

ScanWave

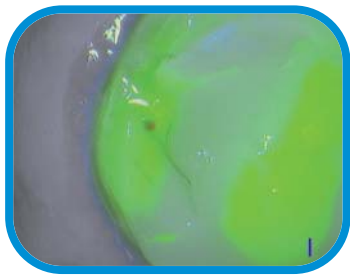
by *Mini LED*

100 % clinic



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)



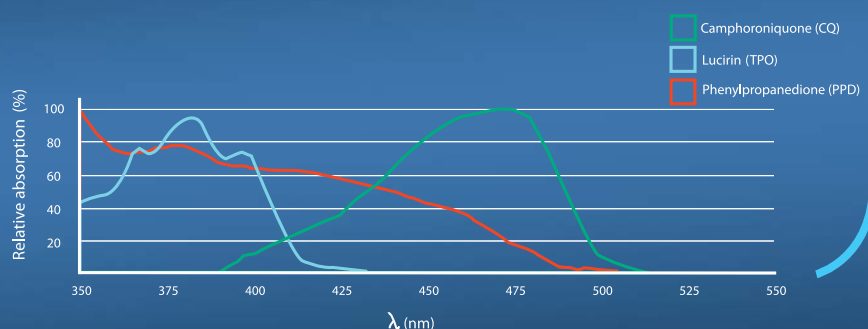
Brackets
(Adhesive)



Posts
(Cements)

Wavelengths and photo-initiators

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.



... and so are we

Studies carried out in cooperation with the Universities of Montpellier* and Birmingham have made it possible to determine and validate the clinical profiles according to the materials to be implemented:

Montpellier:

- Material conversion rate
- Shrinkage due to the polymerization
- Thermal elevation linked to the radiation emitted
- Pull-off test on orthodontic bracket after bonding

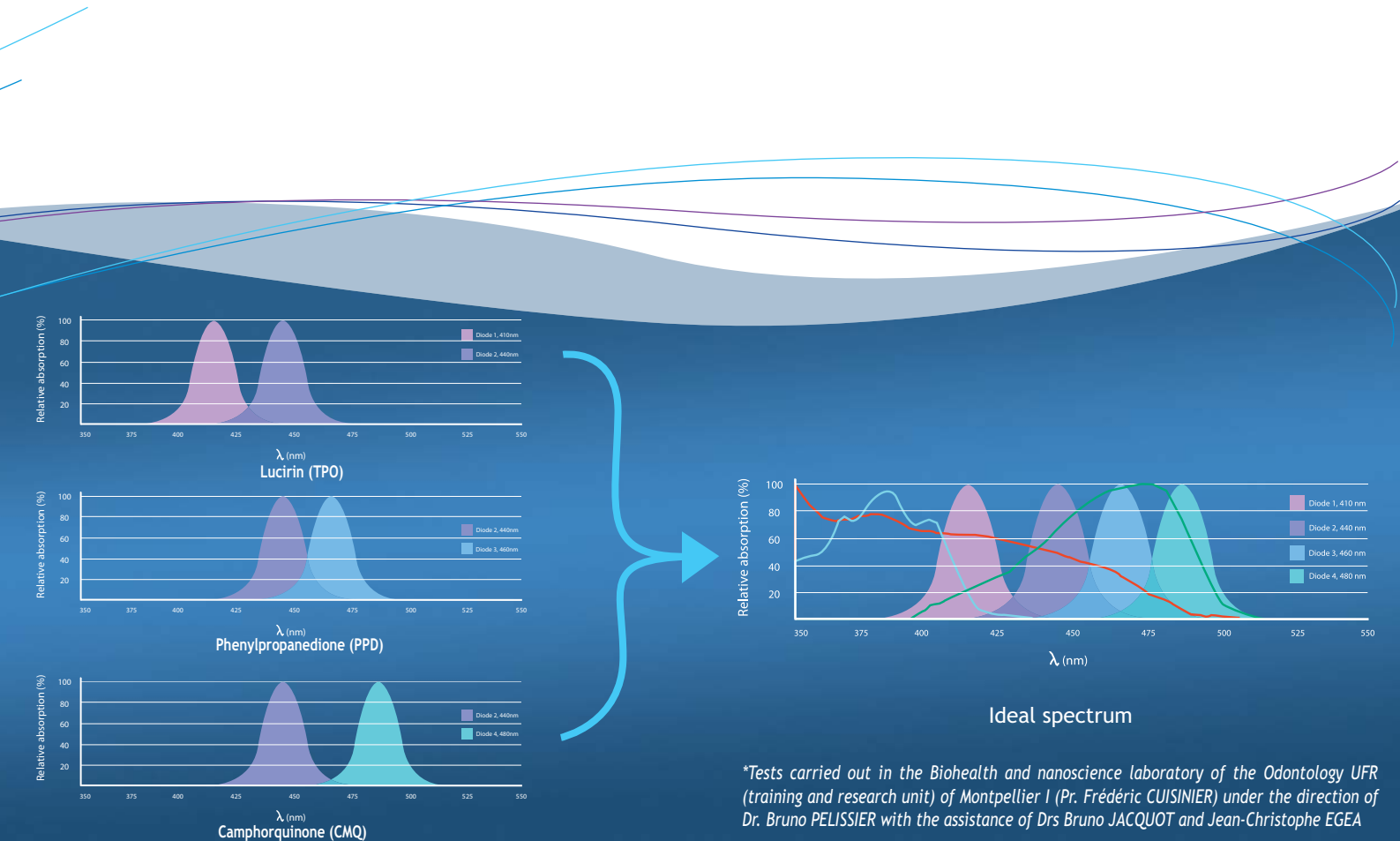
Birmingham :

- Measurement of the light power emitted and of its stability
- Characterisation of the light profile
- Measurement of light diffusion in the composite
- Thermal elevation linked to the radiation emitted
- Material conversion rate

These studies have assisted Satelec in designing an innovating product able to polymerize all of the dental materials on the market, via a systematic scan of the wavelengths.

ScanWave is a LED curing-light that generates a light spectrum that is suitable for materials containing Camphoroquinone (CQ), Phenylpropanedione (PPD) or Lucirin (TPO).

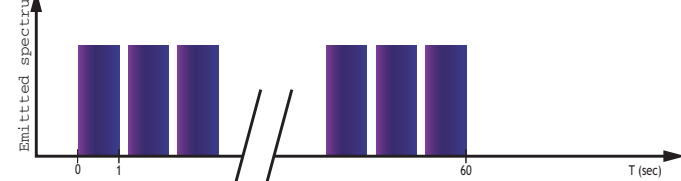
This universal polymerization light incorporates several LEDs which make it possible, during the cycle, to scan a wide spectrum from 390 to 510nm, and therefore covers all of the dental photo-initiator absorption zones.



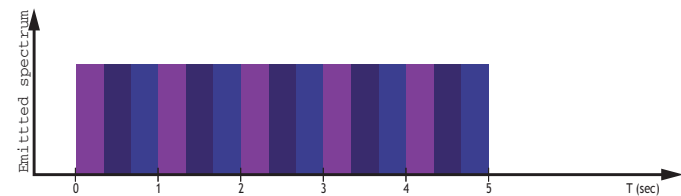
Polymerization modes

• BONDING MODE

Dedicated to bondings and adhesives, and displayed "Bond".
This mode has 2 cycles:



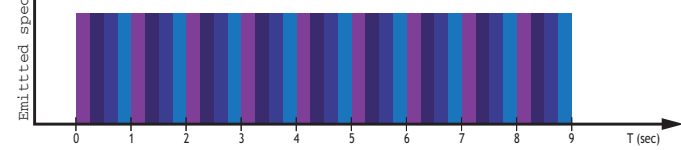
A pulse cycle of 12x5 seconds, for a complete arch or indirect bonding.



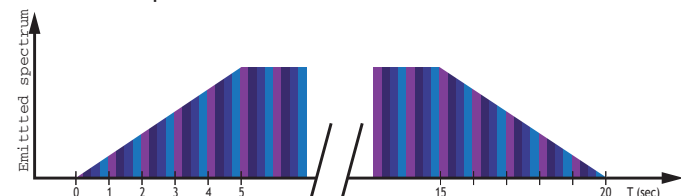
A continuous cycle of 5 seconds, for clear and translucent bondings (brackets).

• MODE SCAN

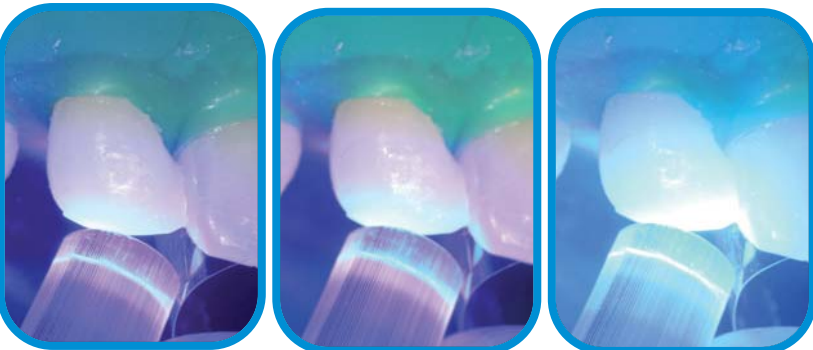
Dedicated for all types of dental materials, and displayed "Scan".
This mode has also 2 cycles :



Full Scan, continuous cycle of 9 seconds.
Universal mode for all types of materials regardless the photo-initiator.



Soft Scan, cycle of 20 seconds.
Soft start of 5 seconds, then full power during 10 seconds and a soft ending of 5 seconds to avoid any thermal choc.
Preserves fragile tissue.



Exclusive technology

In Scan mode, turning on light sources sequentially makes it possible to limit thermal overheating of the tissue and the Scanwave handpiece.

Patent application pending

Ergonomics

Several grasping possibilities are available including a pen style and a gun style thanks to its dual activation system (ON/OFF button and trigger).



Hygiene

Scanwave, thanks to its exclusive cooling system, does not require a fan which avoids stagnation and the development of microorganisms that can cause cross-contamination of the patient and the clinician.

The light guide, which is removable, allows you to sterilize the parts that are in contact with the patient.

The base station is equipped with a drain to avoid the collection of cleaning liquids.

ScanWave

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Light guide

ON/OFF button

LCD screen

Battery

Power insufficient

Power OK

Charging base

The base station has a measuring cell that makes it possible to control the light power available at the fibre optic output.

Laser target ring

Having a maximum amount of energy without controlling the orientation of the light causes the clinician to lose an average of 50% of its effectiveness.

The laser target ring, developed by Acteon, makes it possible to view and control the zone where the light energy delivered will be at its maximum.



Laser target ring = optimal orientation of the light guide

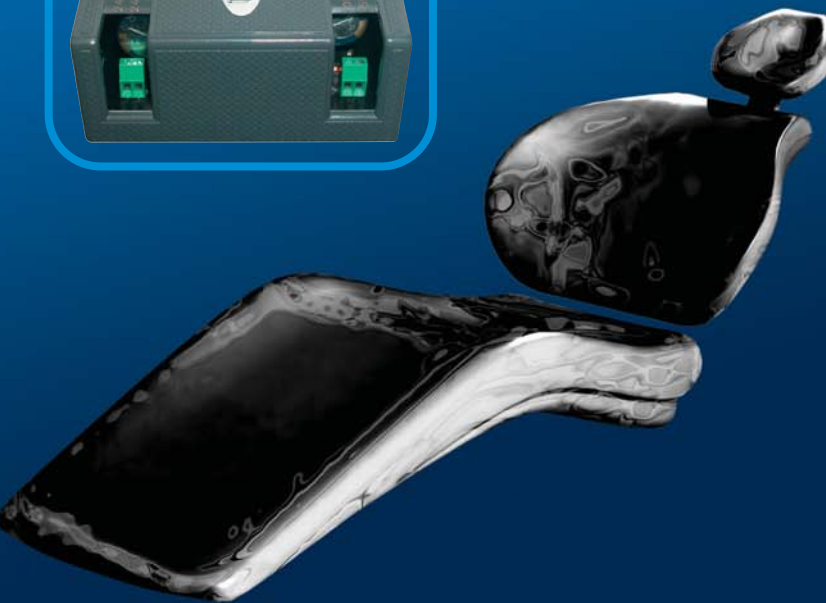
ScanWave

by Mini LED



ScanWave OEM

Available in OEM version, ScanWave can be integrated into all dental chairs on the market.
Compatible with the standard Mini LED module, it makes it easy to update the existing equipment.



Characteristics

- **Name of the device: Scanwave**
Medical classification: IIa according to directive

- **Handpiece**
Weight: 185 g
Dimensions: Ø24 x 201mm
Operation: Constant service
Classification: Type B
Protection: Fusible 1,5 A T Fu1
(not accessible) 125 V
Protective index: IPX0

- **Power supply**
Service voltage: 100 V AC to 240 V AC
Frequency : 50 Hz to 60 Hz
Power voltage : 12 V DC
Output current : 0,8 A
Classification : II
Protective index: IP 41

- **Base station**
Power voltage: 12 VDC
Protection : 3 A T Fu1 fuse
(not accessible) 125 V
Classification : Constant service
Protective index: IPX0

- **Battery**
Type : Lithium-Ion
Size : 88 x Ø24mm
Capacity : 2500 mAh

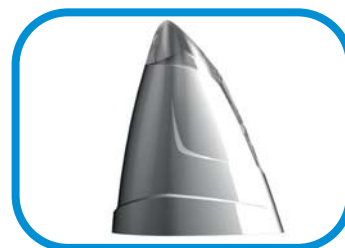
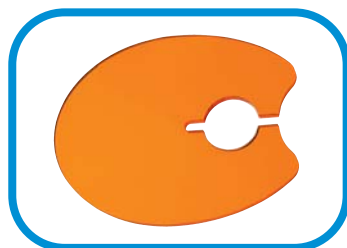
- **Optical specifications**
Leds source: 4
Wavelength range: 390-485 nm
Central wavelength: 405 / 440 / 460 and 480nm
Intensity: 1500 mW/cm² ± 10% (Light guide 7,5 mm)
2200 mW/cm² ± 10% (Light guide 5,5 mm)
Maximum exposure time: 60 seconds (pulse mode at 1500 mW/cm² ± 10%)

- **Laser ring**
Wavelength: 650 nm
Intensity: < 1 mW
Class: 2M
Exposure time: As long as user presses the button

Accessories

ScanWave	Ref. F05450
ScanWave handpiece	Ref. F05460
ScanWave Battery	Ref. F05451
ScanWave Charging base	Ref. F05452
Universal power supply	Ref. F05453
Light guide Ø 7,5 mm	Ref. F05470
Light guide Ø 5,5 mm	Ref. F05471
Light shield	Ref. F05407
ScanWave OEM Module	Ref. F02730

*other voltages available: contact your reseller or contact satelec@acteongroup.com



UNIVERSITY OF
BIRMINGHAM

