



Occuity **PM1** Pachymeter

Ophthalmic Series



PM1

The first of Occuity's revolutionary handheld optical ophthalmic devices, the PM1 allows both clinicians and technicians to take a corneal centre thickness measurement quickly and easily.

Simple to use, the PM1 is held in front of the subject's eye at a comfortable working distance. To take a measurement, the operator simply touches the screen to put the pachymeter in scanning mode and holds it up to the patient's eye. The PM1's advanced Precision Optical Technology provides feedback to help the operator to position the device correctly. Once aligned, the PM1 automatically captures over 200 scans each second before immediately displaying the average of these measurements along with an indication of precision.

There is no need to anaesthetise or touch the eye, removing the risk of infection transmission and making the whole process much more comfortable, safer and quicker for both the operator and subject.

Non-contact
A better clinician and patient experience

Handheld
Desktop capability, handheld utility

Easy to Operate
The PM1 requires no training

Reduce Chair Time
Results in just a few seconds

Safer
Remove risk of disease transmission and injury

Accurate
Measure corneal thickness accurately, reliably and repeatably

Cost Effective
Desktop performance, handheld pricing

Wireless Charging
Ready when you need it

No Consumables
No waste, no waiting



Features & Benefits

Non-contact

A better clinician and patient experience

The PM1's non-contact capabilities make it totally pain-free and a much better experience for both the clinician and the patient.

Accurate

Measure corneal thickness, accurately, reliably and repeatably

In-house testing indicates the Occuity PM1 will be capable of delivering reliable, repeatable measurements with target accuracy of +/- 5 microns.

The PM1 will be undergoing clinical trials and CE certification in 2022.

Handheld

Desktop capability, handheld utility

The PM1's compact design makes it easy to carry and store. You can use it handheld or if you prefer, in a slit-lamp mounted cradle (coming in late 2022), making it perfect for both clinical and non-clinical settings.



Reduce Chair Time

Results in just a few seconds

As the PM1 is non-contacting, there is no need for anaesthetic eye drops. This significantly reduces the overall time it takes to make a measurement.

Easy to Operate

Intuitive design means no training is required

The PM1's touchscreen interface has been thoughtfully designed making it easy and intuitive to use. Clinical staff and technicians can become proficient with just a few minutes of practice.

Safer

Reduced risk of disease transmission and injury

With its generous working distance, the PM1 never touches the eye – removing the potential risk of cross infection and accidental damage to the cornea. In particular, the PM1's non-contacting capability enhances COVID-19 safety.



No Consumables

No waste, no waiting

Removing the need to contact the eye, removes the need for anaesthetic eye drops, waiting and cleaning times. This reduces costs, waste, downtime, and the risk of damaging equipment through cleaning. The PM1 was designed with sustainability in mind. A quick wipe to remove any dust from the lens is all that is required.

Wireless Charging

Ready when you need it

The Occuity PM1 will always be ready thanks to the innovative wireless charging dock. Once placed back on the cradle, the battery will charge automatically. The cradle also contains a built-in reference artefact so the device can automatically perform a self-check when required giving confidence in its reliable operation.

Cost Effective

Desktop performance, handheld pricing

Enjoy the accurate measuring and non-contact capabilities of expensive optical desktop devices at a price point comparable to existing contacting ultrasound devices.



Precision Optical System

The patented optical technology within the Occuity PM1 uses a tightly focused beam of light to scan the eye. When the focus passes through a surface a bright reflection is seen which allows the meter to know exactly where that surface is.

The PM1 collects the reflections from the front and back surfaces of the cornea, allowing a very precise measurement of corneal thickness.

With our expertise in optics and miniaturisation, Occuity's proprietary technology ensures that in addition to being accurate, the PM1 is also compact and very cost effective.

Comparison



Watch video

Visit the Occuity website for more



The Occuity PM1 makes it easier, faster, and safer to measure corneal centre thickness in just a few seconds. Ideal for corneal, glaucoma and cataract clinics.

	Occuity PM1- Projected	Existing Handheld Pachymeters
Technology	Optical	Ultrasound
Contact	Non-contact	Multiple contact of cornea
Total Measurement Time	Full measurement in seconds	Several minutes
Risk	None	Risk of accidental corneal damage & infection transmission
Cleaning	No clinical cleaning required between patients	Clinical cleaning required between every patient
Consumables	None	Anaesthetic drops, cleansing wipes, replacement probes
Operators	Clinicians & Technicians	Specialist trained clinicians only
Training	No training required	Specialist training required
Display	TFT touchscreen display	Generally basic LCD screens
Usage Location	Clinic, Front Office, Mobile	Clinic only

Draft Technical Specification*

Model	PM1
Devicetype	Pachymeter
Overall dimensions	17.5cm x 15cm x 4.5 cm
Weight	450 g
Display	3.46" Colour LCD
Laser source	1310nm <160 µW Class I
Measurement units	µm
Measurement range	300 µm to 1000 µm
Measurement rate	≥ 200 scans per second
Measurement time	< 10 s
Averaging	100 measurements per displayed result
Accuracy	µ± 5µm
Display resolution	1µm
Battery	7.4V 1050mAh
Charger	Input: 100-240V at 50/60 Hz (Universal) Output: 5VDC 2A
Auto power-off when idle	15minutes

*This technical information is for guideline purposes only and is subject to change pending regulatory approval and CE marking. For more information please contact us.

About Occuity

Founded in 2019, Occuity is a UK-based medical technology company specialising in the research, design, and production of handheld non-contact optical instruments for use in healthcare, diagnostics, and monitoring.

Optometry & Ophthalmology

Occuity are developing a range of devices within our Ophthalmic series and our first device, the Occuity PM1, is the world's first handheld, non-contact, optical pachymeter. Building upon the underlying technology in the PM1, our pipeline of future products will enable other measurements within the eye including, axial length, pupillometry and keratometry for use in both human and veterinary optometry.

Disease Screening

Building upon our existing technology, Occuity's disease screening products, are planned to make it easier and cheaper to screen for diseases such as diabetes and Alzheimer's in non-clinical settings such as high street opticians and care homes.

Disease Monitoring

Occuity plan to deliver the Occuity Indigo - the world's first non-invasive, non-contact glucose monitor which can determine blood glucose levels by measuring subtle changes within the anterior chamber of the eye.

Find Out More - www.occuity.com

Find Out More:
www.occuity.com/pm1



Please note:

The PM1 is currently undergoing final testing ahead of CE certification and is not yet available for sale.

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Product: PM1 Pachymeter

The availability of products and features may vary by country. Occuity reserves the right to change product specifications and design. All information is valid at the time of production (10/21).

EN ISO 13485:2016 Certified