![Olympus logo] **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

Microphone options
With the option to choose between air and throat microphones, Olympus offers the right solution for every diagnostic situation.

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.

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 **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.

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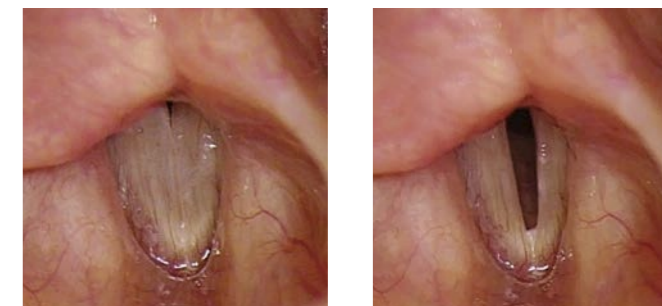
Excellent image quality:
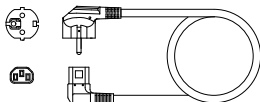*StrobeLED in combination with the Olympus HD laryngoscope 70°*

StrobeLED

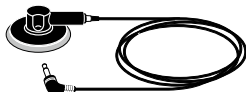WA97010A   Light source "OLYMPUS CLL-S1",
for stroboscopy
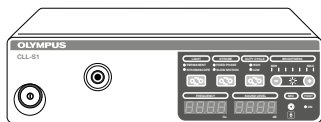
Delivery includes:
Light source, foot switch, microphone
(incl. extension cable), 2 BNC cables,
4 foot holders, 2 spare fuses

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

WA97013A   Throat microphone

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
Type................ electret 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 Vpp < 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
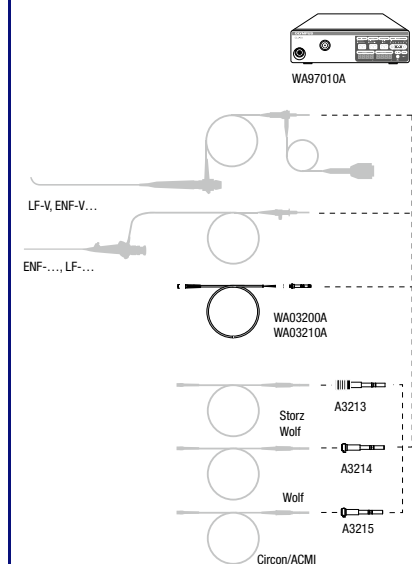
Service Parts

W7102106   Foot switch

W7102100   Microphone

W7102539   Microphone cable extension

Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer

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