

## from Grafton Optical



# World's most accurate handheld autorefractor

#### Binocular and open view

Eliminates patient accommodation for maximum reliability

#### **Wavefront aberrometry**

The most comprehensive method to measure ocular refractive errors

#### **Dynamic measurements**

Produces results with high confidence

#### **APPLICATIONS**

### Accurate for the clinic, durable for the field



Mobile eyecare
Home visits • School and office screenings • Nursing homes



Global health
Mission trips • Population health
• Initiatives in low resource settings



Eyecare clinics
Patient screening • Post-op
• During pretest or refraction

# Binocular measurements in 10 seconds

- Accelerates subjective refraction with a more accurate starting point
- Enables high throughput autorefraction

#### Accessible & easy to use

- Ideal for patients with mobility disabilites and/or physical challenges
- · Easy to learn
- · Works anywhere
- Patient friendly

#### Field durable

- Calibration free
- Operates in humid and dusty settings
- Can be used indoors and outdoors, in most light settings
- Includes hardened carrying case
- Operates up to 8 hours on battery





#### Accurate autorefraction anywhere

CLINICAL PERFORMA	NCE SPECIFICATIONS
Intended patient population	5–85 years old
Accuracy (agreement with subjective refraction)	<= 0.25 D: 60-70% of patients <= 0.5 D: 80-90% of patients (see publications)
Cylindrical range	-6D to +6D, increments of 0.01D, 0.125D, 0.25D
Axial range	0–180°, increments of 1, 5, 10 degrees
Spherical range	-10D to +10D, increments of 0.01D, 0.125D, 0.25D
Interpupillary distance range	47–78mm continuous
Accommodation control	Binocular open view
Pupil size	2-8mm
Cycloplegia requirement	None
Amblyopia or strabismus	May require monocular measurement
Contact lens wearers	Over-refraction compatible
Dilation requirement	None
Illumination requirements	Works in any illumination
Furniture requirements	None
Materials	This product is latex-free
Storage/transport	Travel hardshell case included

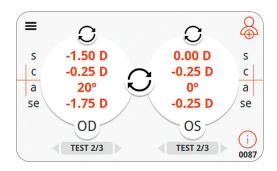
Wavefront Refraction Engi	ne™ technology patented by PlenOptika
Technology	Wavefront aberrometry
Measurement mode(s)	Binocular and monocular
Measurement time	10 seconds
Calibration	Factory calibrated, no field calibration needed
Battery life	6–8 hours of operation; 6 hours charge time (10 hours for initial charge)
Communications	Bluetooth via QuickSee Companion App and Bluetooth printer
Measurement capacity	10,000 measurements
Regulatory	Class I product, FDA Class IIa product, CE
Laser safety	Class 1, enclosed
Electrical safety	Compliant with IEC 60601-1(2005, 3.1 ed.)
Weight	3.14lbs / 1.42kg (without case) 6.95lbs / 3.15kg (with case)
Dimensions	6.5 x 11 x 3.25 " / 16.5 x 28 x 8.25 cm
Warranty	1 year warranty

#### **United States**

PlenOptika, Inc. 955 Massachusetts Avenue Number 339 Cambridge, MA 02139

#### Europe

PlenOptika Europe S.L.U. Parque Cientifico de Madrid Calle Faraday 7, Number 007 Madrid 28049, Spain



User interface: Simple and intuitive

#### Distributed in the UK and Ireland by Grafton Optical



Unit 7 River Park Industrial Estate Billet Lane, Berkhamsted Hertfordshire, HP4 1HL United Kingdom

sales@graftonoptical.com www.graftonoptical.com 01923 233 980

#### **KEY PUBLICATIONS**

- 1. Durr NJ, Dave SR, Lim D, et al "Quality of eyeglass prescriptions from a low-cost wavefront autorefractor evaluated in rural India: results of a 708-participant field study" British Medical Journal Open Ophthalmology 2019;4:e000225. doi: 10.1136/bmjophth-2018-000225
- 2. Rubio M, Hernandez CS, Seco E, Perez-Merino P, Casares I, R. Dave SR, Lim D, Durr NJ, Lage E. "Validation of an affordable handheld wavefront autorefractor". Optometry and Vision Science, 2019 (accepted, in press)

