Centre of Laser Technology
LASERINSTRUMENTS Ltd.

LASERS AND ACCESSORIES

for dermatology, aesthetic medicine, cosmetology

PROTOTYPE TESTS DOCUMENTATION VERIFICATION CERTIFICATE PRODUCTION

CTL - Innovative Laser Technology for: medicine, industry and science since 1991 !

Company Profile

Dear Sirs,

CTL–Centre of Laser Technology LASERINSTRUMENTS Ltd. is the leading private Polish company specialising in the field of laser technology. The firm started it's activity in October 1991 in Warsaw. The main filed of company's activity is research, construction and production of lasers, laser modules, laser and optoelectronic systems for medicine, material processing, measurement technology, education, research and safety.

Our company specialises in execution of orders according to individual customers requirements. the company conducts also the training courses for: doctors, physiotherapists, engineers, physicists, etc.

We focus on research, development and production of OEM modules, subassemblies and accessories for CO , YAG and Diode lasers. The CTL's range of products includes 30 own 2 construction of laser devices and technologies for two leading directions of it's activity i.e. medicine and industrial technologies. A few CTL's medical lasers already obtained the CE conformance marks with the directives of European Union and next lasers are under the adequate research and compatibility procedures. As a complement to it's own offer CTL actively promotes and distributes laser and optoelectronic components and systems of renowned foreign companies on local markets.

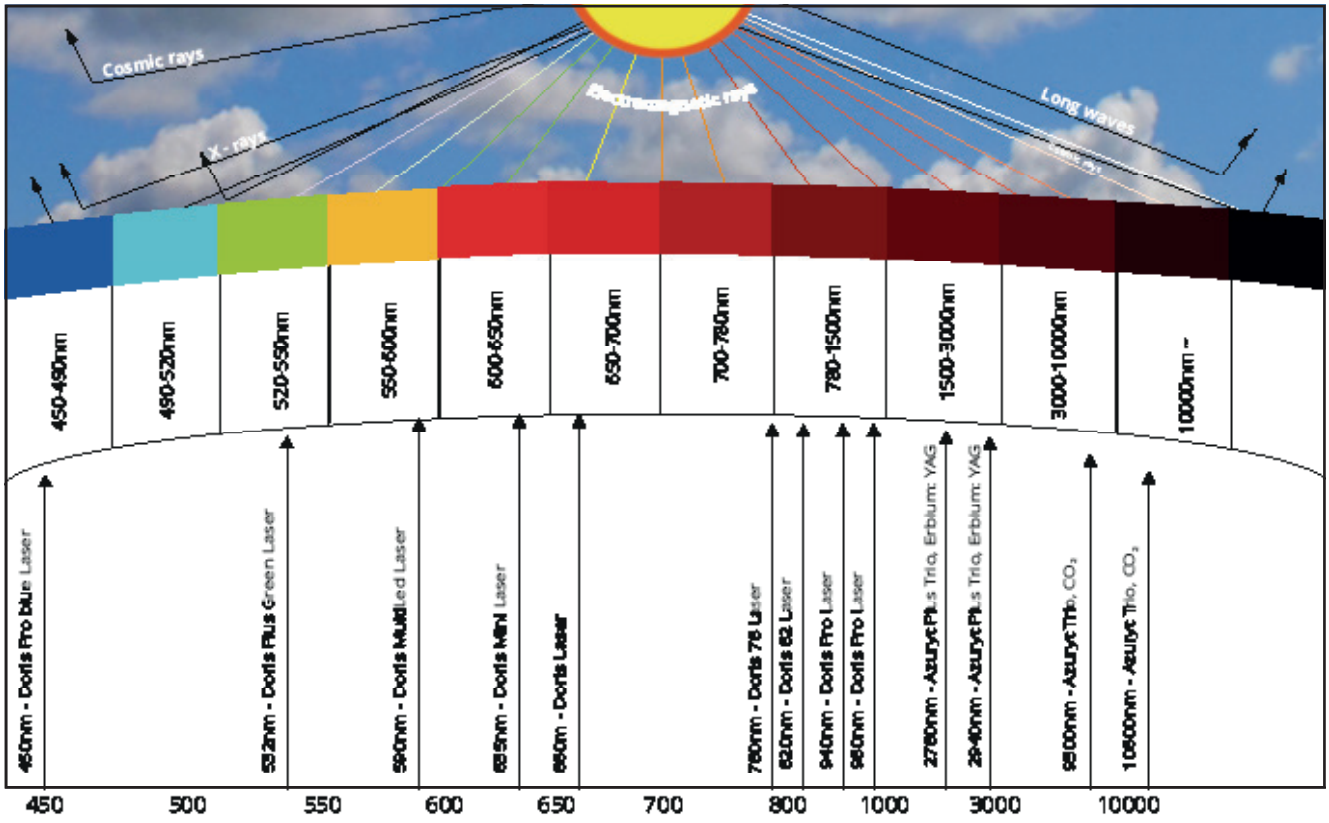
Our company is absolutely committed to superior product quality and continuous improvement when developing our projects. Our personnel constantly improve their qualifications, among others through participation in specialist conferences, branch exhibitions, etc. Our devices are produced in compliance with International Standards for production and safety e.g. according to IEC-825, IEC-601, etc. Our company quality management has been confirmed with ISO 9001 certificate. We have our own R&D Department as well as 1500m of class A production and testing place.

CTL cooperates with many research, service and production institutions here and abroad. In solving difficult, innovative design and research projects amply leading specialists from Poland or abroad. CTL enjoys esteem within customers and business partners, which has been proven by many awards and distinctions granted to CTL among others twice GRAND PRIX of the prestigious fairs. CTL company became also the Leader of Enterprise in 1999.

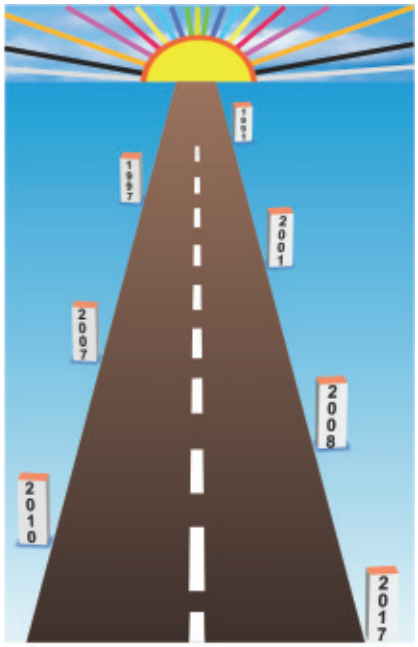
The President of the company Ludwik Pokora (technical physicist, Ph. D., Prof.) is a known authority in laser and optoelectronic technology. He is the author of over 300 publications, 25 patents and six books on applications of lasers. Ludwik Pokora is the member of local and international scientific-technical societies and committees, among others: International Society for Photo-Optical Instrumentation Engineering (SPIE), IEEE Laser Association (EMLA). He is the expert in the EU committee for evaluation of research projects on laser technology and optoelectronics. He was also the Head of Department in High Medical School.

CTL - LASERINSTRUMENTS Team

THE WAVELENGTH OF CTL'S LASER COMPARE TO WAVELENGHT REFLECTED BY THE SUN



THE MILESTONES IN DEVELOPMENT OF DERMATOLOGY CTL'S LASERS SINCE 1991



TOGETHER TO SUCCESS !

1991 - Erbium:YAG Laser - Azuryt Plus „Turbine Laser", the first laser in Poland and the third in the world

1992 - The first diode laser - Gala - CTL1202, 904nm - 30W

1993 - The first Polish CO_2 Surgical Laser - Azuryt - CTL1401, 10600nm - 15W

1994 - The first Laser in the world with two treatment probe and two wavelenght - Doris - CTL 1106MX, 660nm - 250mW and 820nm - 250mW

1995 - Erbium YAG: Nd crstal - Azuryt Plus - CTL 1503 - First Laser in Poland for periodontology

1997 - GRAND PRIX on DENTOX'97 48/5000, set of innovative lasers for dentistry

2000 - Master of Technology NOT for turbine dental laser for painless and non-contact treatment of dental caries and GRAND PRIX CEDE 2000 for the laser!

2003 - Exports of diode medical lasers CTL to Australia

2004 - European Certifications „CE" for dental lasers CTL

2005 - Certificate FDA for laser CO_2 - Azuryt - CTL 1401 and the first export to US

2006 - Export of the first lasers CO_2 - Azuryt - CTL 1401 to India!

2010 - Diode surgical laser Doris Pro - CTL 1105MX, 810nm - 635nm 3W + - 5mW

2012 - Diode Surgical- Therapy Laser Doris Pro Duo - CTL 1105MX, 940nm - 10W and 635nm - 150mW2009 -

2013 - Golden Laurel Innovation for the project: Tablet laser - a set of innovative laser therapy and treatment of the third generation; Company of the Year; pearls of Medicine

2015 - Diode Surgical- Therapy Laser - Doris Pro Duo - CTL 1105MX, 635nm - 150mW and 450nm - 300mW

CO_2 Surgical - Therapy Laser Laser - Azuryt Trio - CTL 1401, 10600nm - 15W i 940nm - 5W and 635nm - 150mW

Erbium:YAG Surgical - Therapy Laser - Azuryt Plus Trio - CTL 1601, 2940nm - 15W and 450nm - 3W i 635nm - 150mW

Leader in Enterprice 2015

TABLE OF CONTENTS

1. Diode Surgical Lasers
   1.1. Diode Surgical Laser, CTL 1551 Doris Plus HR, 810nm - 600W.....06/07
   1.2. Diode Surgical Laser, CTL 1551 - Doris Plus LIPO, 980nm - 30W + 635nm - 5mW..... 08/09
   1.3. Diode Surgical Laser, CTL 1551 - Doris Plus EVLT, 1470nm - 15W + 635nm - 5mW.....10/11
   1.4 Diode Surgical Laser, CTL 1551 - Doris Plus Green, 532nm - 5W + 635nm - 5mW.....12/13

2. Diode Therapy Lasers
   2.1. Diode Therapy Laser, CTL 1106MX - Doris Multidiode 17, 660nm - 1000mW(17x6mW).....14/15
   2.2. Diode Therapy Laser, CTL 1106MX - Doris Trio, 820nm - 600mW and 660nm - 300mW + + 780nm - 300mW(8x40mW) 16/17

3. CO_2 Surgical and Fractional Lasers
   3.1. CO_2 Surgical and Fractional Laser, CTL 1401 - Azuryt Frax, 10600nm - 30W + 635nm - 5mW.....18/19
   3.2. CO_2 Surgical and Fractional Laser, CTL 1401 - Azuryt Frax, 10600nm - 30W + 635nm - 5mW.....20/21

4. Erbium:YAG Surgical Lasers
   4.1. Erbium:YAG Surgical Laser, CTL 1601 - Azuryt Frax, 2940nm - 15W + 635nm - 5mW.....22/23

5. Phototherapy Lamp MultiLED
   5.1. Phototherapy Lamp MultiLED, CTL 1106MX - Doris MultiLed Maxi 420nm - 100mW/cm^2 or 635nm - 80mW/cm^2 .....24/25

Diode HR Laser

CTL 1551 - Doris Plus HR DER

810nm - 600W

New !

ISO 9001 · CE · ISO 13485

REF: CTL 1551__-0810-600.23b.TT.DER · VER: D1.5-16.PS-EN.23b.DER

Basic functional advantages

- Maximum effect with minimum pain
- Very well chosen parameters
- Easy exchange of applicators
- High patient and doctor comfort
- High efficiency and effectiveness
- Easy to use
- Colour touch screen
- User identification by PIN code
- Switching on laser beam by button ON in display or foot switch
- Attractive design, modern styling
- Wide range of applications
- The highest quality and reliability !
- Durable and reliable - 2 years warranty !

CTL 1551 - Doris Plus HR Laser

Examples of hair removal (HR)

Example of face hair removal

Example of underarm hair removal

Example of legs hair removal

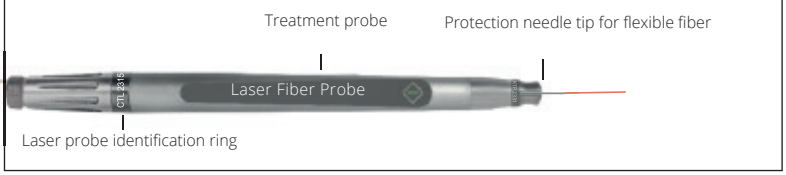
Basic technical-usage parameters	HR Laser - 810nm
Laser type	diode
Wavelength	810nm
Max. output power	600W
Operation mode	continuous (c.w.) or pulsed mode (p.m.)
Continuous mode (c.w.)	
Max. output power - $P_{c.w.}$	600W, regulated from 50W to 600W with step 50W
Pulsed mode (p.m.)	
Max. pulse power - P_p	600W, regulated from 50W to 600W with step 50W
Min. pulse time - T_w range of segments	0,01ms, regulated 0,01 ms – 1ms 1ms – 10ms 10ms – 100ms
Max. pulse frequency - f (in 0,1 ms T_w)	10000Hz, regulated from single pulse with step 10Hz
Average power - P_{AV}	600W
Beam delivery system	treatment probe
Display / Keyboard	colour, LCD - TFT , touch-T
Power supply / Power consumption	universal input (95-265)VAC, (50-60)Hz <600W
Switching control	by footswitch or button START on LCD screen
Safety class	class 4 laser safety, class I type B electrical safety
Dimensions / Weight	230mm x 300mm x 925mm (W x D x H) / ~25kg
REFerence number	REF.: CTL 1551__-0810-600.23b.TT.DER

Diode Surgical Laser

CTL 1551 - Doris Plus LIPO DER

980nm - 30W + 635nm - 5mW

Surgical probe - 980nm



Exchangeable applicators for different surgical applications

Protection needle tip for flexible fiber, straight - 0° REF.: KTP 2334-150-2.0-00	Protection needle, straight - 0° REF.: KTP 2331-30-00
Protection needle tip for flexible fiber, angled - 15° REF.: KTP 2335-150-2.0-15	Protection needle, angled - 15° REF.: KTP 2332-30-15
Protection needle tip for flexible fiber, angled - 30° REF.: KTP 2336-15-150-2.0-30	Protection needle, angled - 30° REF.: KTP 2333-30-30

Laser liposuction probe

ISO 9001 • CE • ISO 13485

REF.: CTL 1551__-980-30.0 + 0635-.005.21b.TT.DER • VER.: D2.3-16.PS-EN.DER

- Precise control of operation
- Maximum effect with minimum pain
- Minimal post-operation swelling
- Very well chosen parameters
- Easy exchange of applicators
- High patient and doctor comfort
- Portable and easy to operate
- High efficiency and effectiveness
- Easy to use
- External power meter for test
- Colour touch screen
- User identification by PIN code
- Switching on laser beam by button ON in display or foot switch
- Attractive design
- Modern styling
- Wide range of applications
- The highest quality and reliability !
- Durable and reliable - 2 years warranty !

CTL 1551 - Doris Plus LIPO Laser

Examples of aesthetic medicine and dermatology surgery applications

Laser liposuction

- body shaping by fat removal - laser lipolysis

Surgery in dermatology and aesthetics medicine

Bening lesions removal

- papilomas
- common warts
- keloids
- fibromas
- cysts
- dermatosis papilosa nigra
- active naevi

Cancerous or precancerous lessions removal

- Bowen's disease
- basal cell carcinoma
- squamous cell carcinoma
- Kaposi sarcoma
- melanoma
- cutaneous metastases(palliatice treatment)

Photocoagulation of vascular lesions

- varicosity
- capillary haemangiomas
- cavernous haemangiomas
- lentigo simplex
- vascular malformations
- teleangiectasisas

Pigmented lesion removal

- hirutism
- trichiasis
- hypertrichiasis
- acne keloidalis nuchae
- pseudofolliculitis barbae
- melonocytic naevi

Basic technical-usage parameters	Surgical Laser - 980nm	Aiming Laser - 635
Laser type	diode	diode
Wavelength	980nm	635nm
Max. output power	30W	5mW
Operation mode	continuous (c.w.) or pulsed mode (p.m.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	30W, regulated from 0W to 30W with step 1W	5mW, regulated with 1mW step
Pulsed mode (p.m.)		
Max. pulse power - P_p	40W, regulated from 0,5W to 40W with step 0,5W	
Min. pulse time - T_w range of segments	0,01ms, regulated 0,01 ms – 1ms 1ms – 10ms 10ms – 100ms	
Max. pulse frequency - f (in 0,1 ms T_w)	10000Hz, regulated from single pulse with step 10Hz	
Average power - P_{AV}	30W	
Beam delivery system	treatment point probe with flexible fiber optic applicators	
Display / Keyboard	colour, LCD - TFT , touch-T	
Power supply / Power consumption	universal input (85-265)VAC, (50-60)Hz <600W	
Switching control	by footswitch or button START on LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	210mm x 250mm x 925mm (W x D x H) / ~25kg	
REFerence number	REF.: CTL 1551__-0980-30 + 0635-.005.21b.TT.DER	

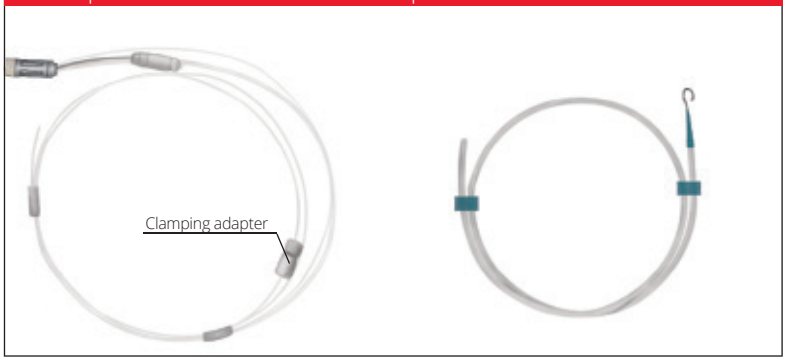
Diode Surgical Laser
CTL 1551 - Doris Plus EVLT DER
1470nm - 15W + 635nm - 5mW

Surgical probe - 1470nm

Exchangeable applicators for different surgical applications

Protection needle tip for flexible fiber, straight - 0° REF.: KTP 2334-150-2.0-00	Protection needle, straight - 0° REF.: KTP 2331-30-00
Protection needle tip for flexible fiber, angled - 15° REF.: KTP 2335-150-2.0-15	Protection needle, angled - 15° REF.: KTP 2332-30-15
Protection needle tip for flexible fiber, angled - 30° REF.: KTP 2336-15-150-2.0-30	Protection needle, angled - 30° REF.: KTP 2333-30-30

Fiber optic and catheter set for EVLT procedures



ISO 9001 • CE • ISO 13485

REF.: CTL 1551__-1470-15.0 + 0635-.005.21b.TT.DER • VER: D1.15-16.PS-EN.DER

Basic functional advantages

- Precise control of operation
- Maximum effect with minimum pain
- Minimal post-operation swelling
- Very well chosen parameters
- Easy exchange of applicators
- High patient and doctor comfort
- Portable and easy to operate
- High efficiency and effectiveness
- Easy to use
- External power meter for test
- Colour touch screen
- User identification by PIN code
- Switching on laser beam by button ON in display or foot switch
- Attractive design
- Modern styling
- Wide range of applications
- The highest quality and reliability !
- Durable and reliable - 2 years warranty !

CTL 1551 - Doris Plus EVLT Laser

Examples of aesthetic medicine and dermatology surgery applications

Fast and effective outpatient treatment

- great saphenous vein
- different types of varicosity
- reticular veins
- venous ulcers
- hemangiomas stellate

Surgery in dermatology and aesthetics medicine

Bening lesions removal

- papilomas
- common warts
- keloids
- fibromas
- cysts
- dermatosis papilosa nigra
- active naevi

Cancerous or precancerous lessions removal

- Bowen's disease
- basal cell carcinoma
- squamous cell carcinoma
- Kaposi sarcoma, melanoma
- cutaneous metastases(palliatice treatment)

Photocoagulation of vascular lesions

- varicosity
- capillary haemangiomas
- cavernous haemangiomas
- lentigo simplex
- vascular malformations
- teleangiectasisas

Pigmented lesion removal

- hirutism
- trichiasis
- hypertrichiasis
- acne keloidalis nuchae
- pseudofolliculitis barbae
- melonocytic naevi

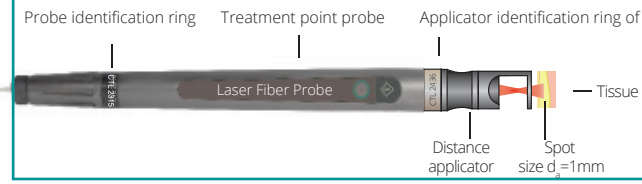
Basic technical-usage parameters	Surgical Laser - 1470nm	Aiming Laser - 635
Laser type	diode	diode
Wavelength	1470nm	635nm
Max. output power	15W	5mW
Operation mode	continuous (c.w.) or pulsed mode (p.m.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	15W, regulated from 0,5W to 15W with step 0,5W	5mW, regulated with 1mW step
Pulsed mode (p.m.)		
Max. pulse power - P_p	20W, regulated from 0,5W to 20W with step 0,5W	
Min. pulse time - T_w range of segments	0,01ms, regulated 0,01 ms – 1ms 1ms – 10ms 10ms – 100ms	
Max. pulse frequency - f (in 0,1 ms T_w)	10000Hz, regulated with step 10Hz	
Average power - P_{AV}	15W	
Beam delivery system	treatment point probe with flexible fiber optic applicators	
Display / Keyboard	colour, LCD - TFT , touch-T	
Power supply / Power consumption	universal input (85-265)VAC, (50-60)Hz <600W	
Switching control	by footswitch or button START on LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	210mm x 250mm x 925mm (W x D x H) / ~25kg	
REFerence number	CTL 1551__-1470-15.0 + 0635-.005.21b.TT.DER	

Diode Surgical Laser

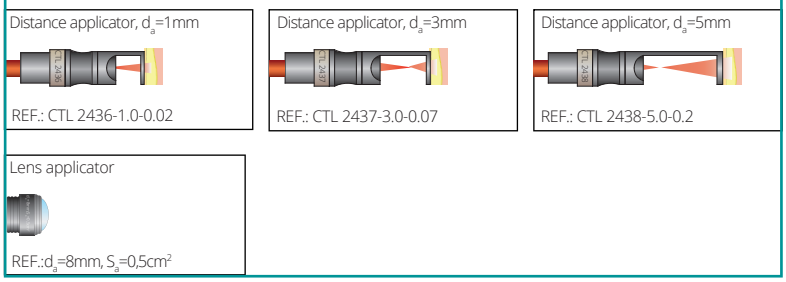
CTL 1551 - Doris Plus Green DER

532nm - 5W + 635nm - 5mW

Treatment probe with printed marking 532nm and 635nm



Exchangeable distance applicators for coagulation procedure



ISO 9001 · CE · ISO 13485

REF: CTL 1551__-0532-5.00 + 0635-.005.21b.TT.DER · VER: D1.2-16.PS-EN.21b.DER

Basic functional advantages

- Painless and bloodless treatments
- Clean operative field
- Quick effects of treatments
- Maximum patient comfort
- Wide range of applications
- Minimal bleeding
- External test power meter
- Colour touch screen
- User identification by personal PIN code
- Switching on laser by foot switch or button ON in display
- Attractive design, modern styling
- The highest quality and reliability !
- Durable and reliable - 2 years warranty !

CTL 1551 - Doris Plus Green Laser

Examples of dermatology and aesthetics medicine applications

Vascular lesions

- port wine stains,
- flat or hypertrophic type
- congenital vascular naevi
- congenital haemangiomas
- cavernous haemangiomas
- haemangiosarcomas
- cylindromas
- face teleangiectasias (also in course of acne rosacea)
- capillary haemangiomas
- spider haemangiomas
- senile (cherry) haemangiomas
- lymphangiomas
- angiokeratomas

Disorders of pigmentation

- senile lentigines
- café-au-lait macules
- ephelides
- lentigo simplex
- postinflammatory
- hyperpigmentations
- Becker's naevus
- naevus of Ota
- naevus of Ito
- Hori's naevus
- mongolian spot
- dermatosis papulosa nigra
- decorative tattoos
- traumatic tattoos

Basic technical-usage parameters	Surgical Laser - 532nm	Aiming Laser - 635
Laser type	diode	diode
Wavelength	532nm	635nm
Max. output power	5W	5mW
Operation mode	continuous (c.w.) or pulsed mode (p.m.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	5W, regulated from 0,5W to 5W with step 0,5W	5mW, regulated with 1mW step
Pulsed mode (p.m.)		
Max. pulse power - P_p	10W, regulated from 0,5W to 10W with step 0,5W	
Min. pulse time - T_w range of segments	0,01ms, regulated 0,01 ms – 1ms 1ms – 10ms 10ms – 100ms	
Max. pulse frequency - f (in 0,1 ms T_w)	10000Hz, regulated with step 10Hz	
Average power - P_{AV}	5W	
Beam delivery system	treatment point probe with distance and flexible fiber optic applicators	
Display / Keyboard	colour, LCD - TFT , touch-T	
Power supply / Power consumption	universal input (85-265)VAC, (50-60)Hz <20W	
Switching control	by footswitch or button START on LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	210mm x 250mm x 925mm (W x D x H) / ~25kg	
REFerence number	CTL 1551__-0532-5.00 + 0635-.005.21b.TT.DER	

Diode Therapy Laser

CTL 1106MX - Doris Multidiode 17 DER

660nm - 1000mW (17x60mW)

Treatment surface probe 17
with membrane keyboard

Signal cable
of surface probe

ISO 9001 · CE · ISO 13485

REF: CTL 1106MX-0660-1000.27bl.TT.DER · VER: A2.5-16.PS-EN.27bl.DER

Basic functional advantages

- Therapy without drugs
- Painless treatments
- Quick treatment effects
- High efficiency and effectiveness
- Wide range of applications
- Stable parameters
- Portable and easy to operate
- Very light, safety
- High patient and doctor comfort
- Colour touch screen
- User identification by personal PIN code
- Switching on laser by foot switch or button ON in display
- Easy to use, intuitive interface
- The highest quality and reliability
- Attractive design, modern styling
- Durable and reliable - 2 years warranty !
- Fair price for properties !

CTL 1106MX - Doris Multidiode 17 Laser

Examples of aesthetic medicine and dermatology applications

Wound healing - acceleration

- Post-operation wounds
- Post-amputation wounds
- Post-injury wounds
- Complicated, infected wounds
- Wounds in metabolic diseases

Wounds healing - induced

- Thremal burns and burn
- Radiation burns
- Frostbites
- Decubital wounds
- Chemical burns (e.g. mustard gasinduced burns)

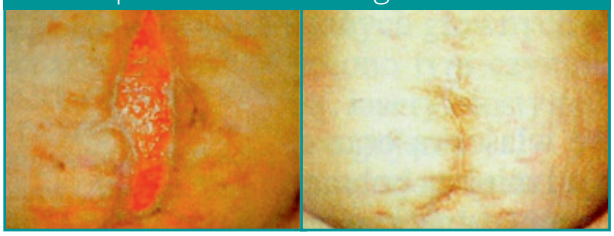
Venous dermatoses

- Crural ulcer
- Venous ulcer
- Venous insufficiency ulceration
- Buerger's disease
- Diabetic foot syndrome

Dermatitis of various etiology

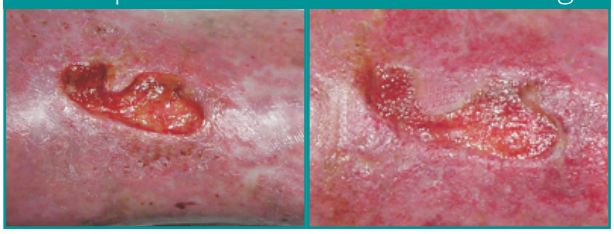
- Acne vulgaris,
- Atopic dermatitis
- Herapetic dermatitis
- Bacterail infections of skin and subcutaneous tissue
- Seborrheic dermatitis, alopecia
- Furuncles

Example of wound healing - acceleration



Example of thermal burns - healing

Example of venous dermatoses - healing

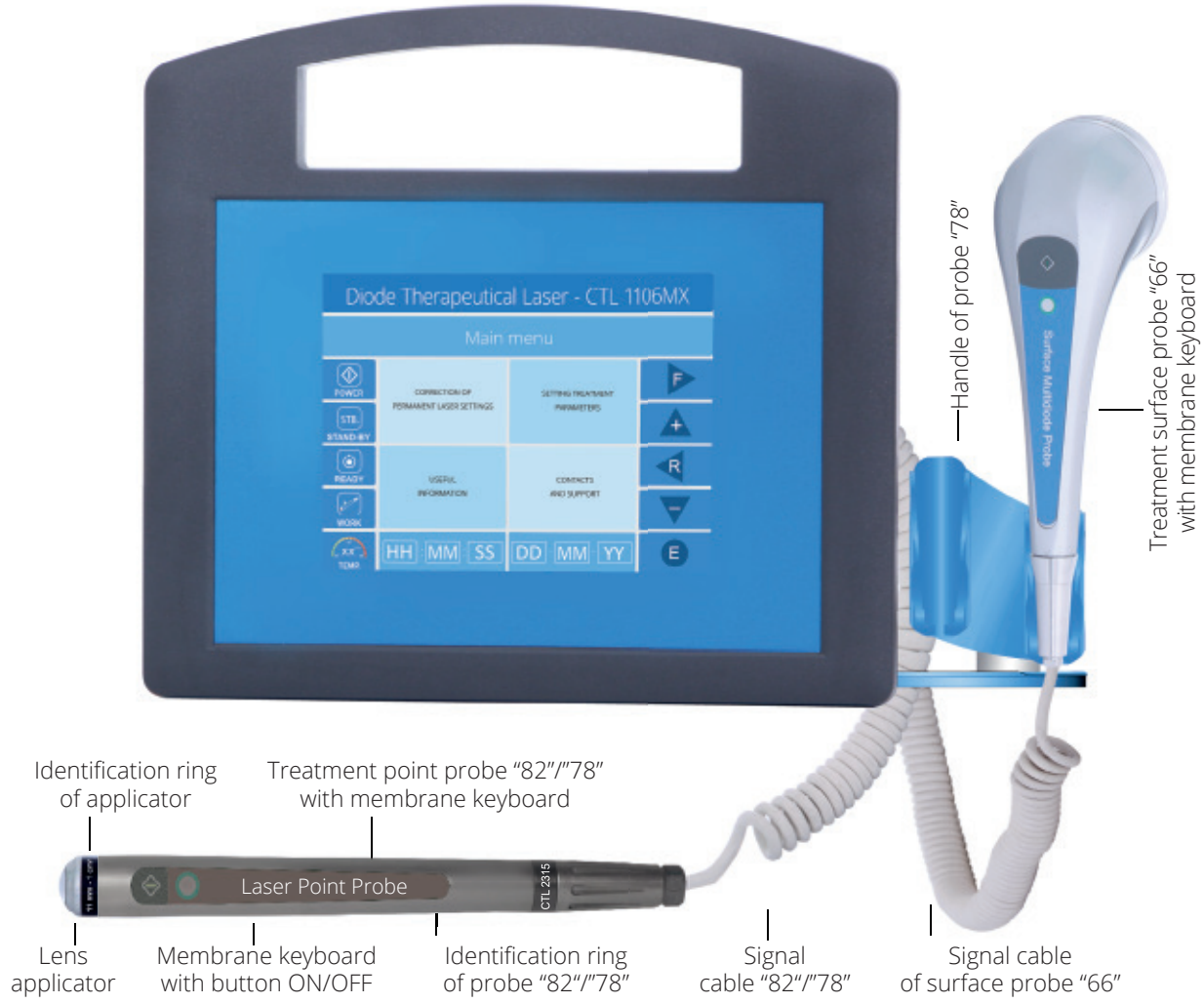


Example of acne vulgaris treatment

Basic technical-usage parameters	
Laser type	diode
Wavelength	660nm
Max. output power	1000mW (17x60mW), regulated from 50mW to 1000mW, with step 50mW
Operation mode	continuous (c.w.)
Beam delivery system	treatment surface probe d_a=50mm, S_a=30cm^2
Display / Keyboard	colour, LCD - TFT , touch-T
Power supply / Power consumption	universal input (85-265)VAC, (50-60)Hz <20W
Switching control	button ON/OFF on probe or button START on LCD screen
Safety class	class 3B laser safety, class I type B of electrical safety
Dimensions / Weight	270mmx195mmx90mm(W x D x H) / ~3,0kg
REFerence number	CTL1106MX-0660-.1000.27b.TT.DER

Diode Therapy Laser
CTL 1106MX - Doris Trio DER

820nm - 600mW and 660nm - 300mW(9x40mW) + 780nm - 300mW(8x40mW)



ISO 9001 · CE · ISO 13485

REF: CTL1106MX-0820-.600 and 0660-.300. + 0780-.300.27bl.TT.DER · VER: B2.2-16.PS-EN.27g.DER

Basic functional advantages

- 3 wavelength in one unit
- Painless treatments
- Quick treatment effects
- High efficiency and effectiveness
- Wide range of applications
- Stable parameters
- Portable and easy to operate
- Very light, safety
- High patient and doctor comfort
- Colour touch screen
- User identification by personal PIN code
- Switching on laser by foot switch or button ON in display
- Easy to use, intuitive interface
- The highest quality and reliability
- Attractive design, modern styling
- Durable and reliable - 2 years warranty !
- Fair price for properties !

CTL 1106MX - Doris Trio Laser

Examples of aesthetic medicine and dermatology applications

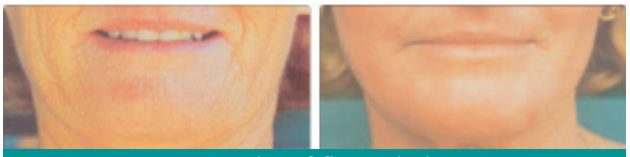
Wound healing acceleration
- Post-operation wounds
- Post-amputation wounds
- Post-injury wounds
- Complicated, infected wounds
- Wounds in metabolic diseases
- Wounds after skin grafts
- Decubital wounds, Non-fibrous scars
- Wounds after amputation, Ulcerations

Wounds induced by physical or chemical factor
- Thremal burns and burn
- Radiation burns
- Frostbites
- Decubital wounds
- Chemical burns (for example mustard gas-induced burns)

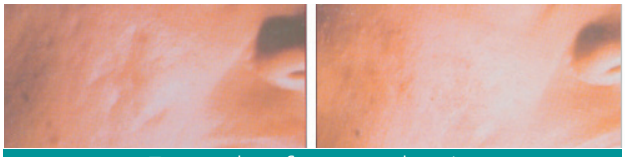
Venous dermatoses
- Crural and venous ulcer
- Venous insufficiency ulceration
- Buerger's disease
- Diabetic foot syndrome

Dermatitis of various etiology
- Acne vulgaris
- Acne rosacea
- Alopecia
- Atopic dermatitis
- Herapetic dermatitis
- Bacterail infections of skin and subcutaneous tissue
- Seborrheic dermatitis
- Seborrheic alopecia
- Furuncles
- Scleroderma

Inflammations of skin, skin appendages
- Atopic and contact dermatitis
- Seborrheic dermatitis
- Urticaria
- Furuncles
- Herpetiform dermatitis and herpes labialis
- Actinic cheilitis
- Dishydrotic eczema, Linear atrophy



Example of flaccid skin



Example of acne vulgaris

Basic technical parameters	Therapy Laser - 820	Therapy Laser - 660	Therapy Laser - 780
Laser type	diode	diode	diode
Wavelength	820nm	660nm	780nm
Max. output power	600mW	300mW (9x40mW)	300mW (8x40mW)
Operation mode	continuous (c.w.)	continuous (c.w.)	continuous (c.w.)
Continuous mode (c.w.)			
Max. output power - $P_{c.w}$	600mW regulated from 50 mW to 600mW with step 50mW	300mW regulated from 50mW to 300mW with step 50mW	300mW regulated from 50mW to 300mW with step 50mW
Display / Keyboard	colour TFT/ Touch		
Power supply	universal input (85-265)VAC, (50-60)Hz		
Power consumption	<20W		
Delivery beam system	treatment point probe - 82 with lens applicator d_a=11mm, S_a=1cm^2 or surface probe 66/78 d_a=50mm S_a=30cm^2		
Switching beam system	ON/OFF switch on probe keyboard or button START on LCD screen or foot switch		
Safety classes	class 3B laser safety, class I type B of electrical safety		
Dimensions/ Weight	270mmx195mmx90mm(W x D x H) / ~3,0kg /		
REFerence number	CTL 1106MX-0820-.600 and 0660-.300. + 0780-.300.27bl.TT.DER		

CO_2 Surgical - Fractional Laser

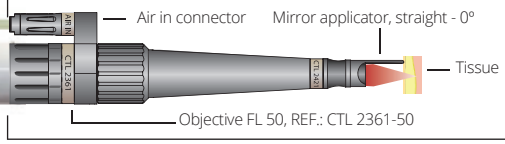
CTL 1401 - Azuryt Frax DER

10600nm - 30W + 635nm - 5mW

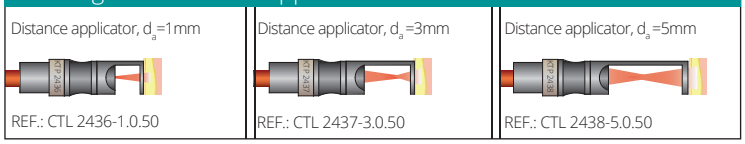
New!

Seven-mirrors articulated arm of laser beam - REF.:CTL 2454

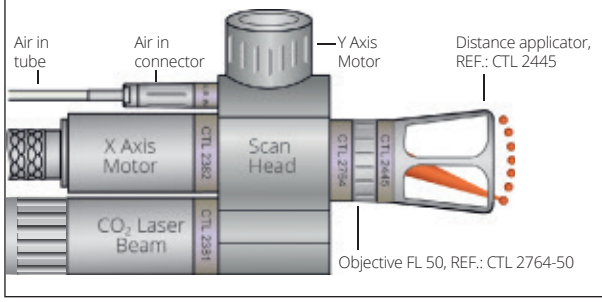
Microsurgical probe with objective FL 50 - REF.: CTL 2353-50



Exchangeable distance applicators



Fractional probe with scan head - REF.: CTL 2381



ISO 9001 · CE · ISO 13485

REF.: CTL 1401-1060-30.0 + 0635-.005.23b.TT.DER · VER.: E1.3-16.EN.23b.DER

Basic functional advantages

- Non-contact, bloodless surgeries with clear view of operative field
- Precise control of surgery
- Minimal post operative oedema
- Quick wound healing
- Maximum patient and doctor comfort
- Easy replacement of applicators
- Wide range of treatment accessories
- Efficient and light
- The highest quality and reliability
- Colour touch screen
- User identification by personal PIN code
- Easy-to-use, intuitive interface
- Interface switching on by identification PIN code card
- Radiation generation activated by foot switch or touch screen
- External, integrated power meter
- Modern design
- 2 years warranty !

CTL 1401 - Azuryt Frax Laser

Examples of aesthetic medicine and dermatology surgery applications

Epidermal lesions

- leucoplakia
- actinic cheilitis
- bowenoid papulosis
- epidermal naevi
- melanomas
- squamous cell carcinoma
- others

Viral infections

- common warts
- periungual warts
- verruca plana
- juvenilis
- condyloma acuminata
- molluscum contagiosum
- others

Dermal lesions

- sebaceous adenomas, syringomas
- sebaceous cystoma, trichoepithelioma
- cylindromas
- Cowden's disease
- neurofibromas, xanthelasma

Aesthetic medicine

- wrinkle reduction
- photorejuvenation of skin through dermabrasion, resurfacing
- granulomas, adenomas
- fibromas
- warts, keloids
- biopsies, phlegmonous
- keloid acne
- others

Basic technical-usage parameters	Surgical Laser CO_2 - 10600	Aiming Laser - 635
Laser type	CO_2 gas laser	diode
Wavelength	10600nm	635nm
Max. output power	30W	5mW
Operation mode	continuous (c.w.) or pulsed mode (p.m.) or super pulsed mode (s.p.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	30W, regulated from 0,5W to 30W with step 1W	5mW, regulated with 1mW step
Pulsed mode (p.m.)		
Max. pulse power - P_p	40W, regulated from 0,5W to 40W c 1W	
Min. pulse time - T_w	1ms, regulated to 2s with step 1ms	
Max. pulse frequency - f	100Hz, regulated from 5Hz to 100Hz with step 1Hz	
Super pulsed mode (s.p.)		
Max. pulse power - $P_{s.p.}$	90W, regulated from 10W to 90W with step 5W	
Min. pulse time - T_w	20µs, regulated from 20µs	
Max. pulse frequency - f	5000Hz, regulated from 100Hz to 5000Hz with step 100Hz	
Average power - P_{AV}	30W	
Beam delivery system	7-mirrors articulated arm	
Display / Keyboard	colour, LCD - TFT, touch-T	
Power supply / Power consumption	(90 - 260) VAC +10%, (50-60)Hz / <600W	
Switching control	by footswitch or button START on LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	230mm x 300mm x 925mm (W x D x H) / ~25kg	
REFerence number	CTL 1401-1060-30.0+0635-.005.23x.TT.DER (x=b=beige; r=red;bl=blue)	

CO_2 Surgical - Fractional Laser

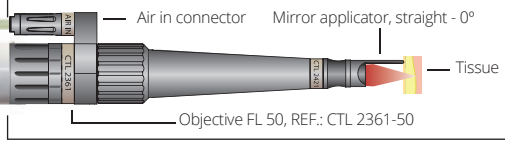
CTL 1401 - Azuryt Frax DER

10600nm - 30W + 635nm - 5mW

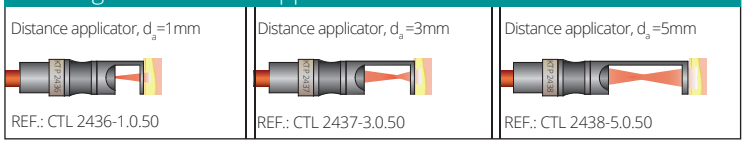
New!

Seven-mirrors articulated arm of laser beam - REF.:CTL 2454

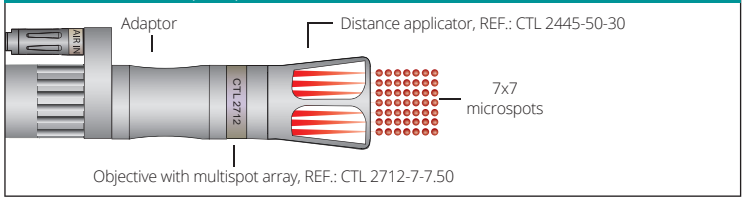
Microsurgical probe with objective FL 50 - REF.: CTL 2353-50



Exchangeable distance applicators



Fractional multispot probe - REF.: CTL 2362



ISO 9001 · CE · ISO 13485

REF.: CTL 1401-1060-30.0 + 0635-.005.23b.TT.DER · VER.: E1.3-16.EN.23b.DER

Basic functional advantages

- Non-contact, bloodless surgeries with clear view of operative field
- Precise control of surgery
- Minimal post operative oedema
- Quick wound healing
- Maximum patient and doctor comfort
- Easy replacement of applicators
- Wide range of treatment accessories
- Efficient and light
- The highest quality and reliability
- Colour touch screen
- User identification by personal PIN code
- Easy-to-use, intuitive interface
- Interface switching on by identification PIN code card
- Radiation generation activated by foot switch or touch screen
- External, integrated power meter
- Modern design
- 2 years warranty !

CTL 1401 - Azuryt Frax Laser

Examples of aesthetic medicine and dermatology surgery applications

Epidermal lesions

- leucoplakia
- actinic cheilitis
- bowenoid papulosis
- epidermal naevi
- melanomas
- squamous cell carcinoma
- others

Viral infections

- common warts
- periungual warts
- verruca plana
- juvenilis
- condyloma acuminata
- molluscum contagiosum
- others

Dermal lesions

- sebaceous adenomas, syringomas
- sebaceous cystoma, trichoepithelioma
- cylindromas
- Cowden's disease
- neurofibromas, xanthelasma

Aesthetic medicine

- wrinkle reduction
- photorejuvenation of skin through dermabrasion, resurfacing
- granulomas, adenomas
- fibromas
- warts, keloids
- biopsies, phlegmonous
- keloid acne
- others

Basic technical-usage parameters	Surgical Laser CO_2 - 10600	Aiming Laser - 635
Laser type	CO_2 gas laser	diode
Wavelength	10600nm	635nm
Max. output power	30W	5mW
Operation mode	continuous (c.w.) or pulsed mode (p.m.) or super pulsed mode (s.p.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	30W, regulated from 0,5W to 30W with step 1W	5mW, regulated with 1mW step
Pulsed mode (p.m.)		
Max. pulse power - P_p	40W, regulated from 0,5W to 40W c 1W	
Min. pulse time - T_w	1ms, regulated to 2s with step 1ms	
Max. pulse frequency - f	100Hz, regulated from 5Hz to 100Hz with step 1Hz	
Super pulsed mode (s.p.)		
Max. pulse power - $P_{s.p.}$	90W, regulated from 10W to 90W with step 5W	
Min. pulse time - T_w	20µs, regulated from 20µs	
Max. pulse frequency - f	5000Hz, regulated from 100Hz to 5000Hz with step 100Hz	
Average power - P_{AV}	30W	
Beam delivery system	7-mirrors articulated arm	
Display / Keyboard	colour, LCD - TFT, touch-T	
Power supply / Power consumption	(90 - 260) VAC +10%, (50-60)Hz / <600W	
Switching control	by footswitch or button START on LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	230mm x 300mm x 925mm (W x D x H) / ~25kg	
REFerence number	CTL 1401-1060-30.0+0635-.005.23x.TT.DER (x=b=beige; r=red;bl=blue)	

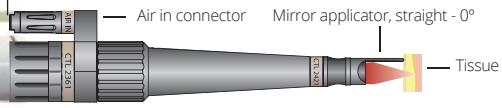
Erbium:YAG Surgical Laser

CTL 1601 - Azuryt Plus Frax DER

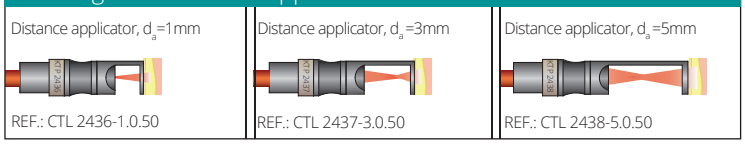
2940nm - 15W + 635nm - 5mW

Seven-mirrors articulated arm of laser beam - REF.:CTL 2454

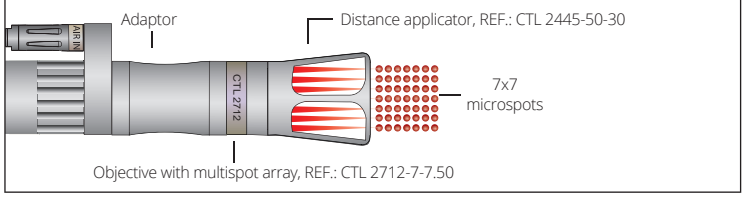
Microsurgical probe with objective FL 50 - REF.: CTL 2353-50



Exchangeable distance applicators



Fractional multispot probe - REF.: CTL 2362



ISO 9001 · CE · ISO 13485

REF.: CTL1601__-2940-15.00 + 0635-.005.23b.TT.DER · VER: F2.2-16.PS-EN.23b.DER

Basic functional advantages

- Non-contact, bloodless surgeries with clear view of operative field
- Precise control of surgery
- Minimal post operative oedema
- Quick wound healing
- Maximum patient and doctor comfort
- Easy replacement of applicators
- Wide range of treatment accessories
- Efficient and light
- The highest quality and reliability
- Colour touch screen
- User identification by personal PIN code
- Easy-to-use, intuitive interface
- Interface switching on by identification PIN code card
- Radiation generation activated by foot switch or touch screen
- External, integrated power meter
- Modern design
- 2 years warranty !

CTL 1601 - Azurut Plus Frax Laser

Examples of aesthetic medicine and dermatology surgery applications

Epidermal and dermal lesions

- seborrheic warts
- viral warts
- sebaceous adenomas
- syringomas
- angiofibromas
- epidermal and adnexal
- carcinomas

Resurfacing treatments

- rhinophyma
- scars
- wrinkles
- hyperpigmentations
- keloids
- xanthelasma

Superficial and deeper located disorders

- epidermal naevi
- lentigines
- ephelides
- melasma
- café-au-lait macules

Basic technical-usage parameters	Er: YAG Laser - 2940	Aiming Laser - 635
Laser type	Er:YAG cristal	diode
Wavelength	2940nm	635nm
Max. output power	15kW in pulse or 15W average power - P_{AV}	5mW
Operation mode	pulsed mode (p.m.)	continuous (c.w.)
Continuous mode (c.w.)		
Max. output power - $P_{c.w.}$	–	150mW, regulated from 15mW to 150mW
Pulsed mode (p.m.)		
Max. pulse power - P_p	15kW, regulated from 1kW to 5kW with step 1kW	
Min. pulse time - T_w	250µs	–
Max. pulse frequency - f	10Hz, regulated from 1Hz to 10Hz with step 1Hz	
Average power - P_{AV}	15W	
Beam delivery system	7-mirrors articulated arm or flexible fiber optic cable	
Display / Keyboard	colour, LCD - TFT , touch-T	
Power supply	230VAC – 50Hz or 110VAC – 60Hz	
Power consumption	<1500W	
Switching control	by footswitch or button START in LCD screen	
Safety class	class 4 laser safety, class I type B electrical safety	
Dimensions / Weight	230mm x 300mm x 925mm (W x D x H) / ~25kg	
REFerence number	CTL 1601-2940-15.0+0635-.005.23x.TT.DER (x=b=beige; g=green)	

Phototherapy Lamp MultiLed

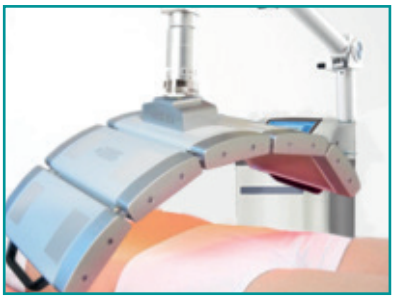
CTL 1106MX - Doris MultiLed Maxi DER

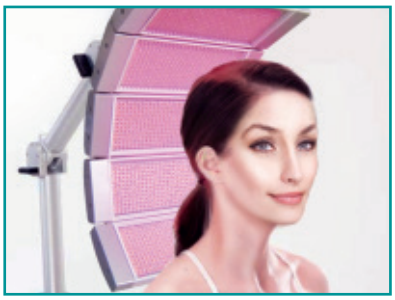
or

420nm - 100mW/cm^2 or 635nm - 80mW/cm^2

420nm - 100mW/cm^2 + 635nm - 80mW/cm^2

Lamp Led phototherapy is an innovative proposal of Led panel which generates blue wavelengths of light - 420nm or red - 635nm or blue and red at the same time. The lamp is characterized by high efficiency, simple controls and a wide range of programs in cosmetic treatments. The device is very comfortable to use - panel with Led can raise the electric articulated boom connector and change position relative to the patient's. It is indispensable for the treatment of acne, recovering the injured skin, reconstruct the dermis collagen structure, post operative wound healing, regeneration after invasive procedures and micro-dermabrasion. Radiation lamps has anti-wrinkle effect, regenerative, inhibits the development of inflammatory skin conditions.





ISO 9001 · CE · ISO 13485

REF.: CTL 1106MX-0420-.100+0635-.080.21b.TT.DER VER: N1-16.PS-EN.21b.DER

Basic functional advantages

- Therapy without medication
- Repair inflammatory acne skin
- Improve skin elasticity
- Change the cellular structure
- Relieve skin sun burn
- High efficiency and effectiveness
- High user comfort
- Modern styling, attractive design

CTL1106MX - Doris MultiLed Maxi

Examples of aesthetic medicine and dermatology applications

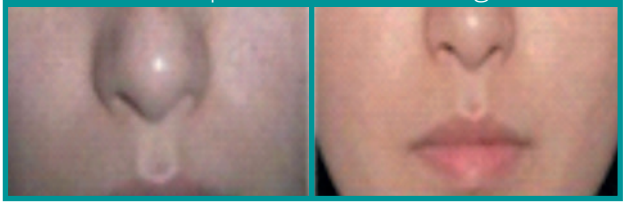
Blue Light

Blue light matches the light absorption peak of porphyrin in the metabolite of propionibacterium in acne. After the stimulation of porphyrin many singlet active oxygen are produced, forming a high oxidation environment to kill bacteria and remove acne.

- Acne, Inflammation
- Skin contaminated
- Antibacterial properties
- Inhibits the development of inflammatory skin and the duration of treatment is shorter
- Destroys bacteria without affecting the skin tissue

Example of acne treatment

Examples of skin whitening



Red Light

Red light improve cell viability, reduce pore size, reduce wrinkles and rejuvenation and remove spots especially for freckle and chloasma. Using photose-nsitizer can effectively treat cystic acne, etc.

- Increases efficiency and metabolism of cell
- It stimulates blood circulation
- It increases elasticity of the skin and improves its colour
- It has anti-wrinkle effect
- Delays the effects of aging
- The analgesic effect
- It provides deeper stimulation and thickening of the skin
- It works effectively on muscle pain
- It accelerates healing
- Supports the treatment of inflammatory and non-healing skin wound

Example of anti wrinkle effect

Basic technical-usage parameters	
Laser type	Led diodes
Wavelength	420nm or 635nm or 420nm + 635nm
Power density	100mW/cm for 420nm 280mW/cm for 635nm
Operation mode	pulsed mode (p.m.)
Beam delivery system	direct lighting from lamp to patient
Display / Keyboard	colour, LCD - TFT , touch-T
Power supply	230VAC, 50Hz
Switching control	by footswitch or button START in LCD screen
Safety class	class 3B laser safety, class I type B electrical safety
Dimensions / Weight	210mm x 250mm x 925mm/ ~20kg
REFerence number	CTL 1106MX-0420-.100+0635-.080.21b.TT.DER

Important awards and distinctions, certificate of patents and diplomas

VIP Health Care 2016

„Dźwignia 2015" Award

„Lider Przedsiębiorczości 2015" Award

Diploma „Lider Przedsiębiorczości 2015"

„Złoty Laur innowacyjności 2013 roku" Award

„Innowacyjność, Nowoczesne Technologie 2013" Award

„Perły Medycyny 2013" Award

„Perły Medycyny 2013" Award

Quality 2011

CTL - Centre of Laser Technology - LASERINSTRUMENTS Ltd.

Address: 49 Wiosny Ludów Str.
02-495 Warsaw

phone: + 48 579-597-562
+ 48 699-708-618

e-mail: med@lasery.eu
www.ctl.com.pl