

# Product Datasheet – Preliminary

## Retinal Photometer RP001

### General Description

The EPVSensors' RP001 is a retinal photostress tester which generates a brief light pulse focused on a small spot of the retina. The light pulse produces a local temporary and reversible bleaching of the retinal pigment commonly referred to as the dazzle test. This is followed by a series of weak light pulses. The time required by the retinal cells to restore their visual function and detect the first weak pulse indicates the time required for restoration of the visual pigment and function. This is detected by the user by pressing a control button initially to start the first pulse and for the second time when he or she recognizes the second weak pulse. A timer indicates the time lapsed and the number of weak pulses presented to the eye during this period is shown on the unit. A patented auto-focusing and auto-centering technology allows the unit to interrogate any desired location on the retina.

### Sensor Characteristics

- Spot size formed on the retina will have a diameter less than the foveal diameter, which is typically about 0.5 mm
- Illuminance between 500 and 5000 lux
- Time resolution of 0.1 sec

### Features

- Non-invasive measurement, for home use, allows determination of the recovery time of the visual pigment, indicating a normal or an abnormal condition



- The patient's response does not depend on the refractive error or mental ability of the patient to guess, his/her reading ability, or the ability to read or recognize a letter
- The information is stored in the unit over time and can be transmitted to the professionals
- Home application with remote data transmission to the health care providers eliminates frequent trips to the clinic

### Applications

- Measurement of the recovery of the visual pigment recovery is a direct indication of the physiological function of the retina ,specifically the macular area
- Monitoring visual function at home
- Screening patients for their macular function
- Diagnosis and management of age-related macular degeneration, diabetic macular edema, etc.
- Monitoring the effects of medication administered to the eye and the duration of their effectiveness or lack of its effect

Major Components of RP001

