SiroLaser Blue
Versatility in Laser Dentistry

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Enhance your knowledge of the science, safety, functionality and importance lasers bring to everyday patient care.

Please contact us: akademie@sirona.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

Infrared wavelength
970 nm
Endo, Perio and Implantology

Red wavelength
660 nm
Photobiomodulation

Absorption of the laser radiation by biological tissue

Range of absorption coefficient of endogenous chromophores in tissue, adapted from P. Beard (Biomedical photoacoustic imaging. Interface Focus 2011; 1: 602-631)
The first 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.

Unique cutting efficiency

Non-contact mode & no fiber initiation

Outstanding coagulation

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

Dr. Simone Suppelt, Germany
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

Images provided by Dr. Peter Kleemann, Luxembourg

Gingivoplasty

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

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

Images provided by Prof. Dr. Giuseppe Iaria & Dr. Matteo Iaria, Italy
Use of infrared laser light leads to improved germ reduction when managing the periodontal disease as an adjunct to scaling and root planing (SRP) as well as after the conventional treatment of the root canal.

So for perio, infrared laser light can be applied to the pockets within the hygiene workflow. The laser assisted periodontal therapy (LAPT) leads to an improved periodontal status without surgical intervention and with minimal discomfort.

For the endodontic treatment the laser is used after preparing and rinsing the root canal in addition to the conventional treatment. The laser effectively reduces germs and bacteria in areas a rinsing fluid can never reach – even deep in the dentinal tubules – leading to better long-term prognosis.

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

Dental hygienist Joy Raskie, USA

“The SiroLaser Blue reduces germs very effectively. I always use the laser for root canal treatments and since then I have had much fewer follow-up treatments because of recurrent inflammation.”

Dr. Matteo Iaria, Italy
Hygiene & Perio workflow

Periodontal germ reduction
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.

Endo workflow

Endodontic germ reduction
Laser decontamination of the root canal and even beyond. The goal is to reduce germ and bacteria in the root canal and even up to 1000 µm in the dentinal tubules.
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

With kind permission of: Dr. Giovanni Olivi, Italy

SiroLaser Blue – All indications at a glance

<table>
<thead>
<tr>
<th>Surgery</th>
<th>Endodontics</th>
<th>Periodontology</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abscess</td>
<td>Implant uncovery</td>
<td>Endodontic germ reduction</td>
<td>Periodontic germ reduction</td>
</tr>
<tr>
<td>Epulis</td>
<td>Incisions/excisions</td>
<td>Gangrene germ reduction</td>
<td>Peri-implantitis</td>
</tr>
<tr>
<td>Fibroma</td>
<td>Operculectomy</td>
<td>Pulpotomy</td>
<td>etc.</td>
</tr>
<tr>
<td>Frenectomy</td>
<td>Gingival troughing</td>
<td>etc.</td>
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<tr>
<td>Gingivectomy</td>
<td>etc.</td>
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<tr>
<td>Gingivoplasty</td>
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</tbody>
</table>
Ergonomic handle for portability and mobility

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

Color touchscreen navigation
- user profiles
- programmed favorites
- customized applications

Disposable fibers sterile EasyTips for immediate and safe treatments

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

Li-ion rechargeable battery for untethered usage and transport

Cable management counterclockwise winding solution for safer transport and storage
**Technical data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wavelength and operating performance</td>
<td>445 nm +/-5 nm / 0.2 - 3.0 W (CW)</td>
</tr>
<tr>
<td></td>
<td>660 nm +/-5 nm / 25, 50 and 100 mW (CW)</td>
</tr>
<tr>
<td></td>
<td>970 nm –10/+15 nm / 0.2 - 2.0 W (CW)</td>
</tr>
<tr>
<td>Laser operating mode</td>
<td>Continuous Wave, Chopped Mode</td>
</tr>
<tr>
<td>Frequency</td>
<td>1 - 10,000 Hz</td>
</tr>
<tr>
<td>Duty cycle</td>
<td>Variable</td>
</tr>
<tr>
<td>Weight</td>
<td>~ 1.3 kg (incl. handpiece and battery)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>~ 19.7 cm x 18.2 cm x 18.9 cm</td>
</tr>
</tbody>
</table>

**Scope of delivery**

- SiroLaser Blue incl. stainless steel handpiece with integrated finger switch
- Battery pack (already mounted)
- Additional handpiece sleeve for alternating operation efficient
- MultiTip 8 mm, therapy light guide
- Bending tool
- Fibercutter
- 3 laser safety goggles (for dentist, dental assistant and patient)

**Accessories**

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handpiece sleeve with keypad</td>
<td>64 87 784</td>
</tr>
<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>
</tr>
<tr>
<td>MultiTip 8 mm, therapy light guide</td>
<td>65 41 465</td>
</tr>
<tr>
<td>MultiTip 4 mm, therapy light guide</td>
<td>65 41 499</td>
</tr>
<tr>
<td>Optic protective cap for handpiece (5 pieces)</td>
<td>65 79 580</td>
</tr>
<tr>
<td>Fibercutter</td>
<td>60 91 669</td>
</tr>
<tr>
<td>Bending tool</td>
<td>62 17 348</td>
</tr>
<tr>
<td>Wireless foot control</td>
<td>62 56 841</td>
</tr>
<tr>
<td>Laser safety goggles for users</td>
<td>66 17 703</td>
</tr>
<tr>
<td>Laser safety goggles for patients</td>
<td>65 41 523</td>
</tr>
</tbody>
</table>

**Scope of delivery additional information**

SiroLaser Blue Ref.-No. for the following countries:
- Germany, Austria: 65 40 491; Switzerland: 65 40 632; Italy: 65 40 657; Netherlands, Belgium: 65 40 509; France: 65 40 640; UK: 65 40 624; Spain: 65 40 608; Portugal: 65 40 665; Denmark: 65 40 616; Finland, Norway, Sweden: 65 40 590; Australia: 65 73 401; ROW: 65 59 111; language extension: 65 40 673. Further countries on request.

**Please note the following guidelines:**

- Laser safety goggles for users
- Laser safety goggles for patients
- Sterile disposable fibers (EasyTips)
- Therapy light guides (MultiTips) for various applications
- Optic protective cap for handpiece (5 pieces)
- Bending tool
- Fibercutter
- Wireless foot control
- Laser safety goggles for users
- Laser safety goggles for patients

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