



Image-Guided Focal ERG

On the web: <https://phoenixmicron.com> Email us at: sales@phoenixmicron.com

Image-Guided using 650 nm light retains dark adaptation

The MICRON Image-Guided Focal ERG is an add-on imaging modality for MICRON retinal cameras. It is optimized for use with mice and rats.

The unique design utilizes near-infrared (NIR) imaging to precisely select a location for focal testing while preserving dark adaptation of the animal.

Focal ERG Value

Testing a selected specific region is valuable to differentiate segments of retina functionality and is ideal for investigating retinal response where therapy is provided on a regional basis. The Phoenix MICRON Image-Guided Focal ERG Generation II attaches to the Phoenix MICRON camera and uses its imaging capability.

Unique Electrode System

The Image-Guided Focal ERG design features a corneal electrode integrated into a gold-tipped ring at the end of the objective lens which couples with the small animal eye. Stimulus targeting is done under guidance from deep red illumination. The animal eye couples to the objective lens/electrode, providing stability and ensuring it will remain in place.



Controlling Stimulus and Reception

A low-noise system provides for illumination and reception through an easy-to-use software interface. The LED light source delivers energy densities from well above the ISCEV high standard of 100 Cd sec/m² to well below the base standard of 0.01 Cd sec/m². Capture software provides for illumination control over six orders of magnitude and pulse length control from 0.2 msec to minutes, to set backgrounds, or deliver "flicker".

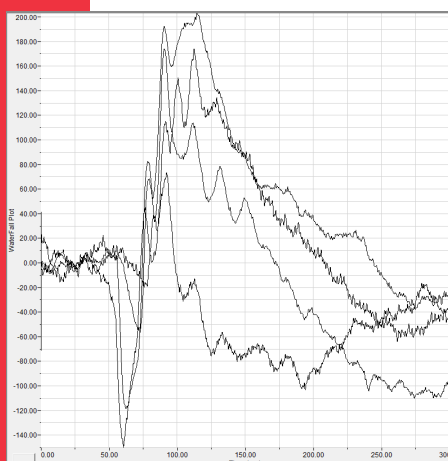
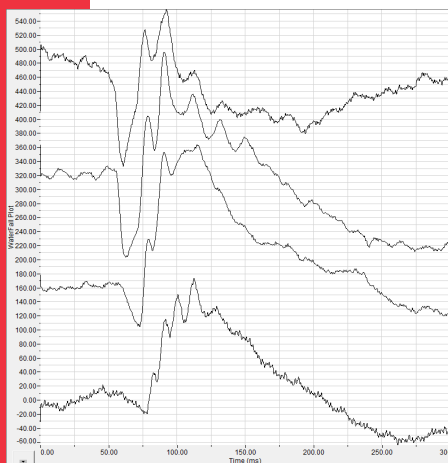
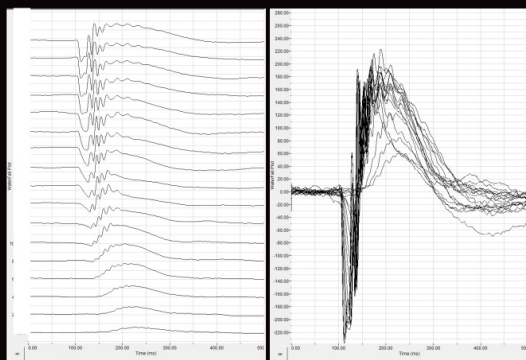


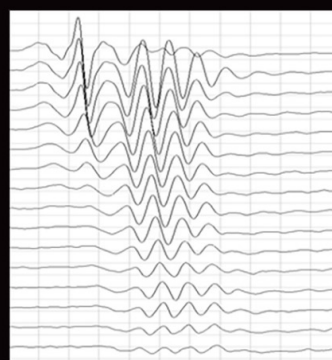
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Waterfalls with 3dB increments using 1.5 mm spot diameter on mouse

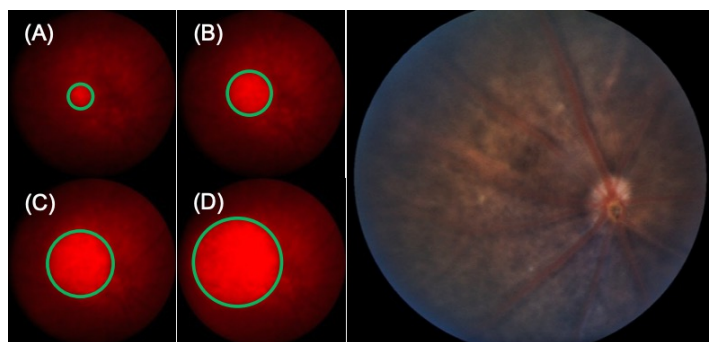


Advanced signal processing capability to extract and display OP signals



Features

- Attaches to MICRON retinal imaging camera
- Electrode built into the objective lens simplifies subject animal handling, especially in a darkened lab
- Deep red guidance light keeps animal dark adapted while allowing for focal spot selection
- Five selectable spot sizes, from 0.25 mm to 1.5 mm



Spot size: (A) 0.25 mm, (B) 0.5 mm, (C) 0.75 mm, and (D) 1.0 mm

Bright Field





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Specification	Details	
Stimuli	White light LED	
Illumination spot size	Mouse: 0.25mm, 0.5mm, 0.75mm, 1.0mm, 1.5mm Doubled for rat Micrometer driven targeting	
Range of stimulation in log cd sec/m ²	-1.7 to 3.1 Set levels over a range of 10 ⁶	
Modes	Single flash Double/Flicker flash Continuous background with flash	Light adaption Chart mode
Pulse length	0.2 milliseconds to minutes	
Objective lenses	Objective lenses designed specifically for mice and rats	
Retinal targeting	Illuminate retina for alignment at 650nm	
Electrodes	Corneal contact (gold-plated objective lens) Platinum needles for tail (ground) and head (reference)	
Acquisition features	CLEAN mode to remove 60/50 Hz pickup noise; controllable bandwidth; controllable digitization sampling rate; control delay and pulse length for LED illumination	
Analysis features	Automatic measurement of A and B wave peaks; automatic display of waterfalls; automatic measurement of OP peaks and implicit time; averaging with user selection	





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Compatible with MICRON 5 and MICRON IV Cameras
MICRON Image-Guided Focal ERG is a modality add-on to both MICRON IV and MICRON 5 cameras.

1000+

Published papers that incorporate MICRON data

15+

Years of experience innovating patented small animal imaging technology

8

Imaging modalities, in a compact footprint

5

The latest generation MICRON Camera

2

Camera platforms

