SiroLaser Blue

Versatility in Laser Dentistry

dentsplysirona.com

First FDA-cleared dental laser with blue wavelength
Enhance your knowledge of the science, safety, functionality and importance lasers bring to everyday patient care. 
Visit: sirolaser.com

SiroLaser Blue – the next step in laser dentistry

Triple-Wavelength-Technology

SiroLaser Blue is equipped with a high-tech laser module, which provides three different forms of laser in a single device.

- **Blue wavelength**
  - 445 nm
  - Surgery
  - Best cutting efficiency of all dental diode lasers

- **Infrared wavelength**
  - 970 nm
  - Perio & Hygiene
  - Effective wavelength for peri and hygiene indications

- **Red wavelength**
  - 660 nm
  - Photobiomodulation
  - Perfect for Photobiomodulation (PBM) / Low-Level-Laser-Therapy (LLLT)

Absorption of the laser radiation by biological tissue

Range of absorption coefficient of endogenous chromophores in tissue, adapted from P. Beard (Biomedical photo-acoustic imaging. Interface Focus 2011; 1: 602-631)
Blue wavelength – 445 nm

The first FDA-cleared Blue Laser for dental use. Blue laser light has a much higher absorption in soft-tissue (i.e. hemoglobin and melanin) than conventional infrared diode laser wavelengths (810nm, 940nm, 970nm). This leads to a much improved soft-tissue cutting efficiency which allows non-contact cutting, a first in dentistry for diode lasers. No fiber initiation is required and non-contact cutting means there is no need to remove tissue residue from the fiber during treatment. Due to the high degree of absorption in hemoglobin, the hemostatic effect is outstanding, helping during all surgical treatments, as well as within CAD/CAM workflow.

"The cutting performance of 445nm is simply phenomenal and it makes my work even more efficient."

Dr. Simone Suppelt, Germany

Unique cutting efficiency

Non-contact mode & no fiber initiation

Outstanding coagulation

Frenectomy

- Reduced pain and bleeding
- Reduced need for injected anesthesia
- Outstanding hemostatic effect
- No sutures and less scarring
- Accelerated wound healing and improved post-operative experience

Before

Immediately after

Wound healing after 10 days

Images provided by Dr. Peter Kleemann, Luxembourg

Gingivooplasty

- Easy visualization of tissue contours
- Reduced bleeding
- Improved post-operative experience

Before

Immediately after the exposure

Immediate placement of the bracket

After

Images provided by Dr. Peter Kleemann, Luxembourg

Tissue management

- Replaces retraction cords
- Clearly defined margins around the preparation site
- Minimizes damage and bleeding to the tissue
- Optimal technique for digital impressions

Before

Immediately after

Digital impression with CEREC™ Omnicam

Finished restoration

Images provided by Prof. Dr. Giuseppe Iaria & Dr. Matteo Iaria, Italy
**Infrared wavelength – 970 nm**

Infrared laser light is used in management of periodontal disease as an adjunct to scaling and root planing (SRP).

In addition, infrared laser light can be applied to the perio pockets within the hygiene workflow.

Laser assisted periodontal therapy (LAPT) leads to an improved periodontal status without surgical intervention and with minimal discomfort.

**Adjunct to conventional perio treatment**

**Reduced use of antibiotics**

**Optimized hygiene workflow**

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“The 970-nm diode laser has significantly improved my day-to-day workflow efficiency in addition to having amazing treatment results every time.”

Joy Raskie, USA

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**Hygiene & Perio workflow**

- The use of anesthesia should be administered as needed – often topical is adequate.
- Probe the periodontal pocket to confirm the pocket depths and become familiar with the architecture.

- Ultrasonic scaling and if desired an antimicrobial agent may be used to assist in removing the biofilm from the root surface. The goal is to remove the calculus and other debris from the root surfaces of the tooth and pocket while leaving cementum intact.
- Light-handed instrumentation of the tooth surfaces as necessary.
- Irrigate the pocket with water to dilute the antimicrobial agent and flush remaining debris.

- Laser decontamination of the entire diseased epithelial lining of the periodontal pocket. The goal is to inactivate the bacteria and microorganisms in the soft tissue and to create the formation of a blood and fibrin clot to facilitate healing and the reattachment of the soft tissue to the root surface.

- If the use of a Locally Administered Antibiotic (LAA) is desired it should be placed at this time to become part of the blood and fibrin clot.
- Apply finger pressure to the gingiva to place it in close contact with the tooth structure.
Red wavelength – 660 nm

Red laser light is used for photobiomodulation, also known as low level laser therapy. Photobiomodulation works through the application of photon energy of light to the tissue. It passes through the skin barrier and is absorbed by the cells where it initiates physiological reactions within the mitochondria. Photobiomodulation can be used throughout the dental practice, supporting indications in both surgical and therapeutic procedures.

Additional treatment options

Improved wound healing & tissue regeneration

Reduction of acute and chronic pain

* facilitated by the increase of local blood circulation
** with the meaning of temporary relief of minor muscle and joint pain

"The advent of the 660nm wavelength for Photobiomodulation Therapy has given me more options to enhance my patient treatment and post-op results. With the 970nm wavelength as well this dual wavelength diode laser has everything I need for simple and complex soft tissue procedures."

Dr. Alfred Wyatt, USA

Temporomandibular joint dysfunction (TMJD)

- Pain reduction
- Improvement of mandibular movement; i.e. better mouth opening

Sirolaser Blue – All indications at a glance

Intraoral and extraoral surgeries including incision, excision, hemostasis, coagulation and vaporization of soft tissue including marginal and interdental and epithelial lining of free gingiva and is indicated for:

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Perio &amp; Hygiene</th>
<th>Endodontics</th>
<th>Other</th>
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<td>Biopsy</td>
<td>Debridement of diseased epithelial lining</td>
<td>Pulpotomy as adjunct to root canal therapy</td>
<td>Hemostasis of donor site</td>
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<td>Crown lengthening</td>
<td>Laser removal of diseased, infected, inflamed and necrosed soft tissue within the periodontal pocket</td>
<td>Pulpotomy</td>
<td>Herpetic ulcers of the oral mucosa</td>
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<tr>
<td>Excision of lesions</td>
<td>Laser soft tissue curettage</td>
<td>Pulpotomy as adjunct to root canal therapy</td>
<td>Treatment of aphthous ulcers</td>
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<td>Exposure of unerupted/partially erupted teeth</td>
<td>Sulcular debridement (removal of diseased, infected, inflamed and necrosed soft tissue in the periodontal pocket to improve clinical indices including gingival index, gingival bleeding index, probe depth, attachment loss and tooth mobility)</td>
<td>Pulpotomy</td>
<td>Treatment of canker sores</td>
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<tr>
<td>Fibroma removal</td>
<td></td>
<td></td>
<td>Bleaching/Whitening</td>
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<tr>
<td>Frenectomy</td>
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<td></td>
<td>Low Level Laser Therapy (LLLT)/Photobiomodulation (PBM)</td>
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</table>
Ergonomic handle for portability and mobility

Disposable fibers sterile EasyTips for immediate and safe treatments

1 laser - 3 wavelengths
445 nm => blue
660 nm => red
970 nm => infrared

Color touchscreen navigation user profiles, programmed favorites and customized applications

Li-ion rechargeable battery for untethered usage and transport

Ergonomic handpiece with integrated finger switch for true portability (optional wireless foot pedal)

Cable management counterclockwise winding solution for safer transport and storage

Technical data
- Wavelength and operating performance:
  - 445 nm +/-5 nm / 0.2 - 3.0 W (CW)
  - 660 nm +/-5 nm / 25, 50 and 100 mW (CW)
  - 970 nm -10/+15 nm / 0.2 - 2.0 W (CW)
- Laser operating mode: Continuous Wave, Chopped Mode
- Frequency: 1 - 10,000 Hz
- Duty cycle: Variable
- Weight: ~1.3 kg (incl. handpiece and battery)
- Dimensions: ~19.7 cm x 18.2 cm x 18.9 cm

Scope of delivery
- SiroLaser Blue incl. stainless steel handpiece with integrated finger switch
- Battery pack (already mounted)
- Additional handpiece sleeve for alternating operation efficient
- Demo set of disposable, non-sterile fibers: 2x EasyTip 320 µm, 2x EasyTip Endo, 2x EasyTip 200 µm
- Combined bending tool
- Fibercutter
- 3 laser safety goggles (for dentist, dental assistant and patient)

Please note the following guidelines:
- Laser safety goggles for users
- Laser safety goggles for patient
- Sterile disposable fibers and therapy light guides for various applications
- Sterile disposable fibers (EasyTips)
- Laser safety goggles for users
- Laser safety goggles for patients

Accessories

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<th>Accessories</th>
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<tr>
<td>Handpiece sleeve with keypad</td>
<td>64 87 784</td>
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<tr>
<td>EasyTip 320 µm (25 pieces)</td>
<td>64 98 062</td>
</tr>
<tr>
<td>EasyTip 200 µm (25 pieces)</td>
<td>64 98 484</td>
</tr>
<tr>
<td>EasyTip 200 µm Endo (25 pieces)</td>
<td>65 35 905</td>
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<tr>
<td>MultiTip 8 mm, therapy light guide</td>
<td>65 41 465</td>
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<tr>
<td>MultiTip 4 mm, therapy light guide</td>
<td>65 41 499</td>
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<tr>
<td>Optic protective cap for handpiece (5 pieces)</td>
<td>65 79 580</td>
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<tr>
<td>Fibercutter</td>
<td>60 91 669</td>
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<tr>
<td>EasyBend – Bending tool (2 pieces)</td>
<td>66 18 180</td>
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<tr>
<td>Wireless foot control</td>
<td>62 56 841</td>
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<td>Laser safety goggles for users SiroLaser Blue</td>
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<td>Laser safety goggles for patients SiroLaser Blue</td>
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<tr>
<td>Laser safety goggles for eyeglasses wearers SiroLaser Blue</td>
<td>65 46 407</td>
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Please note the following guidelines:
- Cautions:
  - Carefully inspect the laser's condition before each treatment.
  - Ensure that the handpiece is properly secured during operation.
  - Use the recommended fibers and accessories for optimal performance.

10/11
Procedural Solution
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