

# LASOTRONIX

- **ST-1**  
**Five-wavelength diode laser**

Unique Polish Company at the Heart of the EU



# PROSTHETICS

prosthetic field preparation  
gingival retraction

# SURGERY

incision, cutting, coagulation  
excision of lesions, abscess  
disinfection

# IMPLANTOLOGY

exposure of implants  
treatment of perimplantitis

# ENDODONTICS

decontamination of root canals

# PERIODONTOLOGY

elimination of bacteria from  
gingival pockets



# BIOSTIMULATION

accelerated tissue healing  
analgesic action  
antioedematous action

# THERAPY

tissue heating  
muscle relaxation

# PAD

elimination of bacteria without  
antibiotics

# DIAGNOSTICS

detection of caries  
visualization of tartar, gingivitis  
and mucous membrane lesions

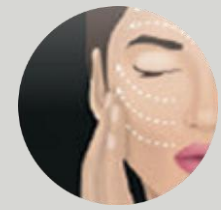
# WHITENING

elimination of bacteria from  
gingival pockets

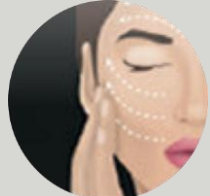
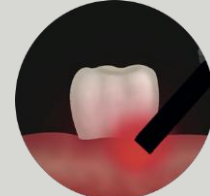
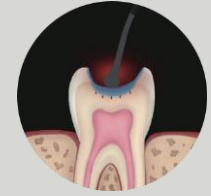


**SMART<sup>M</sup> ST LASER  
OFFERS 5  
WAVELENGTHS**

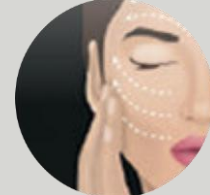
**405 nm**



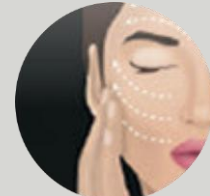
**635 nm**



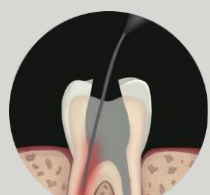
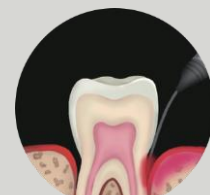
**808 nm**



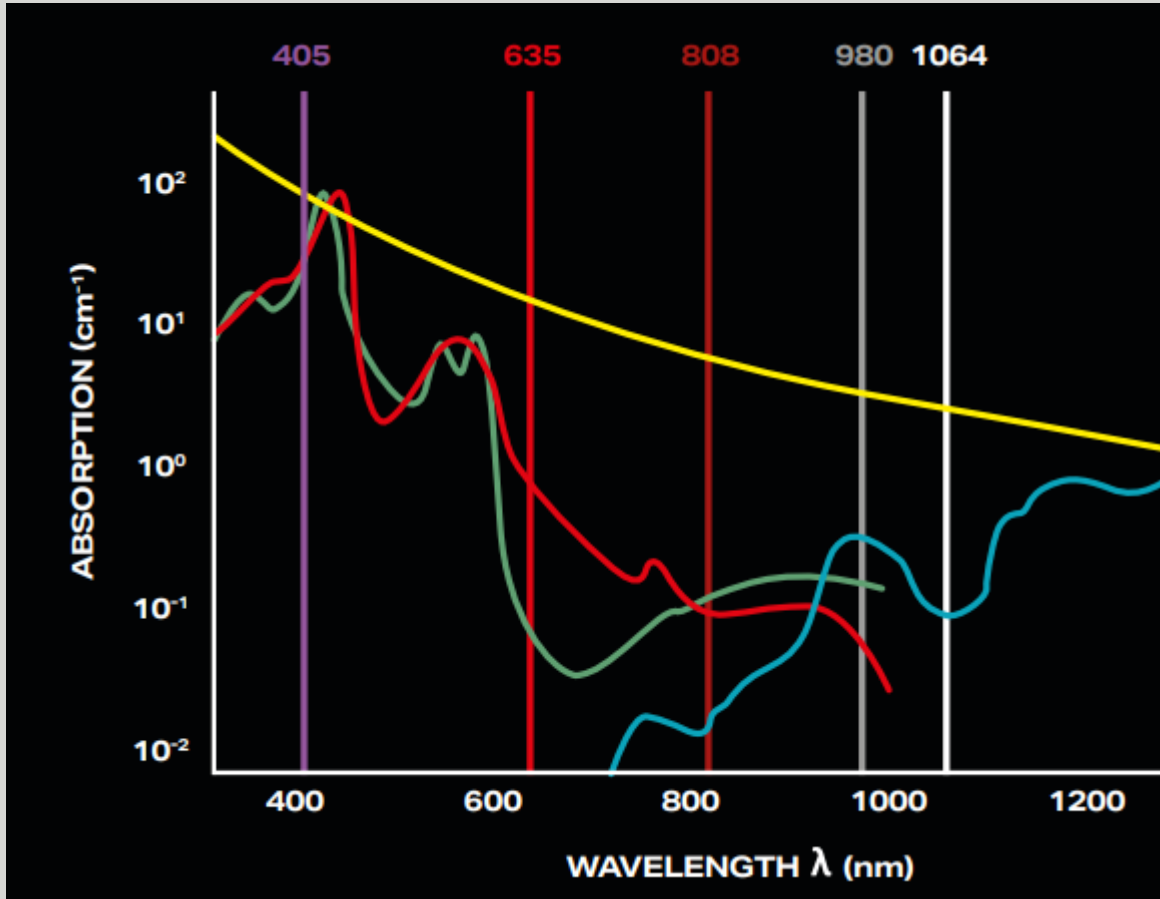
**980 nm**



**1064 nm**



# Why is there no universal wavelength?



**405 nm** (the most effective fluorescence) - diagnosing the extent of fungal and bacterial infections, caries and mucous membrane lesions invisible to the naked eye

**635 nm** the most effective biomodulation and cold disinfection of bone and soft tissue

**808 nm** photobiological effects (photobiomodulation – PBM) in hard tissue. Used to effectively stimulate osteoblasts, it allows effective stimulation and regeneration of bone tissue, as well as reduction of tension and pain resulting from long-term overload and degeneration of joints.

**980nm** offers excellent surgical effects by leveraging soft tissue's high absorption properties, enabling quick, safe treatments with coagulation and decontamination. It also effectively activates products for laser whitening of endodontically treated teeth.

**1064nm** penetrates deep into muscle tissues to reduce chronic pain, thanks to its low dispersion. It also offers superior bacterial elimination during endodontic and periodontal treatments, providing better results in deep treatments.

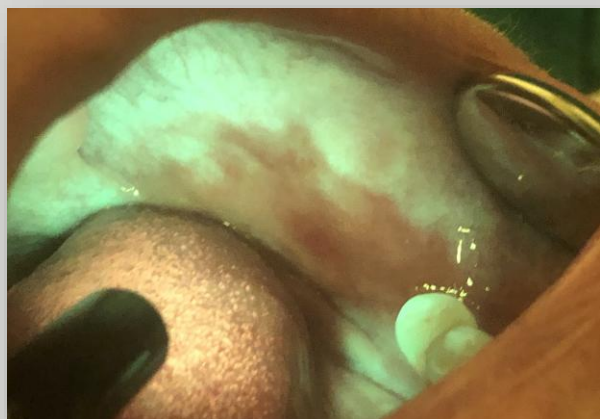


405 nm

# DIAGNOSTICS



- Detection of mucous membrane lesions
- Diagnosis of dental caries
- Diagnosis of cracked teeth
- Detection of dental plaque
- Visualization of composite fillings and prosthetic restorations





980 nm

# SOFT TISSUE SURGERY



- **Contouring the course of the gingival festoon**
- **Implant exposure**
- **Gingival retraction**
- **Frenectomy**
- **Opening abscesses**
- **Removal of fibromas and angiomas**
- **Deepening of oral vestibule**
- **Exposure of a carious cavity located subgingivally**





980 nm

# TEETH WHITENING



- Fast and safe teeth whitening during one appointment
- A possibility of whitening single teeth or an entire arch
- Whitening both vital and necrotic teeth
- Colour change from 6 to 12 shades according to the VITA Shade Guide





# 1064 nm

# THERAPY



**Therapy involves raising the temperature locally, which leads to temporary tissue congestion and pain relief.**

**Procedures reduce or eliminate the need for the patient to take non-steroidal anti-inflammatory drugs (NSAIDs) and analgesics.**



## Applications:

- lockjaw
- temporomandibular joint pain
- carpal tunnel syndrome
- overload pain of shoulders, neck, elbows, knees, spine



1064 nm

ENDO/PERIO



- Root canal decontamination
- Indirect pulp capping
- Gingival pocket debridement / decontamination
- Gingival pocket decontamination
- Prosthetic preprocedural decontamination
- Aphthous ulcer
- Hypersensitivity treatment



**635 nm**

# BIOMODULATION

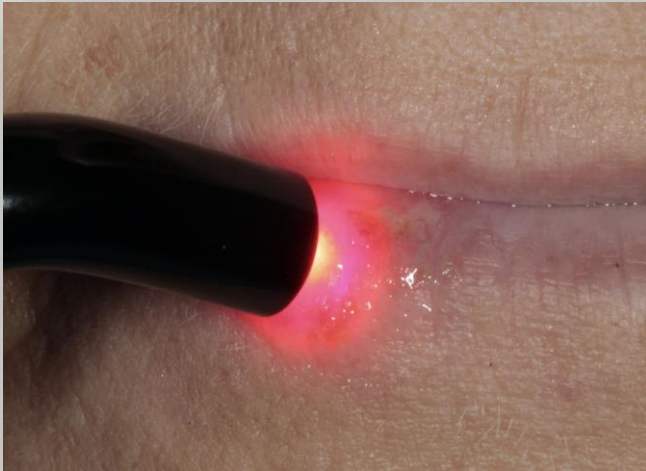


## Application examples:

- accelerated tissue healing, reduced inflammation
- increased regeneration capacity of muscles and nerves
- improved implant osteointegration
- increased efficiency of orthodontic treatment

## Analgesic effect:

- after surgical procedures
- in post-extraction alveolitis
- reducing tooth cervix sensitivity
- decreasing pain after orthodontic device placement





635 nm

# BIOMODULATION



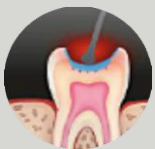
## Treating:

- inflammation
- irritation
- pulp exposure
- tooth cervix hypersensitivity
- prosthetic pressure sores
- dry socket
- trigeminal neuralgia
- bleeding control
- eliminating aphthae and herpes
- nerve fibre regeneration



## How does it work?

- *stimulation of blood and lymph microcirculation*
- *increasing the rate of oedema absorption*
- *accelerating haematoma absorption*
- *inhibiting the secretion of pro-inflammatory cytokines*



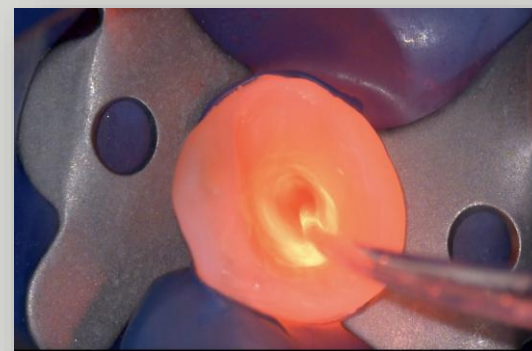
635 nm

# PHOTOACTIVATED DISINFECTION



## Advantages and benefits of PAD:

- Destroys 99.99% of bacteria, fungi and viruses
- Broad spectrum of activity
- No drug-resistance
- Immediate action
- No contraindications for use in pregnant women
- No allergic reactions
- Painless and tasteless therapy without tissue discolourations





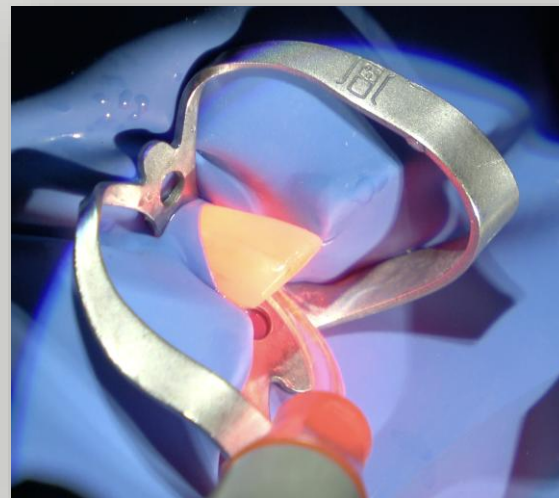
**635 nm**

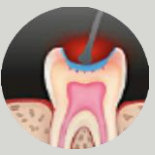
# **PHOTOACTIVATED DISINFECTION**



## **Decontamination of:**

- **root canals**
- **cavities before filling**
- **inflammatory conditions in the oral cavity**
- **treatment of herpes, aphthae**
- **hygienization of sites after scaling**
- **treatment of periimplantitis and periodontitis**
- **treatment of periapical lesions**





**808 nm**

# **BIOMODILATION (HT)**



## **Applications:**

- **Pain therapy (hard tissue)**
- **Ossification stimulation**
- **Temporo-mandibular injury**
- **Lockjaw**
- **Postextractive wounds**
- **Orthodontic teeth movement**
- **Sinuses inflammation**
- **Bone fractures / breaks**



- **Wide range of accessories - the broadest scope of applications**
- **Possibility of upgrading the laser with new options**
- **Lowest operating costs**
- **Compact size of the device**
- **Made in Poland**



# DENTAL SURGERY



405 nm

Determination of mucous membrane lesion margins before taking biopsies for histopathological examination



635 & 808 nm

Dry socket treatment  
Accelerated healing  
Post-extraction wound  
Treatment of sensory disturbances after surgery



980 nm

Opening abscesses  
Coagulation  
Decontamination of treatment site  
Resecting mucous membrane lesions

# IMPLANTOLOGY



405 nm

Examination of bacterial count at the implant



635 nm & 835 nm

Treatment of periimplantitis  
Accelerated osteointegration  
Treatment of periimplantitis



980 nm

Implant exposure  
Deepening of oral vestibule

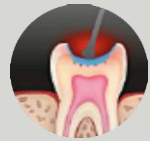


# DENTAL PROSTHETICS



405 nm

Diagnosis of bacteria and fungi around dentures and  
prosthetic restorations



635 nm

Treatment of oral candidiasis  
Disinfection of abutments  
Elimination of the vomiting reflex in patients before  
taking impressions



980 nm

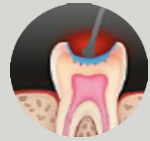
Denture bearing area correction  
Exposure of the preparation margin  
Gingival retraction

# CONSERVATIVE DENTISTRY



405 nm

**Caries and dental plaque diagnostics**



635 nm

**Defect decontamination  
Treatment of dentin hypersensitivity  
Anaesthesia before anaesthesia  
administration  
Elimination of the vomiting reflex**



980 nm

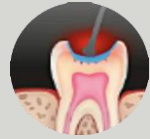
**Denture bearing area correction  
Exposure of the preparation margin  
Gingival retraction**

# ENDODONTICS



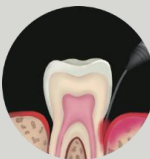
405 nm

**Visualization of bacteria in a canal**



635 nm

**Canal system decontamination  
Accelerated regeneration of periapical lesions  
Pain treatment after canal obturation  
Diagnosis and treatment of reversible pulpitis**



1064 nm

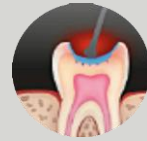
**Canal system decontamination  
Canal preparation and drying before obturation**

# PERIODONTOLOGY



405 nm

Diagnosis of mucous membrane lesions  
Determination of lesion extent  
Detection of lesions with neoplastic potential



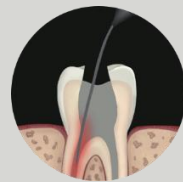
635 nm

Accelerated healing and revascularization after procedures  
Treatment of periodontal pockets  
Treatment of candidiasis, lichen, HPV, mucositis



980 nm

Deepening of oral vestibule  
Labial and lingual frenectomy  
Removal of inflammatory granulation tissue from sockets



1064 nm

Root canal decontamination  
Indirect pulp capping  
Gingival pocket debridement / decontamination  
Aphthous ulcer  
Hypersensitivity treatment

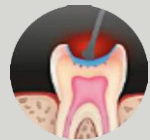


# PEDIATRIC DENTISTRY



405 nm

Diagnosis of caries, dental deposits  
Fluorescence-assisted selective removal of caries  
Detection of mucous membrane lesions



635 nm

Decontamination of cavities in deciduous teeth  
Disinfection before teeth sealing  
Tooth socket decontamination before replantation  
Treatment of mucous membrane lesions (aphthae, herpes)  
Supporting apexification



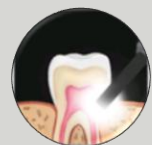
980 nm

Coagulation  
Lingual frenectomy  
Pulp amputation



405 nm

**Diagnosis of early caries and dental calculus**



808 nm

**Accelerated healing**  
**Reducing pain after orthodontic device placement**  
**Accelerated treatment of mucous membrane lesions caused by orthodontic devices**



980 nm

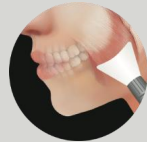
**Correction of frenal attachments**  
**Exposure of impacted teeth**  
**Removal of gingival hyperplasia**

# ORTHODONTICS

# TEMPOROMANDIBULAR JOINT DISORDERS



808 m



1064 nm

Treatment of lockjaw

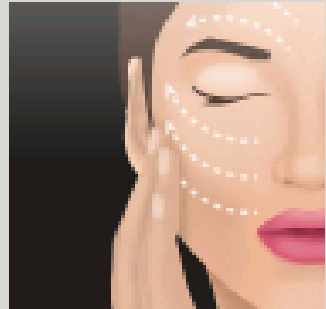
Treatment of temporomandibular joint pain

Relaxation of muscle tension

# COSMETIC MEDICINE

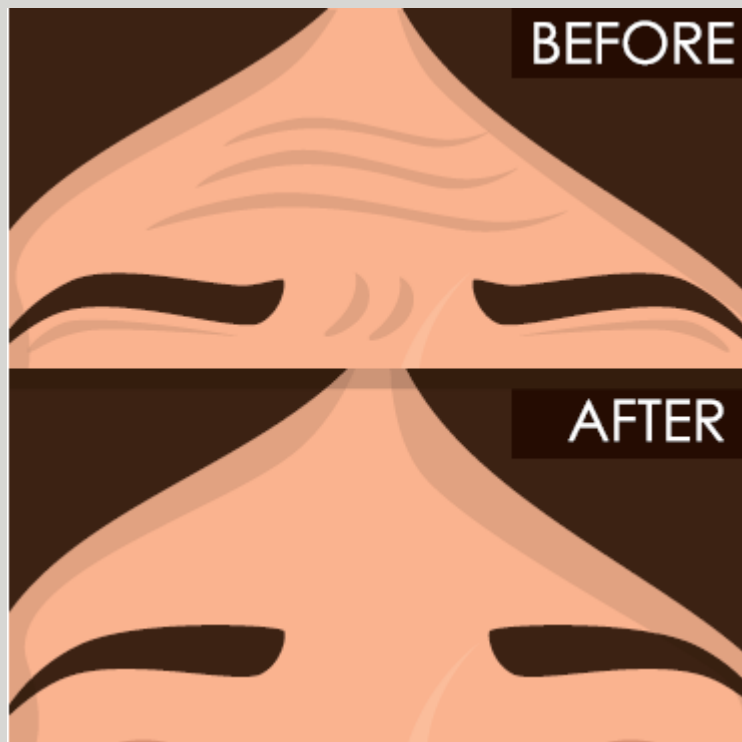
## SMART<sup>™</sup> ST LASER

4 wavelengths for full effect  
405 nm / 635 nm / 808 nm / 980 nm



# Revolutionary anti-aging laser therapy

## Effects of laser treatment:



- reduction of wrinkles
- skin smoothing
- pore size reduction
- restoration of elasticity
- vital appearance
- moisturizing effect
- skin lightening effect
- alleviation and elimination of acne lesions
- elimination of bacteria causing the formation of lesions with simultaneous skin disinfection

# Acne treatment

## Effects of laser treatment:



- reduction of inflammation, eczema, blackheads, etc.
- prevention of new lesions
- reduction of skin redness
- uniformed tone

# LASOTRONIX

■ 5λ

UNIQUE APART  
PERFECT TOGETHER

