THE DENTAL SOLUTIONS COMPANY™



## SiroLaser Blue Versatility in Laser Dentistry

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(	Dentsply Sirona
,	Dr. Brown Ginglvectomy
	Perio. germ reduction Endo. germ reduction Sulcular Debridement
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	SiroLaser Blue

## SiroLaser Trainings

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

Please contact us: akademie@sirona.com

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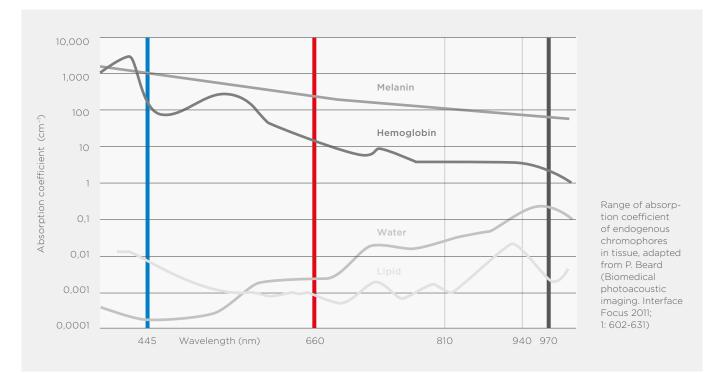
# SiroLaser Blue – the next step in laser dentistry

## Triple-Wavelength-Technology

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



#### Absorption of the laser radiation by biological tissue



## Blue wavelength - 445 nm

The first Blue Laser for dental use. Blue laser light has a much higher absorbtion 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

- 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

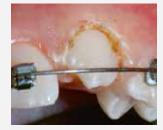
Images provided by Dr. Peter Kleemann, Luxembourg

#### Gingivoplasty

- 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

### Infrared wavelength - 970 nm

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.

#### Effective germ and bacteria reduction

Adjunct to conventional periodontal and endodontic treatment

Reduced use of antibiotics



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

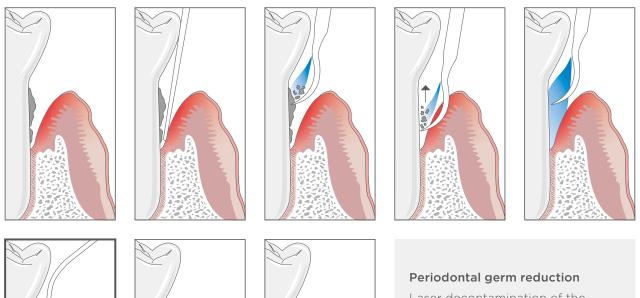
Dental hygienist Joy Raskie, USA

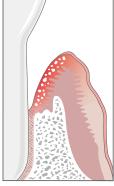


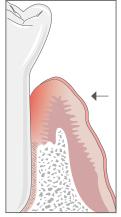
"The SiroLaser Blue reduces germs very effectively. I always use the laser for root canal treatments and since then I have had much fewer follow-up treatments because of recurrent inflammation."

Dr. Matteo Iaria, Italy

#### Hygiene & Perio workflow



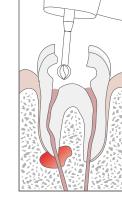




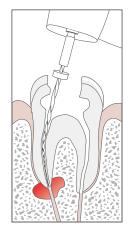
Laser decontamination of the entire diseased epithelial lining of the periodontal pocket. The goal is to inactivate the bacteria and microorganisms in the soft tissue and to create the formation of a blood and fibrin clot to facilitate healing and the reattachment of the soft tissue to the root surface.

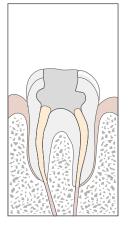
#### Endo workflow

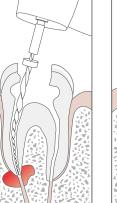














#### Endodontic germ reduction

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  $1000 \ \mu m$  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.



\* 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



Before treatment



Pain TMJ



Pain masseter muscle



After treatment

With kind permission of: Dr. Giovanni Olivi, Italy

#### SiroLaser Blue - All indications at a glance

Surgery		Endodontics	Periodontology	Other
Abscess	Implant uncovery	Endodontic germ reduction	Periodontic germ reduction	Aphthous ulcers
Epulis	Incisions/excisions	Gangrene germ reduction	Peri-implantitis	Desensitization
Fibroma	Operculectomy	Pulpotomy	etc.	Hemostatis
Frenectomy	Gingival troughing	etc.		Herpes
Gingivectomy	etc.			Soft laser therapy
Gingivoplasty				etc.



#### 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)



Sterile disposable fibers (EasyTips)



Therapy light guides (MultiTips) for various applications



Laser safety goggles for users



Laser safety goggles for patients

Accessories	Ref.
Handpiece sleeve with keypad	64 87 784
EasyTip 320 μm (25 pieces)	64 98 062
EasyTip 200 μm (25 pieces)	64 98 484
EasyTip 200 μm Endo (25 pieces)	65 35 905
MultiTip 8 mm, therapy light guide	65 41 465
MultiTip 4 mm, therapy light guide	65 41 499
Optic protective cap for handpiece (5 pieces)	65 79 580
Fibercutter	60 91 669
Bending tool	62 17 348
Wireless foot control	62 56 841
Laser safety goggles for users	66 17 703
Laser safety goggles for patients	65 41 523

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; Finnland, Norway, Sweden 65 40 590. Australia 65 73 401, ROW 65 59 111, language extension 65 40 673. Further countries on request.

Technical data	Please note the following guidelines:		
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)	CAUTION CLASS 4 VISIBLE LASE INVISIBLE LASER	
Laser operating mode	Continuous Wave, Chopped Mode	OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION	
Frequency	1 – 10.000 Hz		
Duty cycle	Variable	Are \$70 new -10/+15 new P <sub>max</sub> = 14 W Are 660 new ± 5 new P <sub>max</sub> = 100 mW	
Weight	~ 1,3 kg (incl. handpiece and battery)		
Dimensions	~ 19,7 cm x 18,2 cm x 18,9 cm	IEC 60825-1:2007	

#### **Procedural Solution**

Preventive Restorative Orthodontics Endodontics Implants Prosthetics

#### **Enabling Technology**

CAD/CAM Imaging Treatment Centers Instruments



#### **Dentsply Sirona**

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