

VIP[®]-400 Pupillometer



NEUROPTICS[®]



VIP[®]-400 Pupillometer

Very Accurately Measures Pupil Size under Various Light Conditions

Enables clinician to make best possible medical decision for LASIK and premium IOL patients based on pupil size, stated daily activities, and patient preferences.

- Portable, battery operated, hand-held device
- Very accurately measures pupil diameter (± 0.03 mm)
- “**Light Off**” setting, 2-second measurement of pupils at different background illuminations
- “**Variable**” setting measures scotopic, low mesopic, and high mesopic pupil sizes in one 12-second sequence to simulate light conditions patient may experience in daily life
- Ergonomic design
- Wireless charging
- Download data via USB



“The NeurOptics[®] Pupillometer...is very **compact, simple to use**, reasonably priced and **gives accurate automatic readings**. An accurate instrument for measuring the scotopic pupil is essential for refractive surgeons.”

—James Salz, M.D.

Technology Produces Reproducible Measurement Results

Testing has shown that the NeurOptics® Pupillometer is consistent from unit to unit and operator to operator. In fact, the NeurOptics Pupillometer has the highest accuracy and lowest error of all commercially available pupillometers¹, while at the same time being the most economical hand-held infrared device.

The key to the reproducibility in measurement is the use of VIP® (Vertex Invariant Pupillometry®) technology developed by NeurOptics. This system compensates for the approximate 12 mm range in vertex distance² that may lead to inaccurate pupil measurement (error up to 20%), producing accurate measurements that are not affected by vertex distance³.

Simple to Use and Operate

- One-button activation
- No calibration required
- Data is stored on the device and can be recalled, downloaded and/or printed
- Video of the measurement can be played on the device's screen



References:

¹Schallenberg M, Bangre V, Steuhl KP, Kremmer S, Selbach JM., Comparison of the Colvard, Procyon, and Neuroptics pupillometers for measuring pupil diameter under low ambient illumination. J Refract Surg. 2010 Feb;26(2):134-43.

²Distance from the front surface of the eye to the back of a lens or optical device.

³The pupil is never at rest, and therefore a single, static, measurement is unlikely to be an accurate assessment of a pupil's true amplitude or range of diameter. To compensate for pupillary unrest, NeurOptics employs a dynamic measurement system which captures 30 pupil positions over an approximate 2-second scanning period, thus producing the weighted average pupil size and standard deviation.

Ordering Information

NeurOptics® VIP®-400	Part Number
System Includes: VIP®-400 Pupillometer, Charging Station & Power Adapter & Plug, USB Cover Removal Stick, Eye Cups (2), Data Download Cable, Carrying Case	VIP-400-SYS
Optional Accessories	Part Number
Wireless Printer Kit	NEUR-PRTS445

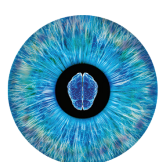
Wireless Printing Broadcast Range and Frequency

Broadcast Function	Range	Frequency
Wireless Printer to/from VIP-400 Pupillometer	Up to 100 cm	2.4 GHz

Technical Specifications

Parameter	Description
Pupillometer Measurement Detection Threshold	Pupil diameter (minimum) 0.80 mm
	Pupil diameter (maximum) 10.00 mm
	Change in Size 0.03 mm (30 microns)
Size Accuracy	± 0.03 mm (30 microns)
Degree of protection against electric shock	Pupillometer & Eyecup -Type BF Applied Part provided protection Charging Station & Power Adapter-Type B Applied Part provided protection
Classification of the equipment against ingress of liquids	Ordinary equipment
Degree of safety of application in the presence of flammable anesthetic mixture with air or with oxygen or nitrous oxide	The equipment is not an AP or APG category equipment
Mode of Operation	On Demand battery operation
Power Supply	Input: 100-240 VAC ± 8%
	Output: 6V, 2.8 Amps
	RF Wireless Charging Output: 5 W, Qi Compliant
Battery	3.6 V 11.70 Wh 3350 mAh/hour Li: Ion Cell
Operating Environment	Temperature Range: 0° C (32° F) to 40° C (104° F)
	Relative Humidity: Non-condensing at all times.
Transportation and storage environment	Temperature Range: -38° C (-36.4° F) to 70° C (158° F) Relative Humidity: Non-condensing at all times.
Dimensions	With Eye Cup = 7.5" H, 3.5" W, 4.5" D
	Without Eye Cup = 7.5" H, 3.5" W, 3.5" D
Weight	344 grams ± 10 grams
Classification	Class 1 LED product per IEC 62471

© 2023 NeurOptics, Inc. NeurOptics and VIP are all trademarks of NeurOptics, Inc.



Advancing the Science of Pupillometry and NPi®

9223 Research Drive
Irvine, CA 92618 | USA
p: 949.250.9792
Toll Free North America: 866.99.PUPIL
info@NeurOptics.com
NeurOptics.com

VIP-400 Brochure, Rev B (HOMA-CJNSCQ)