



# RETeval™

Improve Patient Outcome with ERG



INTUITIVE



OBJECTIVE



REPEATABLE

Go beyond structure. Measure function.

## Visual Electrophysiology Testing

ERG and VEP tests provide objective information on how the visual system is functioning. It provides reliable guidance for medical professionals to manage functional changes that may impact a patient's vision.

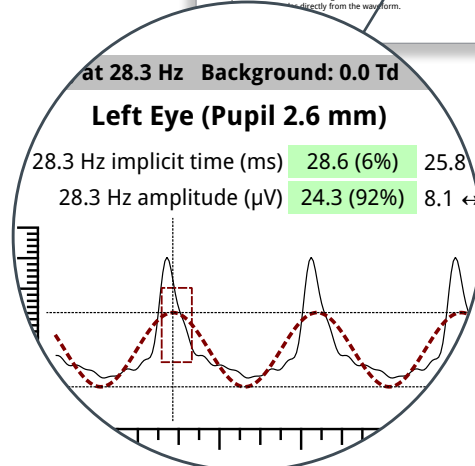
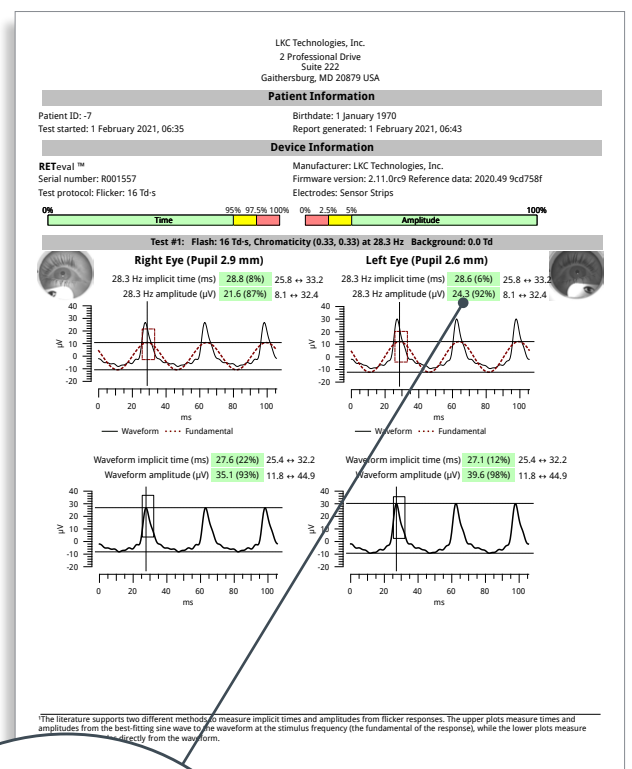
The RETeval™ device helps doctors to:

|  |  |  |                           |
|--|--|--|---------------------------|
| <b>DETECT</b>                                  | <b>PREDICT</b>                         | <b>FOLLOW UP</b>                       | <b>MONITOR</b>            |
| Detect various retina and optic nerve diseases | Predict the progression of the disease | Follow up on the course of the disease | Monitor treatment success |

## Indications

- DIABETIC RETINOPATHY
- GLAUCOMA
- INHERITED DISEASES
- PEDIATRIC NYSTAGMUS
- OPTIC NEUROPATHIES
- CRVO
- UNEXPLAINED VISION LOSS
- ACQUIRED RETINA DISEASES
- ACHROMATOPSIA
- BIRDSHOT CHORIORETINOPATHY
- RETINITIS PIGMENTOSA
- CONE-ROD DYSTROPHIE
- LCA
- CSNB
- DRUG TOXICITY MONITORING
- CHOROIDEREMIA
- RETINAL DETACHMENT
- X-LINKED RETINOCHISIS
- TOXOPLASMOSIS
- VITAMIN A DEFICIENCY

## Report



Color-coded age-adjusted reference data on report for easy interpretation.

## Full ISCEV compliant ERG and VEP testing in a completely portable device



Usable with dilated and undilated eyes by built-in pupillometer to compensate for pupil size.



Non-invasive testing with the optional use of patented LKC Sensor Strip electrodes.



High test success rate at first attempt even with small pupils or media opacities.



Can be used in any location and with any patient type.



## How It Works

- 1 RETeval device will start flashing light into the patient's eye.
- 2 The retina responds to the flashes by generating small electrical signals that travel through the facial structure to the Sensor Strip.
- 3 RETeval Sensor Strip detects the electrical signals and compares the results to the normative database.

## Improve your diagnosis with the right information in hand

### ADVANCED TESTING IN 17 LANGUAGES FOR ALL YOUR NEEDS

- DR Assessment
- ISCEV compliant 5 and 6 steps
- Photopic Negative Response
- Flash/Flicker tests
- Flash VEP
- Scotopic Flash tests
- S-cone test
- On/Off
- Custom protocols for specific needs

- 1 Soft eye cup for patient comfort
- 2 IR camera to view eye during testing
- 3 Immediate test results right on the device
- 4 Simple joystick control
- 5 Ergonomic to fit comfortably in hand
- 6 Small charging base
- 7 Lithium ion battery for up to 8 hours\* of use
- 8 Docking station offers USB connectivity

*\*Approximately 70 patients before recharging, depending on protocol used.*



| Light source      | Red LED (621 nm)  | Green LED (530 nm) | Blue LED (470 nm) | White RGB |
|-------------------|---|--------------------|-------------------|-----------|
|                   | Flash luminance with or without background lights                                       |                    |                   |           |
| Input type        | Custom 3 pin connector, input $\pm 0.6$ V   |                    |                   |           |
| Noise             | $< 0.1$ $\mu$ V at the flicker frequency for flicker protocols                          |                    |                   |           |
| CMRR              | $> 100$ dB at 50–60 Hz  |                    |                   |           |
| Frequency range   | DC-coupled  |                    |                   |           |
| Sampling rate     | Approximately 2 kHz   |                    |                   |           |
| Data resolution   | 71 nV/bit   |                    |                   |           |
| Pupil measurement | 1.3–9.0 mm resolution $< 9.1$ mm, 28.3 Hz   |                    |                   |           |
| Flicker frequency | Approximately 28.3 Hz   |                    |                   |           |
| Timing accuracy   | Accuracy (electronic eye): $\leq \pm 0.1$ ms, Precision (human eye): $\leq \pm 1$ ms    |                    |                   |           |
| Power source      | Li-Ion battery (testing for approximately 70 patients), recharge time 4 h               |                    |                   |           |
| Size and weight   | 7 cm W x 10 cm D x 23 cm H (2.8' x 3.8" x 9"), 8.5 oz. (240 g)                          |                    |                   |           |
| Protocols         | ISCEV compliant and others, retinal illuminance (Td) and luminance (cd/m <sup>2</sup> ) |                    |                   |           |
| Docking station   | Convenient storage location, charging stand, and USB connectivity                       |                    |                   |           |

There are over 120 publications about the RETeval device or where the RETeval device was used. For the full list, please contact LKC Technologies Inc. at [sales@lkc.com](mailto:sales@lkc.com)

The RETeval device is in use in over 2000 locations all over the world. The manufacturing site is located in Maryland, US.