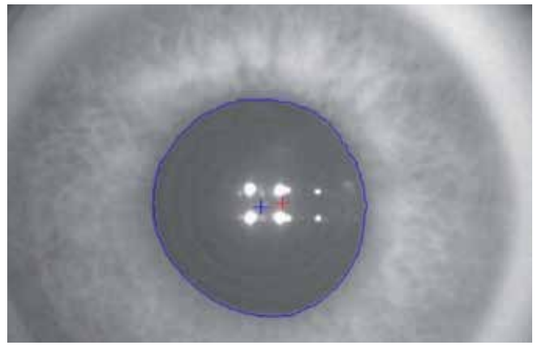
TORIC IOL'S

ALADDIN provides information on some important

decisions for toric IOL-selection:

- Amount of toric correction needed
- Coma that will not be corrected by toric implantation
- Required spherical aberration of the IOL

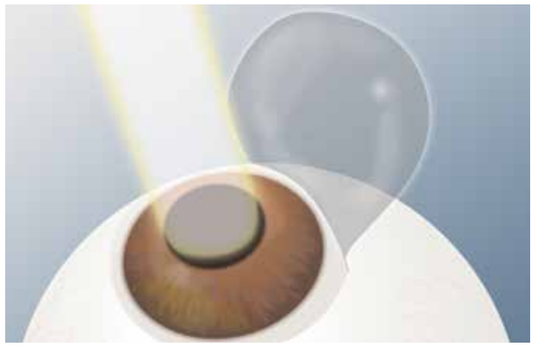
When implanting a toric IOL specific toric calculation software is included in the ALADDIN; this saves you time and avoids unnecessary mistake when manually entering data online.



PUPILLOMETRY

For any refractive procedure it is vitally important to diagnose the pupil very carefully in different light conditions.

It will provide you the possibility to assess patients before multifocal IOL implantation and exclude cases of extreme small or decentrated pupils.



CORNEAL REFRACTIVE PROCEDURES

In eyes that have previously undergone refractive surgery, spherical aberration values are often outside of the standard value. In these often demanding cases, choosing the right asphericity is vital to ensure patient satisfaction.

Integrated Camellin-Calossi post-LASIK formula aids in selecting the right diopter.

ALADDIN OUTPUT

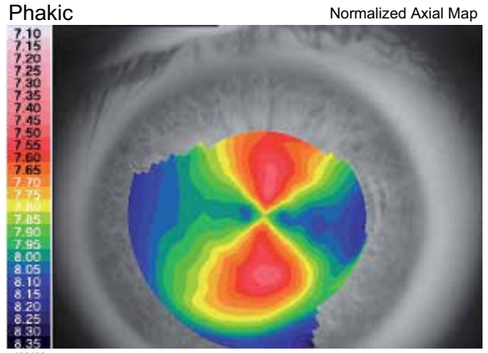
TOPCON

Patient : **TOPCON PATIENT**
Patient ID : **19500101**
Date Of Birth (dd/mm/yyyy) : **01/01/1950**

OD

Phakic

Normalized Axial Map



mm

Measuremen

AL	**24.95 mm**	K1	**8.01 mm@ 174 °**
ACD	**3.81 mm**	K2	**7.53 mm@ 84 °**
WtoW	**11.98 mm**		

Keratorefrac

CYL 3 mm	**-2.71 D**	Ax:	**173°**
CYL 5 mm	**-2.77 D**	Ax:	**174°**

SD	SAI	e	Kc
0.53 D	**0.37 D**	**0.49**	**43.11**

Keratoconus

AK	AGC	SI	p
46.17 D	**1.66 D/mm**	**0.08 D**	**15%**

Pupil

Photo:	Diam 4.30 mm	Dec	0.14 mm; 172°
Meso:	Diam	Dec	

Zernike A

OPD	Coma	Sph. Ab.
rms 1.14 µm	rms 0.06 µm	rms 0.13 µm

Aladdin Summary (V. 1.1.0)

TOPCON

Patient : **TOPCON PATIENT**
Patient ID : **19500101**
Date Of Birth (dd/mm/yyyy) : **01/01/1950**

OD

Phakic

Data Measurements n : **1.3375**

Aladdin Optical

AL	:	**24.95 mm**	K1	:	**8.01 mm @ 174 °**
ACD	:	**4.54 mm**	K2	:	**7.53 mm @ 84 °**
			CYL	:	**-2.72 D**	ax **174 °**

Target Refraction: 0

Oculentis
L-313

Hoffer Q	
IOL(D)	*REF(D)*
14.50	0.78
15.00	0.45
15.50	**0.11**
16.00	-0.23
16.50	-0.58

IOL @ Target 15.66 — pACD = 5.010

Oculentis
LS-313 MF30

SRK/T	
IOL(D)	*REF(D)*
15.50	0.55
16.00	0.22
16.50	**-0.12**
17.00	-0.46
17.50	-0.80

IOL @ Target 16.32 — A = 118.500

Oculentis
LU-313 MF30T

Haigis	
IOL(D)	*REF(D)*
15.50	0.67
16.00	0.33
16.50	**-0.02**
17.00	-0.37
17.50	-0.73

IOL @ Target 16.47 — A0 = 0.870, A1 = 0.400, A2 = 0.100

Oculentis
L-303

Holladay I	
IOL(D)	*REF(D)*
15.00	0.76
15.50	0.43
16.00	**0.10**
16.50	-0.24
17.00	-0.58

IOL @ Target 16.15 — SF = 1.360

Oculentis
L-312

Hoffer Q	
IOL(D)	*REF(D)*
15.00	0.67
15.50	0.35
16.00	**0.02**
16.50	-0.32
17.00	-0.66

IOL @ Target 16.02 — pACD = 5.260

IOL Calculator (V. 1.1.0)

TOPCON

Patient : **TOPCON PATIENT**
Patient ID : **19500101**
Date Of Birth (dd/mm/yyyy) : **01/01/1950**

OD

Phakic

Axial len

Comp. AL: 24.91 mm

AL	**AL**
24.90 mm	
24.86 mm	
24.95 mm	
25.08 mm	
24.86 mm	
24.93 mm	

Value Corne

KER: 8.29/8.16 mm CYL: -0.66 D Ax 0 °

K1: 8.29 mm @ 0°	40.72 D
K2: 8.16 mm @ 90°	41.38 D
CYL: -0.66 D ax 0°	

ACD

ACD: 3.487 mm

3.48 mm	3.48 mm	3.53 mm	3.49 mm
3.49 mm			

White to

WTW 12.85 mm

Overview Biometer Measurements (V. 1.1.0)

TOPCON MEDICAL

Surgeon : **Surgeon Generic**
Exam Date (dd/mm/yyyy) : **18/09/2013 - 14:37**

OS

Diameter (mm)

Min	**Max**
2.92	4.43

Center (mm)

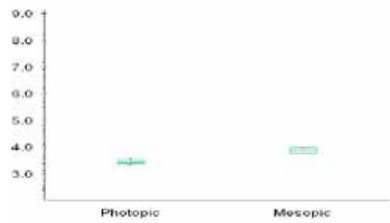
Mean	**Std Dev**
x= 0.13 y= -0.09	0.03

Diameter (mm)

	Mesopic	**Photopic**
Mean	3.86	3.44
Std Dev	0.08	0.06

Center (mm)

	Mesopic	**Photopic**
X	0.12	0.08
Y	-0.09	-0.06



Specifications

Measurement ranges for IOL power calculation	
Axial Length (interferometry)	15 mm - 38 mm
Corneal Radii	3.3 - 37,5 mm / 9.0 - 101.5 D
Anterior Chamber Depth	1.5 mm - 5.5 mm
White to White	6 - 18 mm
Pupil size	0.5 - 10 mm
On-board IOL calculation formulae	
	SRK II, SRK/T, Hoffer Q, Holladay 1, Haigis, Camellin-Calossi (post refractive IOL calculation)
Placido Topography Specifications	
Keratoscope cone	24 rings equally spaced on a 43D sphere
Analyzed points	Over 100,000
Measured points	Over 6,200
Corneal coverage	Up to 9.8 mm on a sphere of 8 mm radius (42.2 dioptres with n=1.3375)
Diopter power range	9.0 -101.5 D
Resolution	3 0.01D, 1 micron
Accuracy/precision axial radius	3 0.02 mm
Machine Specifications	
Display	10.1 inch color touch screen
Interfaces	2 USB, LAN
External Printer	Any USB printer (provided by user)
Dimensions/Weight	47cm (L) x 49cm (H) x 32cm (W) / 18kg
Power Consumption	max. 150 VA
Power Supply	AC 100-240 V 47-63 Hz

ALADDIN - The complete picture in Optical biometry & placido topography




CERMET Certification and research for quality

CE 0476

IMPORTANT Subject to change in design and/or specifications without advanced notice.
In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

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