

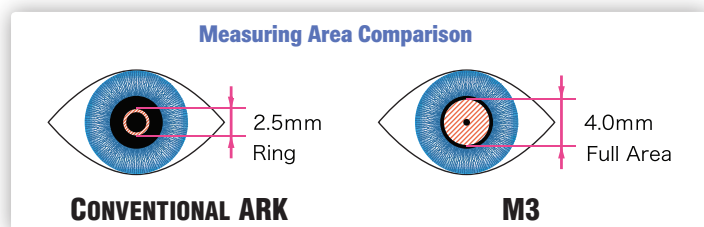
**Marco  
M3** **AUTO REFRACTOR,  
AUTO KERATOMETER, AND  
NON-CONTACT TONOMETER**



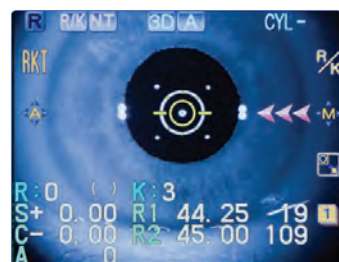
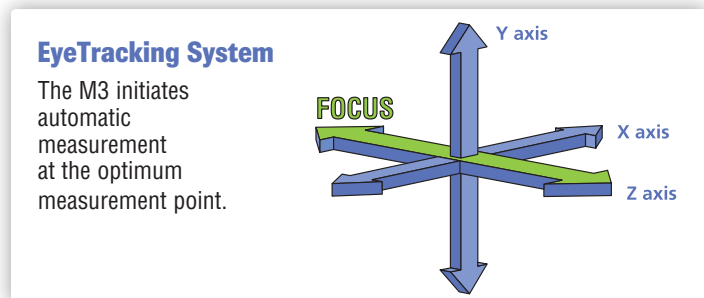


**The Marco M3** non-contact tonometer, auto-refractor, and auto-keratometer combines the measurement of refractive power, corneal curvature and intraocular pressure (IOP) providing fast, highly accurate, reliable measurements with significantly reduced measurement time. Its space saving design eliminates the need for multiple instruments, offering greater efficiency, and it interfaces easily with the patient's EMR.

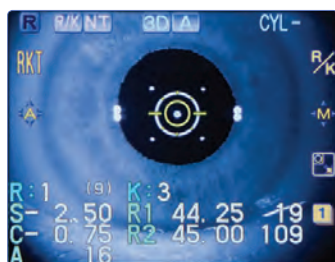
**Small Pupil Zone Measurement** The M3 is capable of measuring through a pupil as small as 2mm. The Marco M3 includes an optional Pupil Zone Imaging Method that includes a wider area (max. 4mm) to obtain measurements that are closer to the refraction through a mesopic pupil.



**Fully Automatic EyeTracking System** The M3 is completely automatic, focusing and tracking the eye horizontally and vertically.



Color Alignment Indicators



Auto Measurement



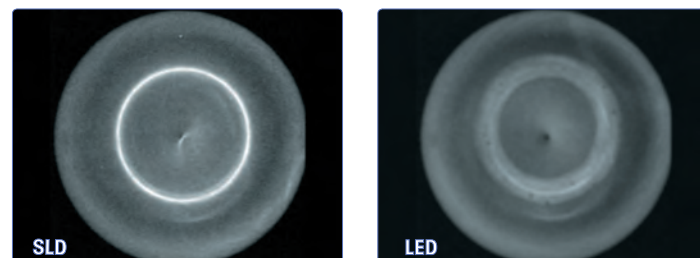
Ring Display



Tonometry Readings

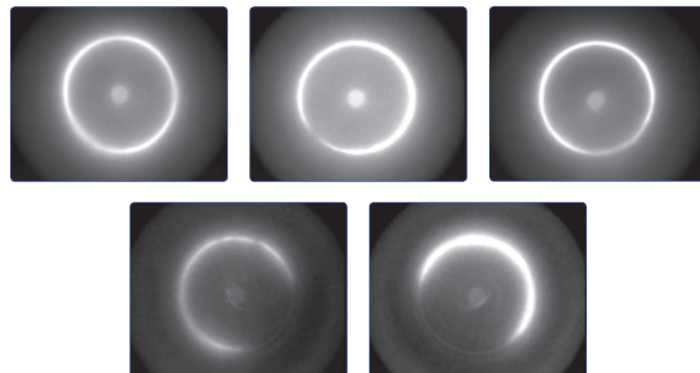
**SLD vs. LED Technology** Super Luminescent Diode (SLD) technology offers advantages over other measurement methods by using brighter illumination to better read through media opacities, providing a more consistent measurement. The result is more consistent and repeatable measurement even with challenging patients.

**What's the difference?**



Comparison of Images Through Cataract SLD vs. LED

**Images From the M3 of the Human Eye with Cataracts**



**Examples of Myopia, Hyperopia, and Astigmatism**





## UNIQUE FEATURES

### Automatic Fogging

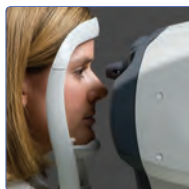
The balloon picture is an infinity target. Automatic fogging minimizes accommodation and maintains fog through all measurement readings.



Balloon Target

Fogged Target

**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 with 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).



### Aseptic Method for Tonometry

The NCT provides a simple aseptic method for taking pressures. The automatic NCT measurements are operator independent. Training is quick and easy.



### Adjustable Motorized Chinrest

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



### Adjustable Monitor with multi-tilt LCD

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



### Easy-Load Paper

The printer provides fast loading and automatic cutting. Simply open the door, drop in the paper, and go. No spool or paper feed needed.

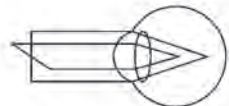


## SAMPLE PRINTOUT

### Data Organization

The Auto-Refractor, Auto-Keratometer, and Non-Contact Tonometer data is separated on the printout.

1	Vertex Distance
2	Near Working Distance
3	Automated Refraction
4	Confidence Index
5	Spherical Equivalent
6	Eyeprint
7	Thin Lens Data
8	CL Conversion Data
9	Spherical Equivalent (CL)
10	K Readings
11	Corneal Size
12	Pupil Size
13	Pupillary Distance
14	Near PD
15	Non-Contact Tonometry

-----0002-----	
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NAME	M/F
JULY/28/2008	4:10 PM
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2	WD=35cm
3	<R>
	S C A
	-1.75 -0.50 173 9
	-1.25 -1.00 177 9
	-1.25 -1.00 5 9
	<-1.25 -1.00 177>
5	<-1.75 SE >
6	
7	TL -1.25 -1.00 177
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	<R2 7.65 44.00 84>
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11	CS 12.5 PS 5.5
	(LAMP=ON)
13	PD 63 N 59
15	IOP (mmHg)
	[R] [L]
	13 13
	13 13
	13 13
	Avg. 13.0 13.0

Actual printout includes data for both right and left eyes.

The NCT measurements are automatic and operator independent and training is quick and easy.





# M3 SPECIFICATIONS



## AUTO REFRACTOR/KERATOMETER

<b>Measurable Range</b>	
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)
<b>Minimum Measurable Pupil Diameter</b>	2mm
<b>Chart</b>	Scenery chart (balloon target)
<b>Radius Curvature</b>	5.00 to 13.00mm (0.01mm increments)
<b>Corneal Refractive Power</b>	25.96D to 67.50D (n=1.3375), (0.01/0.12/0.25D increments)
<b>Auto Track &amp; Automatic Data Capture</b>	X-Y-Z direction, Automatic Data Capture
<b>PD Measurable Range</b>	30.00mm to 85.00mm (indication increments: 1mm)
<b>Corneal Size (CS)</b>	8.1mm–14.6mm (indication increments: 0.1mm)
<b>Pupil Size (PS)</b>	0.8mm–12.1mm (indication increments: 0.1mm)

## NON-CONTACT TONOMETER

<b>Measurement Range</b>	1mm Hg to 60mm Hg
<b>Measurement Range Settings</b>	APC40, APC60 (APC=Automatic Puff Control) 40, 60 Standard PC puff does not automatically adjust
<b>Working Distance</b>	11.0mm
<b>Eye Fixation</b>	Inner Fixation Light
<b>Auto Track &amp; Automatic Data Capture</b>	X-Y-Z direction, Automatic Data Capture

## GENERAL INFORMATION

<b>Monitor</b>	Multi-position tilt 5.7 inch color LCD
<b>Printer</b>	Thermal line printer with automatic paper cutter
<b>Power Supply</b>	AC 100-240 V±10%, 50/60Hz
<b>Power Consumption</b>	100VA
<b>Dimensions &amp; Weight</b>	10.23"(W) x 18.93"(D) x 19.9"(H) / 50.7 lbs.
<b>Standard Accessories</b>	Spare printer paper, Chinrest paper, Power cord, Dust cover, Model eye



Marco automated technologies share data and integrate to EMR systems with Marco Connect software



Designed and Manufactured by NIDEK – Represented by MARCO

800.874.5274  
www.marco.com

