

OLYMPUS

Your Vision, Our Future

OLYMPUS CLL-S1

StrobeLED

Diagnosis of Voice Disorders With Advanced LED Technology



StrobeLED

NEW QUALITY DIMENSIONS IN STROBOSCOPY

StrobeLED, the stroboscopy light source from Olympus – especially designed for laryngologists and voice experts – enables an incredibly precise and noise free examination and diagnosis of voice disorders.

EXCELLENT STROBOSCOPY ALGORITHM

No flickering in video, no blackouts

GREAT ILLUMINATION

In permanent and stroboscopy mode

ADJUSTABLE DUTY CYCLE

Choice between more resolution or more brightness depending on the application

NOISE FREE

No side tone distraction during examination

LOW ENERGY CONSUMPTION (<55 W)

Low lifetime costs and environmentally friendly compared to conventional lamps



The **HD laryngoscope** combines highest durability and a supreme HD image quality through an innovative lens design, which allows to visualize even finest structures during the stroboscopy procedure.



With the **ENF-VH** HD rhino-laryngo videoscope, the images have reached a new quality standard. The images are brighter and now in a full screen HD quality. The ENF-V3 gives a fantastic stroboscopic high quality image, making the smaller anatomies also easy to reach.



The StrobeLED opens up new quality dimensions in stroboscopy. With its advanced LED technology and the reliable stroboscopy algorithm due to the Dual-Filter-System, the stroboscopy light source generates an excellent image quality. Within milliseconds the system picks up frequencies and turns them into an optimal illuminated and sharp image or slow motion playback of the vibrating vocal folds. The extremely fast and reliable frequency recognition enables the examination even of voices that are difficult to

detect. Changeovers between different modes are easy to toggle via foot switch.

As a unique feature, the system offers an adjustable duty cycle where changes between more brightness and resolution can be made depending on the intended use. Compared to conventional light sources, the StrobeLED allows an almost noise free examination without any distracting side tones caused by conventional gas-discharge lamps.

ADVANTAGES OF LED

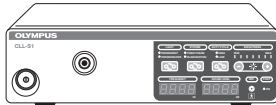
- **Low maintenance costs.** Vocal fold examinations of a minimum of 2,000 h without changing the LED module.
- **No extra white balance.** No significant difference in color temperature between stroboscopy and permanent light.
- **Constant light intensity** over lifetime
- **Low lifetime costs** due to the low energy consumption of this environmentally friendly LED.



Excellent image quality: StrobeLED in combination with the Olympus HD laryngoscope 70°

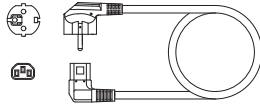
StrobeLED

WA97010A Light source "OLYMPUS CLL-S1", for stroboscopy

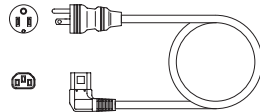


Delivery includes:
Light source, foot switch, microphone (incl. extension cable), 2 BNC cables, 4 foot holders, 2 spare fuses

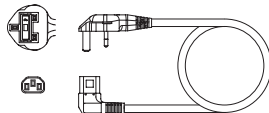
WA95621A Power cable, type E/F (CEE 7/7)



WA95622A Power cable, type B (NEMA 5-15)



WA95623A Power cable, type G (BS 1363)



Technical Data

Power supply
Voltage..... 100–240 V
Frequency..... 50/60 Hz
Power consumption 100 VA
Fuse T 3.15 A 250 V

Dimensions
Size width 370 mm
height 111 mm
depth 475 mm
Weight..... 7.85 kg

Safety
Protection class acc. to IEC 60601-1.... BF
Ingress protection rate..... IPX0

Illumination
Lamp..... LED
Operating hours 2,000 hours

Microphone
Cable length 1 m
Length of extension cable..... 1 m
Typeelectret condenser microphone
Polar pattern..... omnidirectional
Frequency response..... 100–12,000 Hz
Sensitivity -42 dB at 1 kHz
Output impedance 2.2 kΩ

Audio/Video
AUDIO OUT line-level audio output
with $V_{pp} < 1$ V
VIDEO IN and VIDEO OUT..... 75 Ω
composite video signal

Environment
Operation
Temperature 10–38 °C
Relative humidity 30–85 %
Atmospheric pressure.... 700–1060 hPa

Storage
Temperature 10–40 °C
Relative humidity 30–75 %
Atmospheric pressure.... 500–1060 hPa

Transport
Temperature -29–70 °C
Relative humidity 10–95 %
Atmospheric pressure.... 500–1060 hPa

System Chart

