

Integration for A-dec



ACTEON
LED Curing Lights

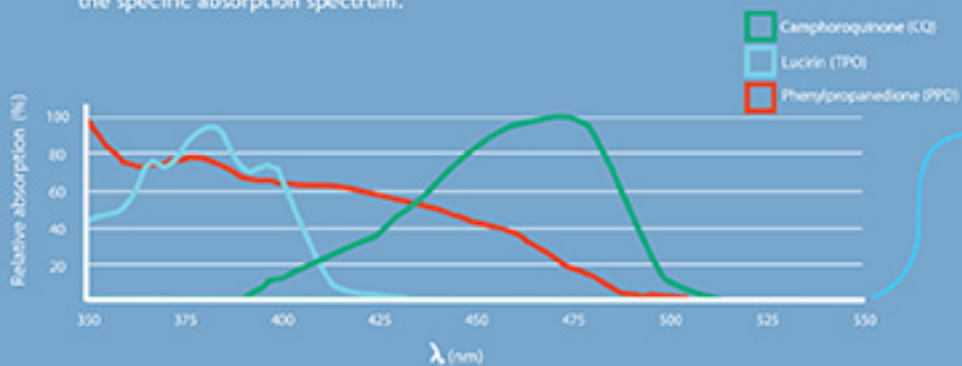


ACTEON
NORTH AMERICA



Although Camphoroquinone (CQ) is the most commonly used photo-initiator in dental materials, CQ is used alone or combined with others such as phenylpropanedione (PPD) and/or lucirin (TPO) reacting at different wavelengths. To activate them, they must be provided with a sufficient quantity of light energy in the specific absorption spectrum.

Wavelengths and photo-initiators



Mini L.E.D. OEM



Until now halogen-type lamps could only polymerize by producing a great deal of heat for a few efficient wavelengths (on average 500mW/cm² in the utilizable wavelength).

The maximum emitting spectrum of halogen lamps (over 480nm) is not relevant to the optimal absorption zone of the photo-initiators used in dentistry (approx. 430 to 470nm).

The latest generation LED (Light Emitting Diode) curing lights offer all that is expected of this new technology and the most recent design developed by SATELEC® combines power, efficiency and speed:

- Its power (1,250mW/cm²) is superior to that of most halogen lamps and nearly as efficient as plasma lamps, (without raising the temperature)
- It emits light in the most efficient part of the spectrum, curing most composites currently available: camphoroquinone (470nm), PPD or PAB(430nm)
- It takes only 6 to 12 seconds to polymerize 2mm of any composite!

Design by Prof. François Duret, DDS DSO-PhD, MS, MD-PhD, inventor of the CAD-CAM and the Apollo plasma lamp.

Mini L.E.D. OEM

SATELEC® presents the **Mini LED OEM™** - a curing light using second generation L.E.D. (light emitting diode) technology. The emitting spectrum of the blue light spans 420nm to 480nm, which makes the Mini L.E.D. one of the only lights able to polymerize almost all types of composite material available today. It is delivered with a sterilizable 7.5mm universal light guide which generates a curing light density of 1,250 mW/cm² (±10%). A 5.5 mm light guide (BoosterTip) is available on option for high-power curing at 2,000 mW/cm² (±10%); particularly useful in orthodontics.

Mini LED OEM™ offers three high-performance curing modes depending on the application:

Fast mode: 10 seconds at full power.

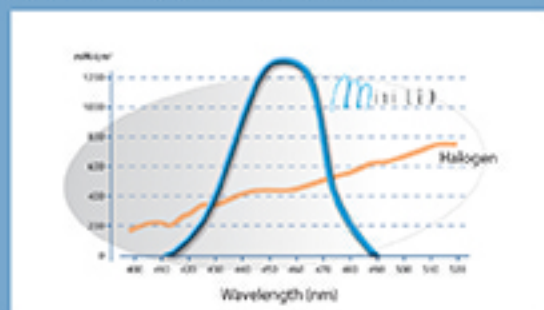
Pulse mode: 10 successive one-second flashes at full power.

Ramping mode: emits 20 seconds progressively up to full power.

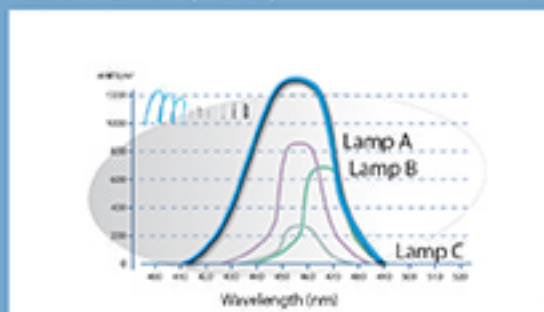
Mini LED OEM™, with its innovative design in anodized aluminum is ergonomic and easy to clean for effortless care and use.



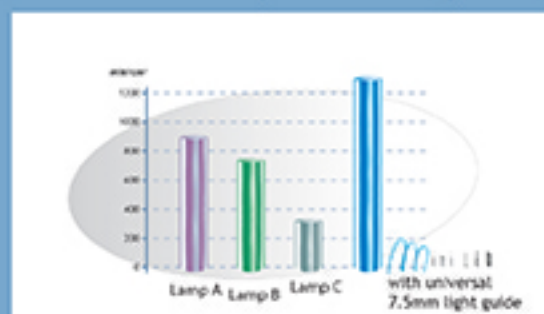
Mini LED emits light in the most relevant and most efficient spectrum (420 to 480nm) unlike the wavelengths of halogen lamps (over 480nm) where only 20% can be used and 80% is lost in heat.



Mini LED is the only LED lamp on the market offering such a wide emitting spectrum, allowing it to activate most photo-initiators of currently available composites: Camphoroquinone (470nm), but also PPD or PAB (430nm)



Mini LED is a very high-powered lamp: it generates 1,250mW/cm² light intensity with a single LED* - one of the most efficient LED lamps available today!



Polymerization Modes

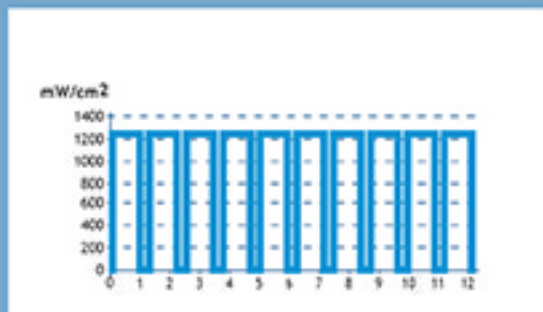
FAST MODE

Emits full power for 10 seconds (audible signal after 5 seconds)



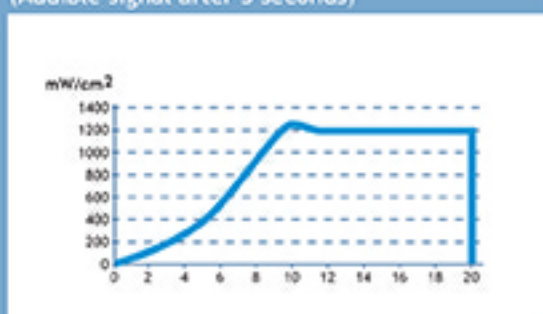
PULSE MODE

Emits 10 successive one-second flashes at Full Power. (audible signal after 5 flashes)



RAMPING MODE

Emits 10 seconds of Progressing Power to 10 seconds of Full Power. (Audible signal after 5 seconds)



* Laboratory testing; unpublished data available upon request

Designed by Prof. Francois Duret, DD S DSO-PhD, MS, MD-PhD, Inventor of the CAD-CAM and the Apollo plasma lamp

ScanWave

by Mini LED



The **Mini LED ScanWave OEM™** activates all photosensitive materials used in the dental market due to its wide emitted spectrum spectrum of light (390 to 510 nm) and automatic Scan of the wavelengths which covers all photo-initiators. This extremely wide wavelength and high power (1,500 mW/cm²) allows the **Mini LED ScanWave OEM™** to cure:

- Restorative materials
- Bonding Adhesives and cements
- Glass ionomer
- Light cured resin dams

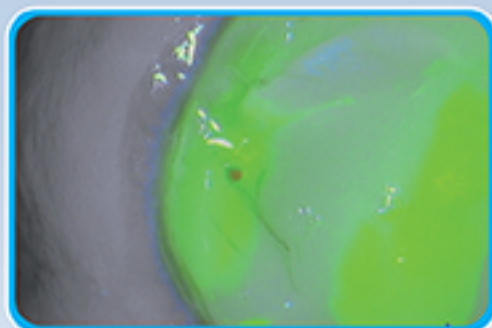
Designed in cooperation with Dental Universities, the **Mini LED ScanWave OEM™** combines **SATELEC®** traditional features such as aluminum casing, a laser pointer allowing accurate positioning, as well as the innovative and exceptional ScanWave concept. It enables perfect curing of dental materials in few seconds. Moreover, this concept avoids any risk of increasing the pulp temperature.

The beautiful and ergonomic design enables a pen-style grip, and its patented cooling system without a fan reduces the risk of cross-contamination. The back-lit display screen, together with the wide choice of times and menus available, ensure the practitioner precise control of the clinical treatment.

Materials are changing...

Modern dentistry involves adhesive dentistry.

Advances in adhesion and in polymerization have made it possible to change everyday clinical practices. Various dental materials are currently used according to the clinical situations and the associated techniques.



Restoration
(Glass Ionomer)



Restoration
(Composite)



Bleaching
(Dam)



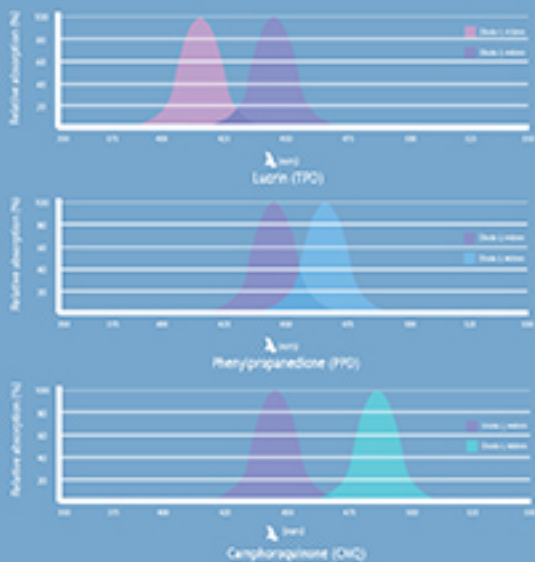
Veneers
(Adhesive)



Brackets
(Adhesive)



Posts
(Cements)



**Ideal Spectrum -
ScanWave covers it!**



**Tests carried out in the Biohealth and nanoscience laboratory of the Odontology UFR (training and research unit) of Montpellier I (Pr. Frédéric CUISINIER) under the direction of Dr. Bruno PELISSIER with the assistance of Drs Bruno JACQUOT and Jean-Christophe EGEA*

Technical Specifications

TYPE	POWER SUPPLY	POWER OUTPUT mWatt/cm ²	FAST	STEP	SCAN	LASER	LCD SCREEN	HANDPIECE SIZE
Mini LED OEM	24VAC - 35VDC ± 10%	1,250@7.5 mm 2,000@5.5 mm	YES	YES	NO	NO	NO	Ø23 x 210 mm
Mini LED ScanWave OEM	24VAC - 35VDC ± 10%	1,500@7.5 mm 2,500@5.5 mm	YES	YES	YES	YES	YES	Ø26 x 210 mm



Optical specifications for Mini LED OEM:

LED source	1
Wavelength range	420 - 480 nm
Intensity	1,250 mW/cm ² ± 10% (Light guide 7.5 mm) 2,000 mW/cm ² ± 10% (Light guide 5.5 mm)
Maximum exposure time	60 seconds (pulse mode at 1,250 mW/cm ² ± 10%)
Handpiece	
Weight	160 g / 5.6oz
Dimensions	Ø23 x 210mm
Operation	Constant service
Classification	Type B
Protection	Fusible 1.5 AT Fu1(not accessible) 125 V
Protective Index	IPX0



Optical specifications for Mini LED ScanWave OEM:

LED source	4
Wavelength range	390 - 510nm
Central wavelength	405 / 440 / 450 and 480nm
Intensity	1500 mW/cm ² ± 10% (Light guide 7.5 mm) 2200 mW/cm ² ± 10% (Light guide 5.5 mm)
Maximum exposure time	60 seconds (pulse mode at 1500 mW/cm ² ± 10%)
Handpiece	
Weight	185 g / 6.6oz
Dimensions	Ø26 x 210mm
Operation	Constant service
Classification	Type B
Protection	Fusible 1.5 AT Fu1(not accessible) 125 V
Protective Index	IPX0
Laser ring	
Wavelength	650 nm
Intensity	< 1 mW
Class	2M
Exposure time	As long as user presses the button



Module

Weight	60g / 2.1oz
Size	72 x 32 x 45mm
Input	
Voltage AC	24VAC ± 20%
Frequency	50 - 60 Hz
Power	20VA
Protection	1 AT Fuse 125V
Output	
Voltage DC	5VDC
Output current	2A
Homologation	
CE Category	Type B
IEC 60 601-1	Classification according 93/42 CEE: Ila
60 601-1-2	Continuous operation

