

# LEONARDO®

**LEONARDO® DUAL 200**

INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR INDIRECT RADIATION

**CLASS 4 LASER PRODUCT**

Diode-Laser 980 +/- 30 nm CW 160 W (Max.)  
Diode-Laser 1470 +/- 30 nm CW 40 W (Max.)  
IEC 60825-1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION  
AVOID EYE EXPOSURE TO DIRECT RADIATION

**CLASS 3R LASER PRODUCT**

Diode-Laser 635 +/- 10 nm CW 4 mW (Max.) (Aiming)  
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.) (Aiming)  
IEC 60825-1:2007 IEC 60601-2-22:2007

**LEONARDO® DUAL 45**

INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR INDIRECT RADIATION

**CLASS 4 LASER PRODUCT**

Diode-Laser 980 +/- 30 nm CW 30 W (Max.)  
Diode-Laser 1470 +/- 30 nm CW 15 W (Max.)  
EN 60825-1:2008 EN 60601-2-22:2007

VISIBLE LASER RADIATION  
AVOID EYE EXPOSURE TO DIRECT RADIATION

**CLASS 3R LASER PRODUCT**

Diode-Laser 635 +/- 10 nm CW 4 mW (Max.) (Aiming)  
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.) (Aiming)  
EN 60825-1:2008 EN 60601-2-22:2007

**LEONARDO Mini Dual**

INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR INDIRECT RADIATION

**CLASS 4 LASER PRODUCT**

Diode-Laser 980 +/- 30 nm CW 30 W (Max.)  
Diode-Laser 1470 +/- 30 nm CW 4 W (Max.)  
IEC 60825-1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION  
AVOID EYE EXPOSURE TO DIRECT RADIATION

**CLASS 3R LASER PRODUCT**

Diode-Laser 635 +/- 10 nm CW 4 mW (Max.) (Aiming)  
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.) (Aiming)  
IEC 60825-1:2007 IEC 60601-2-22:2007

**LEONARDO Mini 1470 nm**

INVISIBLE LASER RADIATION  
AVOID EYE OR SKIN EXPOSURE TO  
DIRECT OR INDIRECT RADIATION

**CLASS 4 LASER PRODUCT**

Diode-Laser 1470 +/- 30 nm CW 8 W (Max.)  
IEC 60825-1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION  
AVOID EYE EXPOSURE TO DIRECT RADIATION

**CLASS 3R LASER PRODUCT**

Diode-Laser 635 +/- 10 nm CW 4 mW (Max.) (Aiming)  
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.) (Aiming)  
IEC 60825-1:2007 IEC 60601-2-22:2007

**CE 1984**

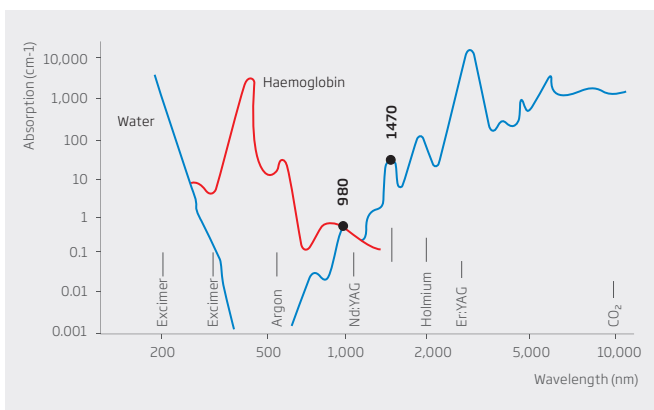
**CeramOptec GmbH**  
Siemensstr. 44, D-53121 Bonn

Model	LEONARDO® DUAL 200	LEONARDO® DUAL 45
REF	SL980+1470nm200W	SL980+1470nm45W
Wavelength	980 nm and 1470 nm	980 nm and 1470 nm
Max. power	200 Watt (1470 nm/40 Watt + 980 nm/160 Watt) individually adjustable	45 Watt (1470 nm/15 Watt + 980 nm/30 Watt), individually adjustable
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity
Treatment mode	CW, pulse mode, ELVeS® signal, ELVeS® segment, derma mode	CW, pulse mode, ELVeS® signal, ELVeS® segment, derma mode
Pulse duration /-break	0.01 – CW / 0.01 – 60 sec	0.01 – CW / 0.01 – 60 sec
Power supply	110 – 240 VAC, 50 / 60 Hz, 850 VA	110 – 240 VAC, 50 / 60 Hz, 450 VA
Dimensions (H×W×D)	approx. 20 cm × 37 cm × 26 cm	approx. 28 cm × 37 cm × 9 cm
Weight	approx. 15 kg	approx. 8.5 kg



Model	LEONARDO® Mini Dual	LEONARDO® Mini 1470 nm
REF	SL980+1470nm14W	SL1470nm8W
Power / Wavelength	10 W (980 nm) / 4 W (1470 nm)	8 W (1470 nm)
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	635 nm, max. 4 mW	635 nm, max. 4 mW
Treatment mode	CW, pulse mode (optional)	CW, pulse mode (optional), ELVeS® signal
Pulse duration /-break	0.01 – 60 sec / 0.01 – 60 sec	0.01 – 60 sec / 0.01 – 60 sec
Power supply	110 – 240 VAC, 50 – 60 Hz (7.2 VDC @ 36 W)	110 – 240 VAC, 50 – 60 Hz (7.2 VDC @ 36 W)
Batteries	Li-ion Batteries	Li-ion Batteries
Dimensions (H × W × D)	6 cm × 9 cm × 21.5 cm	6 cm × 9 cm × 21.5 cm
Weight	900 g	900 g

All laser sets comprise 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case. The standard device in urology primarily used for BPH treatment and all other applications is the LEONARDO® DUAL 200 Watt. The LEONARDO® DUAL 45 is the suitable laser system for partial nephrectomy, bladder tumors, strictures, condylomas etc. The LEONARDO® Mini is the suitable laser system for bladder tumors, strictures, condylomas, etc.



## LEONARDO® DUAL 200 Watt - Unique combination of two simultaneous wavelengths

LEONARDO® DUAL 200 Watt combines the wavelengths of 980 nm and 1470 nm with high absorption in H<sub>2</sub>O and hemoglobin for multiple applications not only in urology. Wavelength of 980 nm provides high absorption in hemoglobin and is therefore well suited for applications in urology. Due to the absorption properties of the laser beam, there is no risk during the BPH treatment that the laser beam creates holes in the bladder wall (good absorption in water).

# Handpieces and instruments

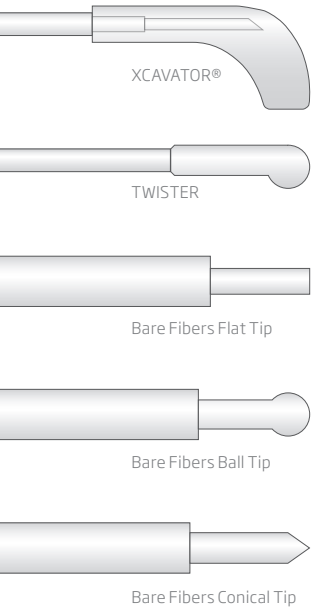
REF	Product
500400355	Storz Laser Cystoscope Set (blue) OD 23 Fr ID 7.5 Fr, no optics, incl. external and internal sheath and obturator
400400250	XCAVATOR® Resectoscope 360° Rotating and Continues Irrigation Set OD 26 Fr, no optics
AB2731	ASAP 30° Optics Hopkins II, compatible Storz Laser Cystoscope blue and XCAVATOR® Resectoscope
400100100	Universal Dual Luer Handpiece, for $\varnothing$ 600-1000 $\mu$ m fibers
400400110	Laparoscopic sheath 30 cm, ID $\varnothing$ 1.4 mm, OD $\varnothing$ 5 mm
400400115	Laparoscopic sheath 40 cm, ID $\varnothing$ 1.4 mm, OD $\varnothing$ 5 mm



## Fibers for LEONARDO®

REF LEONARDO®	Product LEONARDO®	Length [m]	Core $\varnothing$ [Fr]	AD $\varnothing$ [ $\mu$ m]/[Fr]
503200250	XCAVATOR® Fiber	3	1.8	-
503200220	TWISTER Large Fiber	3	1.8	3100/9.3
503200235	TWISTER XL Fiber	3	1.8	3300/9.3
503200744	Bare Fiber 400 $\mu$ m, Flat Tip, IC	3	400/1.2	750/2.3
503200740	Bare Fiber 600 $\mu$ m, Flat Tip, IC	2.6	1.7	860/2.6
503300400	Bare Fiber 1000 $\mu$ m, Flat Tip, IC	2.6	2.9	1400/4.2
503200750	Bare Fiber 600 $\mu$ m, Ball Tip, Adj. Luer, IC (1 $\times$ 6 h)	2.5	1.7	860/2.6
503300410	Bare Fiber 1000 $\mu$ m, Ball Tip, IC	2.6	2.9	1400/4.2
503200741	Bare Fiber 600 $\mu$ m, Conical Tip, IC	2.6	1.7	860/2.6
503300405	Bare Fiber 1000 $\mu$ m, Conical Tip, IC	2.6	2.9	1400/4

All fibers are free of latex and DEHP. Our fibers are single use products (unless otherwise indicated), delivered sterile for immediate use.



## Accessories

REF	Product
LA1371	Laser safety goggles 950 – 110 L4 + 1470 L2 (FULL) type: earpiece
LA5199	Laser safety goggles DIR 804 – 1755 L3 (FULL), type: basket, clear
LA5165	Sticker Laser warning 20 $\times$ 20 cm
400100115	Medi Strip 0.7/1.2 BF 600 $\mu$ m, autoclavable – Fiber stripper for Bare Fiber 600 $\mu$ m
AB1316	Ceramic scissors
AB1323	Stripping tool for fibers 0.3 – 1 mm
AB1908	Tuohy Borst adapter
AB2594	Biopsy needle (for the handpiece)
400400200	Camera Filter HPD 980 nm and 1470 nm, small, OD 24 mm*

\* With high wattages (100 watt) for a good view on the screen

## Fibers for holmium laser systems

REF	Product	Length [m]	Core $\varnothing$ [ $\mu$ m]/[Fr]	AD $\varnothing$ [ $\mu$ m]/[Fr]	Connector	NA
<b>Single-use Fiber</b>						
500200326	Megabeam HBFSS 230 – 253, OD 420 $\mu$ m	3.1	272	420	SMA905	0.28
500200327	Megabeam HBFSS 365 – 403, OD 550 $\mu$ m	3.1	365	550	SMA905	0.22/0.37
500200328	Megabeam HBFSS 550 – 603, OD 750 $\mu$ m	3.1	550	750	SMA905	0.22/0.37
<b>Multiple use</b>						
500200789	Megabeam RHBFSF 230/253 – 3	3.0	272	420	SMA905	0.22/0.36
500200790	Megabeam RHBFSF 365/400 – 3	3.0	365	550	SMA905	0.22/0.36
500200791	Megabeam RHBFSF 550/605 – 3	3.0	550	750	SMA905	0.22/0.36
500200792	Megabeam RHBFSF 945/1000 – 3	3.0	945	1400	SMA905	0.22/0.36
<b>Side Fiber</b>						
500300451	Megabeam SF – 2100 – H	3.2	550	950	SMA905	0.22

All fibers are free from latex and DEHP. Our fibers are designed for single use only (unless otherwise indicated), delivered sterile for immediate use. Fibers are compatible with, but not limited to: StoneLight®, COHERENT®, Deka, LUMENIS®, Dornier MedTech and NewStarLasers systems.

