M3®

¥ AUTOMATIC REFRACTOR ¥ AUTOMATIC KERATOMETER ¥ NON-CONTACT TONOMETER

MARCO

THE LEADER IN VISION DIAGNOSTICS®

MARCO M3® WORLD'S FIRST SYSTEM COMBINING TONOMETRY WITH AUTOREFRACTION

New Non-Contact Tonometer, Automatic Refractor, and Automatic Keratometer

3in1

Combining the measurement of refractive power, corneal curvature and intraocular pressure (IOP), the device provides fast and accurate ophthalmic patient care.

SPACE SAVING

Compact & Efficient

The M3 provides auto refraction, keratometry, and tonometry, while saving space and offering greater efficiency by eliminating the need for multiple instruments. Also, the M3 interfaces with EMR.

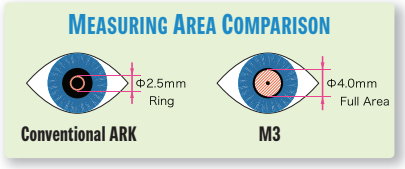
FAST AND ACCURATE

High-Speed & Reliable Measurement

With the latest advanced technologies, the M3 provides highly accurate, reliable measurements with significantly reduced measurement time.

Pupil Zone Imaging Method

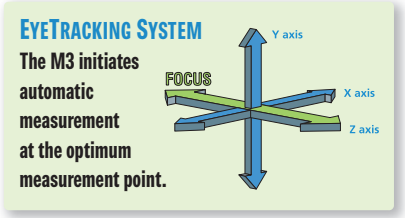
The Marco M3 adopts the advanced Pupil Zone Imaging Method for refraction measurement, which analyzes a wider area (max. ø4mm) to obtain more reliable and realistic data closer to manifest refraction. The M3 is also capable of measuring a 2mm pupil.



FULLY AUTOMATIC

EyeTracking System

The M3 is completely automatic, using three axes: alignment, tracking, and focusing.



USER FRIENDLY

Adjustable Monitor

The clear 5-inch color LCD monitor with tilting function offers easy operation. If the operator needs to stand to lift the patient's eyelid, the monitor can still be viewed.

TILTABLE LCD

New Easy-Load Paper

Printer provides fast and automatic paper loading, cutting and detachment.

Simply open door, drop in paper, and go. No spool or paper feed needed.

EASY-LOAD PAPER

Motorized Chinrest

Up/Down buttons are used to adjust the motorized chinrest to the correct height for patient measurement.

ADJUSTABLE MOTORIZED CHINREST

BALLOON TARGET

The balloon picture is an infinity target. Automatic fogging minimizes accommodation and maintains fog through all measurement readings.

BALLOON TARGET FOGGED TARGET

COLOR ALIGNMENT INDICATORS

AUTO MEASUREMENT

RING DISPLAY

TONOMETRY READINGS

ADDITIONAL MEASUREMENTS

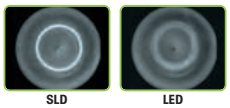
SLD vs. LED Technology.

SLD technology measures patients with small pupils and media opacities. Competitors' utilization of LED technology to measure the refractive power of the optical system presents disadvantages including poor penetration of the LED through media opacities, limited data and accuracy of patients measured.

What's the difference?

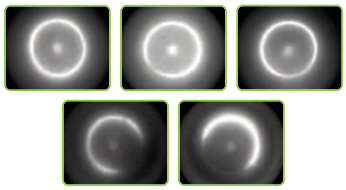
SLD vs. LED Technology

Comparison of Images on CCD Through Cataract SLD vs. Cataract LED



IN-HOUSE TRIAL DATA (MODEL EYE)

Cataract Images From the M3 of the Human Eye



Examples of Myopia, Hyperopia, and Astigmatism

PATIENT FRIENDLY

Gentle Air

The new M3 has an advanced APC (Automatic Pressure Control)–high volume–low pressure puff-function which provides a softer puff of air for accurate IOP measurements and increased patient comfort. The M3 system automatically adjusts the strength of the air puff based on the first measurement of the patient's IOP (including glaucoma suspects).

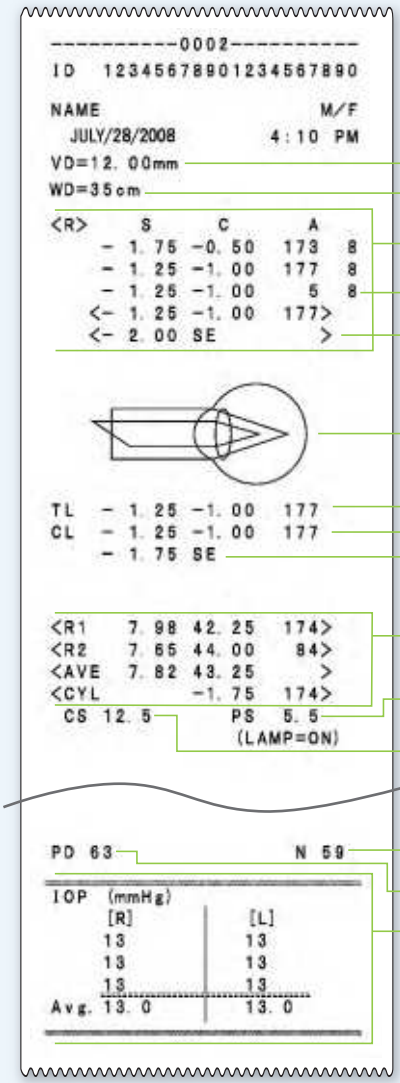
NON-CONTACT TONOMETRY

The M3 non-contact tonometry requires no sterilization. The automatic NCT measurements are operator independent, repeatable, and reproducible. Training is quick and easy.

PRINTOUT

The Automatic Refractor, Automatic Keratometer, and Non-Contact Tonometer data are automatically separated when printing. The printer comes equipped with an automatic paper cutter, eliminating torn printouts.

SAMPLE PRINTOUT



ENHANCED COMPREHENSIVE DIAGNOSTICS

- **Vertex Distance**
- **Near Working Distance**
- **Automatic Refraction**
- **Confidence Index**
- **SE Value**
- **Eyeprint**
- **Trial Lens Data**
- **CL Conversion Data**
- **Spherical Equivalent**
- **Automatic Keratometry**
  - Sagittal K readings with eccentricity values.
- **Pupil Size**
- **Corneal Size**
  - Measurements are taken from limbus to limbus and recorded on a printout.
- **Near PD**
- **Pupillary Distance**
- **Non-Contact Tonometry**

Actual printout includes data for both right and left eyes.

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SPECIFICATIONS

AUTO REFRACTOR/KERATOMETER

Measurable Range	
Sphere	–30.00D to +25.00D (V.D. =12mm), (0.01/0.12/0.25D increments)
Cylinder	0D to ±12D (0.01/0.12/0.25D increments)
Axis	0° to 180° (1°/5° increments)
Measurable Minimum Pupil Diameter	2mm
Chart	Scenery chart (balloon target)
Radius Curvature	5.00 to 13.00mm (0.01mm increments)
Refractive power	25.96D to 67.50D (n=1.3375), (0.01/0.12/0.25D increments)
Astigmatism	0D to ±12.00D (0.01/0.12/0.25D increments)
Axis	0° to 180° (1°/5° increments)
Auto Tracking & Auto Shooting	X-Y-Z direction, Auto Shooting
PD Measurable Range	30.00mm to 85.00mm (indication increments: 1mm)
Corneal Size (CS)	8.1mm–14.6mm (indication increments: 0.1mm)
Pupil Measurable Range	0.8mm–12.1mm (indication increments: 0.1mm)

NON-CONTACT TONOMETER

Measurement Range	1mmHg to 60mmHg
Measurement Range Settings	APC40, APC60 (APC=Automatic Puff Control) 40, 60 Standard PC puff does not automatically adjust
Working Distance	11.0mm
Eye Fixation	Inner Fixation Light
Auto Tracking & Auto Shooting	X-Y-Z direction, Auto Shooting

GENERAL INFORMATION

Monitor	Tiltable 5.7 inch color LCD
Printer	Thermal line printer with automatic paper cutter
Power Supply	AC100-240 V±10%
Power Consumption	100VA
Dimensions & Weight	10.23"(W) x 18.93"(D) x 19.9"(H) / 50.7 lbs.
Standard Accessories	Spare printer paper, Chinrest paper, Fixing pins, Power cord, Dust cover, Model eye.

The TONOREFII (M3) is manufactured by Nidek.

NIDEK