STROBOSCOPE

STROBOLUX III LED

TECHNOLOGY AND PRECISION IN STROBOSCOPIC LIGHT

- LED technology
- Stroboscopic and continuous light
- Digital control of the signal

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A precise and reliable stroboscope to evaluate the function of the vocal cords or larynx, enabling the speech therapy specialists and otolaryngologists to identify the cause of the voice disorder or hoarseness of their patients.

STROBOSCOPIC PRECISION

The STROBOLUX III LED is a new generation device developed using the latest technology in frequency analysis in real time and high power LED illumination.

Its optic condensers of 4 elements concentrate the light so it can be transmitted through the fiber optic, achieving bright, stable and precise images.

The combination of cutting edge technology hardware and software provides light reaction in real time and stable images.

The two independent light outputs allow for the use of the device as a high performance stroboscope or continuous light source, so two instruments can be connected simultaneously.

The stroboscope function has Phase mode and Slow Motion mode, controlling the phase or speed with the pedal.

The integrated TFT screen offers a clear display of the measurements, and allows for an easy adjustment of the different parameters.
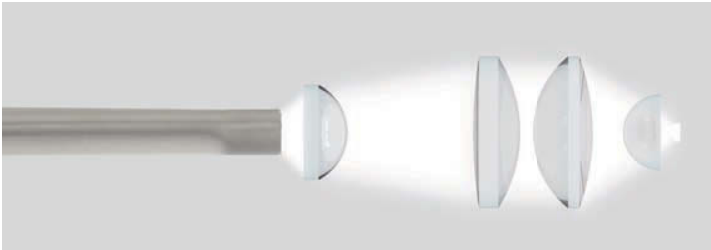
The long life LED technology results in a low consumption device, eco-friendly and maintenance free.

It is compact, light and solid, the best choice for the modern practice.

STROBOLUX III LED

OPTICAL CALCULATION AND HIGH POWER LED TECHNOLOGY

Each illuminator is composed of a high power LED coupled to an optic set of 4 condenser lenses, designed to achieve the maximum level of light concentration.

The result is a bright and clear image, even using fiberscopes of a small diameter.

This is one of the features that make it different from others in the market.

PRECISION

As the LED is an electronic component, it can pulsate at a high frequency. It can function from 60 to 1,000 Hz without a need to skip any phonation cycles, as can happen with a Xenon light stroboscope or systems based on stroboscopic cameras.

This provides clearer and sharper stroboscopic images, eliminating the flickering typical of other devices.

NO COLOUR VARIATION

The light emitted has a colour temperature of 6,500°K.

The traditional Xenon systems use a different lamp for continuous light, usually halogen, causing the light colour to change when going from continuous mode to stroboscopic mode.

In the STROBOLUX III LED, as the same LED is used for continuous and stroboscopic light, the light colour does not vary when going from one mode to the other.
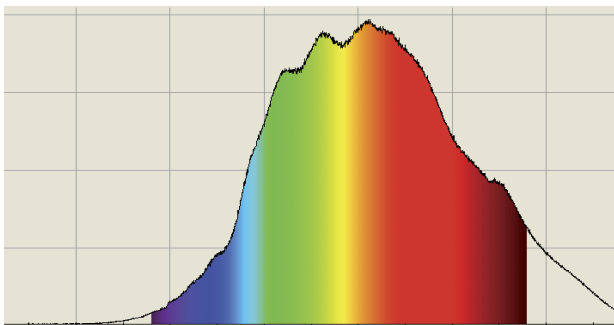
FREE OF CONSUMABLES

With a LED lifespan of 60,000 hours, the need of frequent lamp replacements is eliminated, enabling the doctor to work without annoying interruptions and to save in consumables.

60,000 h

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VERSATILITY IN ITS TWO FIBER OPTIC OUTPUTS

DOUBLE OUTPUT OF STROBOSCOPIC LIGHT

Two endoscopes can be connected to the device simultaneously, allowing for the use of either output according to needs.

DOUBLE OUTPUT OF CONTINUOUS LIGHT

Both continuous light outputs can be used alternately or simultaneously.

Two endoscopes or an endoscope and a head lamp can be connected simultaneously, and they can be used independently or both at the same time.

POWER VARIATION DEPENDING ON THE ENDOSCOPE

The device can be configured to be used with rigid or flexible endoscopes of different diameters. The microprocessor controls the work cycle of the LED flash, achieving images which are better balanced between light performance and image definition.

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ELECTRONIC CONTROL OF ALL PARAMETERS

The STROBOLUX III LED has a keypad with 9 keys to manage the device through intuitive menus, with icons on the 5" TFT colour display. The use of the display makes browsing through the menus easy.

The display changes depending on the operation mode:

• Stroboscopic mode: controls the Phase / Slow Motion mode, selection of the type of endoscope, etc., showing a graphic representation of the sound wave, frequency and sound level.

• Continuous light mode: controls and shows the light intensity and selected output.

The angle of the LED flash in Phase mode (0-400º) can be modified through the powerful software and the pedal, as well as the flash speed in Slow motion (0.5-2Hz), providing hands-free operation.

DIGITAL CONTROL OF THE SIGNAL
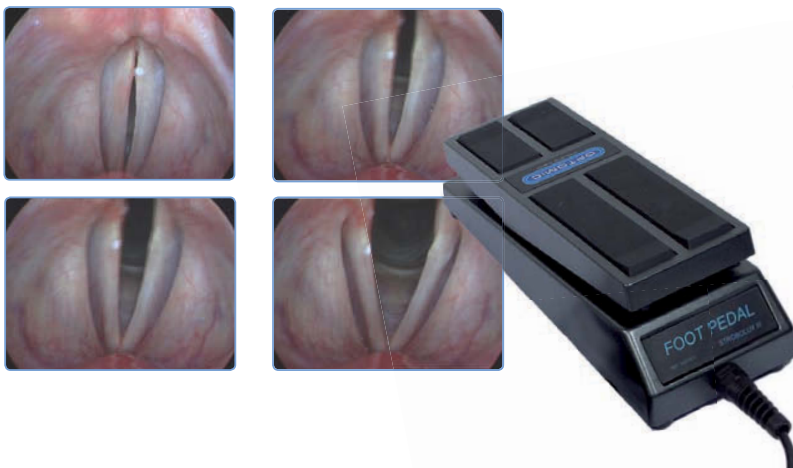
Its powerful new generation microprocessor digitally analyse the audio signal with control technology (uP32), providing a fast and precise calculation of the F0 (fundamental frequency) and of the SPL (sound pressure level). This element provides a high stroboscopic stability, delivering a clear image in real time of the vocal chords.

OSD – PARAMETER DISPLAY ON THE IMAGE MONITOR (Optional)

The OSD function (On Screen Display) shows the frequency and SPL directly on the monitor.

With this option, the STROBOLUX III LED adds to the composite or Y/C video signal of the external camera the information of the most important parameters on the viewing monitor without blocking the image.

AUDIO PRECISION

The highly sensitive air microphone, attachable to the endoscope, captures phonation for the stroboscopy frequency control. It also has a contact adaptor to carry out stroboscopy directly.

The AGC (Automatic Gain Control) and the sound compression mechanisms guarantee a stable audio signal even in low audio levels, essential in patients with voice pathologies.
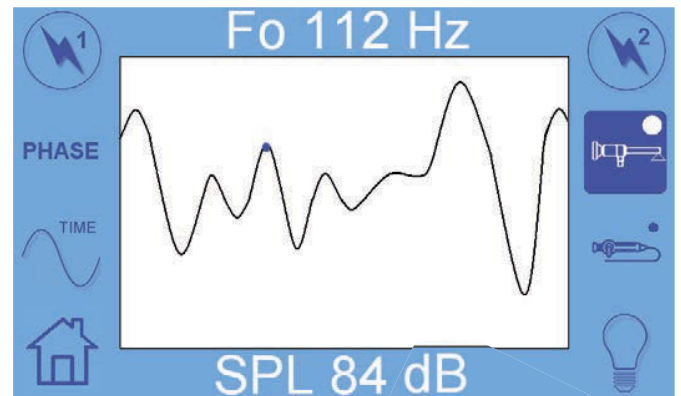
SILENT STROBOSCOPY

When operating as stroboscope the silent mode is activated. The cooling system composed of 4 fans with independent speed control adjusts to make the least possible noise and switches on only when necessary.

ENERGY EFFICIENT

It has a low consumption in relation with its high power thanks to its LED technology and modern electronic design. Its high efficiency power supply switched with PFC consumes in Stand-by less than 1w.
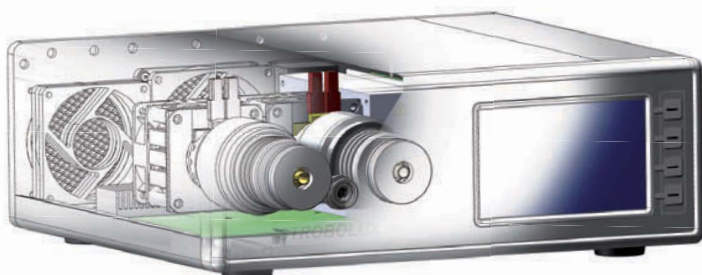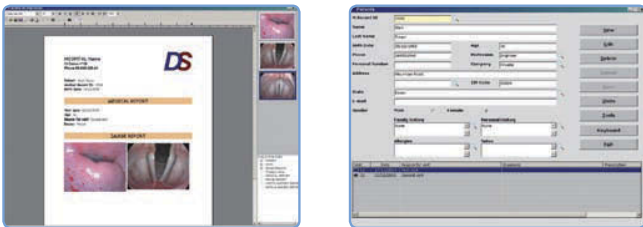
COMPACT AND LIGHT DESIGN

Its studied design and aluminium and steel structure results in a compact and light device.

DIGITALLY SOFT

The digital stroboscopy adds to the features of the STROBOLUX III LED the advantages of the Digitally Soft digital system of image, video and data capture.

Our image management software Digitally Soft, together with the STROBOLUX III LED, allows for the creation of reports, export of images and videos and comparison between before and after treatment. Other possibilities are statistics, area calculation, measurement comparison, etc., all functions which enable the specialist to manage the patient data easily and quickly.

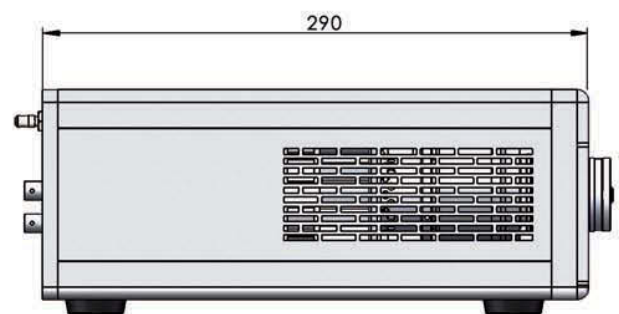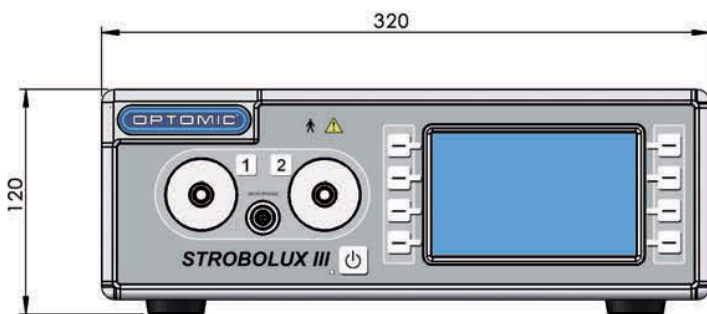## With Optomic digital stroboscopy the doctor can:

- Carry out functional exams of the vocal chords
- Record video and audio, and take pictures during examination using the pedal
- Keep a database with patient data and visits
- Play videos at a normal speed or frame by frame
- Capture images from the videos
- Generate customized reports in a quick way
- Import and export videos and images in any media
- Customize searches and filters
- Have Dicom system (optional)

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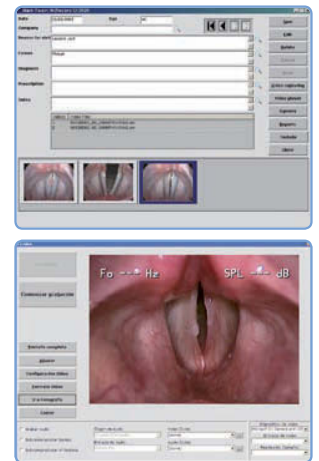
TECHNICAL SPECIFICATIONS **STROBOLUX III LED**

	STROBOLUX III LED
OPERATION MODES	Stroboscopic light and continuous light
LIGHT OUTPUTS	2 LED
COLOUR TEMPERATURE	6,500 ºK
LED LIFE	60,000 hours
STROBOSCOPIC FUNCTION MODES	Phase and Slow Motion
CONFIGURATION DISPLAY	5″ TFT / 800x600 pixels / 16 colour bits (RGB 565)
LIGHT CONDENSER	4 lens system
SOUND INTENSITY	70—150 dB
SAMPLE FREQUENCY	44,400 Hz
FREQUENCY RANGE	60—1,000 Hz
FLASH ANGLE IN PHASE	0-400º
FLASH SPEED IN SLOW MOTION	0.5—2 Hz
SHOWN PARAMETERS	F0 (Fundamental Frequency) and SPL (Sound Pressure Level)
SETTING MEMORIES	Rigid endoscope (thick, normal or thin) and flexible endoscope (thick or thin)
MICROPHONE	Air / contact
OSD INFORMATION	Composite – Y/C video (optional)
DIMENSIONS / WEIGHT	320mm (w) x 120mm (h) x 290mm (d) / 5 kg
POWER SUPPLY	110—240 V AC
MAXIMUM CONSUMPTION/STAND BY	200w / <1w

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CE