



Features

- ISCEV Standard ERG / EOG / VEP
- Double flash, On/Off, S-Cone, photopic negative response, scotopic threshold response ERGs
- SunBurst™ Color LED Ganzfeld
 - Lightest, brightest, most capable
- UBA-4204 Digital Biomedical Amplifier
 - Smallest, lightest, quietest
- Compatible with legacy LKC data. Migrate data from your previous LKC system.
- CE and MET (UL equivalent) certified
- GLP (21CFR11) Compliance Pack option
- Color or white-only mini-ganzfeld option
- Multifocal ERG - Multifocal VEP option
- Sweep VEP (objective visual acuity) option
- Dark adaptometry option

The UTAS

This revolutionary product will provide you with everything you need for any type of electroretinogram, electro-oculogram, or visual evoked potential. The ultra-bright ganzfeld – capable of over 15,000,000 different colors – will allow you to perform ERGs you never imagined possible including on-off, double flash, photopic negative response, scotopic threshold response, and s-cone ERGs. Amplification with our digital biomedical amplifiers allows faithful reproduction of every nuance of your recordings.

Design Features

- The world's brightest and most capable ganzfeld
- Ultra low-noise digital amplifiers
- Built-in ERG normative data, or use your own.

Key Specifications

- Total flash range from -75 dB to +30 dB in 1 dB steps
- Flash stimuli from -50 dB to +18 dB in any color
- Background luminance 0.005 to 5000 cd/m² in any color

UTAS Visual Electrodiagnostic Testing System Specifications

SunBurst™ Ganzfeld

Easy to Use

- Small and lightweight – 13.5" W x 10.5" D x 8" H (34.3 cm x 26.7 cm x 20.3 cm), 5.0 lbs (3.7 kg)
- Ergonomic mounting arm provides easy and comfortable adjustment to any patient. Quick mount feature and built-in grips for easy positioning over patient.
- Infrared fixation camera allows simple visualization of fixation and electrode placement.
- Cleanable interior
- Dim red illumination to assist during electrode placement.

Clinical Capabilities

- SunBurst can produce all ISCEV standard stimuli, PLUS Double Flash ERG; On/Off Response ERG; S-Cone ERG; Chromatic backgrounds and stimuli (e.g. photopic negative response); Scotopic Threshold Response ERG; Infrared flash for retinal implant testing, and MORE!
- Latencies and amplitudes of ISCEV standard ERGs match results from legacy LKC products. No need for new normative data.
- 9 red EOG fixation LEDs in $\pm 15^\circ$ horizontally. Brightness adjustable over 20 dB range in 256 steps.

And Beyond

- Uses Red (627 nm), Green (530 nm), Blue (470 nm), Amber (590 nm) and white LEDs and Xenon flash.
 - * Dynamic flash luminance range of 105 dB (+30 dB to -75 dB) in 1 dB steps.
 - * Xenon flash luminance of 2.5 to 2500 cd-s/m² (0 dB to +30 dB).
 - * LED flash luminance of $2.5 \cdot 10^{-5}$ to 160 cd-s/m² (-50 dB to +18 dB) in any arbitrary color. LED flash luminance of -75 dB to -50 dB in white.
- Flash duration <5 ms.
- Background light from 0.005 to 5000 cd/m² in 0.01 dB increments in any color; In white as low as 10⁻⁶ cd/m².
- Easy verification of calibration.
- Flicker stimuli to +18 dB; 1 Hz repetition rate for intensities +19 dB to +30 dB.
- Long duration flash (On/Off response) stimuli programmable to 6.5 seconds in 5 ms increments, adjustable intensity and chromaticity.
- Arbitrary waveform capability using RGB stimuli to 2000 points (10 seconds) per cycle.
- Fully isolated Trigger In and Trigger Out signals for interfacing to other equipment.

UBA-4204 Amplifier

Communication: Fully Isolated Fiber Optic TOSLink connection over 2 meter cable.

Input Type: 4 channel differential with > 10 M Ω impedance.

Connector Type: 1.5 mm Male DIN Safety electrode connections.

Noise: < 0.7 μ V p-p @ 100 Hz Sampling Rate, 10 K Ω Input.
< 1.8 μ V p-p @ 1000 Hz Sampling Rate, 10 K Ω Input.

CMRR: > 110 dB at 50-60 Hz.

Frequency Range: DC to > 1.0 MHz without aliasing. Cutoff is sample rate dependent.

Input Gain: 1, 2, 4, 8, 16, 32, 64 (user selectable).

Data Resolution: 3.7 nV / bit (Gain = 64) to 250 nV / bit (Gain = 1).

Input Range: ± 2 V (Gain = 1).

Stability: < 250 nV / $^\circ$ C drift.

Accuracy: < 0.2% absolute, Nonlinearity < 0.0010%.

Sampling Rate: 5 Hz to 3750 Hz.

Filters: High cut and low cut filters implemented in application software.

Safety: No wires (fiber optics only) means no leakage currents!

Power Source: Rechargeable Li-Ion Battery provides up to 12 hours continuous use per charge.

Recharge Time: 4 hours to 80% capacity, 8 hours to 100% - Charger included.

Size: 5 3/4" x 3 1/4" x 1" (14.6 cm x 8.3 cm x 2.5 cm).

Weight: 8 oz. (225 g), including battery.

All specifications subject to change.

LKC Technologies, Inc., established in 1975, is an ISO 13485:2003 certified and FDA registered medical device manufacturer with quality products in over forty countries.

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