camntech

Actilight®

innovation in technology

Main Features

- Ultra light-weight light intensity monitor for ambulatory monitoring
- Available with strap or necklace mounting to be wrist or neck worn, strapped onto clothing or lapel pinned
- Records for up to 45 days with a 1 minute epoch
- Designed for use with custom analysis software and a reader for data transfer to a PC
- Light data can be combined with activity data from the Actiwatch Mini, which records physical activity by means of an accelerometer
- Suitable for use with sleep disorders and circadian rhythm studies
- All data stored in the software is fully exportable for analysis in a third party program

The Actilight is an ultra light-weight device which detects and logs light intensity. The data is stored in the device and can be downloaded to a PC for analysis. As such, it is a convenient tool for the ambulatory recording of light levels for clinical use and for research purposes.

The device can be either lapel-mounted or it can be worn on a neck chain.

Chronobiology

The ActiLight can be used in conjunction with the AW Mini which records physical activity. The light and data files can be combined using bespoke software so that the light data is superimposed on activity plots which quantify the intensity and duration of physical activity.

Sleep

The combination of Actiwatch Mini and ActiLight is also useful for screening patients with suspected sleep disorders which require bright light therapy.

Sleep analysis software also serves to analyse sleep wake patterns and to calculate sleep onset latency, sleep efficiency and sleep fragmentation.

Validation

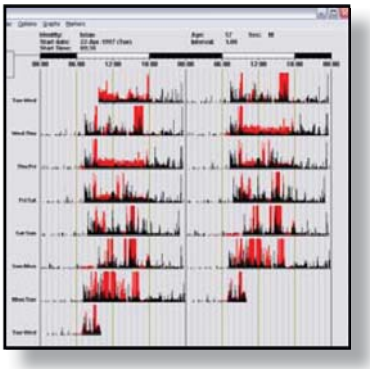
The Actiwatch has been validated against polysomnography the 'gold standard' for use in sleep studies[1],[2] and it has been used extensively for other applications.

Fields of Applications

The Actiwatch is in use in the fields of physical activity monitoring, sleep, respiratory medicine, paediatrics, psychiatry, health psychology, pain, Parkinson's research, geriatric medicine, dermatology and urology.

Technical Specification

Diameter:	24 mm
Depth:	7 mm
Weight:	7.5 grams
Range:	0.5-40,000 Lux
Memory:	128 KB
Recording Time:	45 days
Sampling Rate:	3 seconds
Battery life:	500 days
type:	CR 1220
Waterproof:	Yes - 2 Bar
Infra-Red Filter:	Yes
CE Marked:	Yes
Warranty:	2 years
PC Analysis:	Windows® XP/Vista Windows®7
Resolution:	
0-200 lux	0.1 Lux
200-2000	2 Lux
2000-8000	4 Lux
8000-20000	50 Lux
20000-40000	200 Lux



Bibliography

1 Kushida C,Chang A, Gadkary C, Guilleminault C, Carrillo O, Dement W.

Comparison of actigraphic, polysomnographic, and subjective assessment of sleep parameters in sleep-disordered patients. ***Sleep Medicine 2 (2001) 389-396***

2 Kevin So, Pat Buckley, T. Michael Adamson, and Rosemary S. C. Horne

Actigraphy correctly predicts sleep behavior in infants who are younger than six months, when compared with polysomnography. ***Pediatric Research, Vol. 58, No. 4, 2005, 761-765***

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