LKC TECHNOLOGIES

Diagnostics in Sight

UTAS Visual Electrodiagnostic Testing System with SunBurst Ganzfeld

- 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
- Multifocal ERG - Multifocal VEP option
  - Now with long m-Sequence!
- Sweep VEP (objective visual acuity) option
- Dark adaptometry option
- Compatible with legacy LKC data. Migrate data from your previous LKC system.
- GLP (21CFR11) Compliance Pack option
- Color or white-only mini-ganzfeld option
- CE and MET (UL equivalent) certified

The New UTAS

This revolutionary product will provide you with everything you need for any type of electroretinogram, visual evoked potential, or electro-oculogram. 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

- Flash stimuli from -50 dB to +18 dB in any color
- Total flash range from -75 dB to +30 dB in 1 dB steps
- Background luminance 0.005 to 5000 cd/m^2 in any color

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 prone 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.
- 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 ±15° 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 - 2500 cd-s/m^2 (0 dB to +30 dB).
  - LED flash luminance of 2.5 • 10^{-5} - 160 cd-s/m^2 (-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/m^2 in 0.01 dB increments in any color; In white as low as 10^{-6} cd/m^2
- Easy verification of calibration
- Flicker stimuli to +18 dB; 1 Hz repetition rate for intensities > +18 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 MΩ impedance.
Connector Type:	1.5 mm Male DIN Safety electrode connections
Noise:	< 0.7 µV p-p @ 100 Hz Sampling Rate, 10 KΩ Input < 1.8 µV p-p @ 1000 Hz Sampling Rate, 10 KΩ 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 / °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:	5¾" x 3¼" 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, CE marked, and FDA-registered medical device manufacturer with quality products installed in over forty countries.

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