

# **VISULAS YAG III. The Fastest YAG Laser. Laser Precision Par Excellence.**



# The New Dimension of Disruption.

The goal of VISULAS YAG III is to provide maximum ease of use with the lowest possible amount of patient stress.

The VISULAS YAG III combines the entire know-how that Carl Zeiss Meditec has gathered while developing disruption lasers. The result is the perfect unison of safety and efficient therapy. The highlights of the device's design are:

- High pulse frequency of 2.5 Hz enables fast procedures.
- 4-point aiming-beam system for perfect targeting.
- Focus shift for precise, automatic and effortless focusing.
- Super-Gaussian mode, a highly-precise beam profile.
- Finely-tuned energy dosage to optimize performance and increase safety.

The VISULAS YAG III is the perfect instrument for ophthalmologists' offices, even with high patient throughput. The portable device is always ready whenever it's needed - even when a change of venue is required. This mobility provides the potential for a variety of uses and quick return on investment.

## Safe and easy

The centerpiece of the VISULAS YAG III is the control panel which can be placed practically anywhere and safely controls the disruption laser's energy. Its compact size guarantees ease of use and takes individual working techniques into account. Ergonomic solutions guarantee the safety of the therapy:

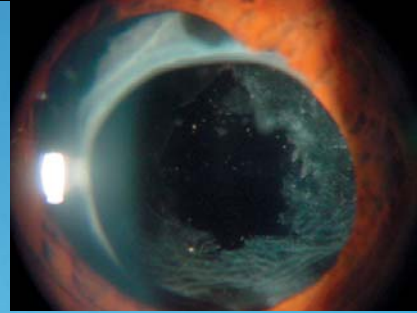
- Illuminated, reflection-free touchscreen with icons
- The large, easy-to-grasp wheel to adjust parameter settings
- The integrated recessed grip

## Laser slit lamp included

A disruption laser and laser slit lamp combine to make the perfect unit. The slit lamp, also a precision product from Carl Zeiss Meditec, is specially designed for laser therapy, but can also be used as a diagnostic lamp with a strong red reflex. Its impressive features include a lowered illumination prism, short corneal microscope, possibility of retrofitting a co-observation tube or DigiCam adapter for digital recording technology, sleek design and ergonomic controls.

The VISULAS YAG III was developed for extreme working conditions, particularly temperature and humidity extremes, making it ideal for tropical climates.







# The Precision-controlled Laser Beam.

## Target and energy perfectly coordinated

The unique 4-point aiming beam system guarantees perfect targeting at all times. The 4-point aiming beam detects and reliably displays astigmatic distortions. As a result, physicians have the opportunity to adjust the selected energy level before firing the laser. The advantage speaks for itself: unnecessary stress to the patient is avoided; the lifespan of the laser-beam source is extended.

## Safely focus on the target

The focus shift easily and safely performs required corrections when focusing. Depending on the treatment, the aiming beam focus is placed exactly in front of, behind, or on the disruption laser focus. As a result, inaccurate manual defocusing is not required, eliminating the risk of unwanted tissue damage. If necessary, e.g. iridotomy, the option can be deactivated with focus shift "0". This not only simplifies the procedure but also delivers added safety to both the patient and doctor.



## 4-point aiming beam

*Defocused*

*Focused*

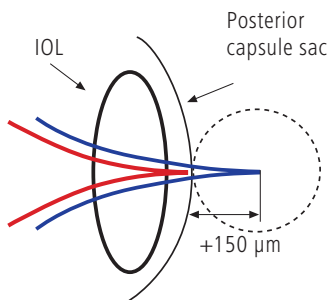


*Aiming beam pattern without distortions, normal case*

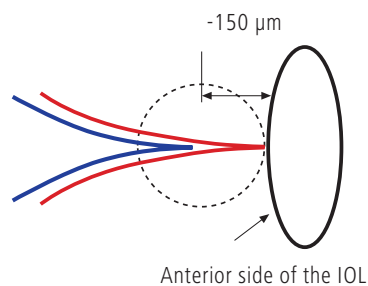


*Aiming beam pattern with astigmatic distortions*

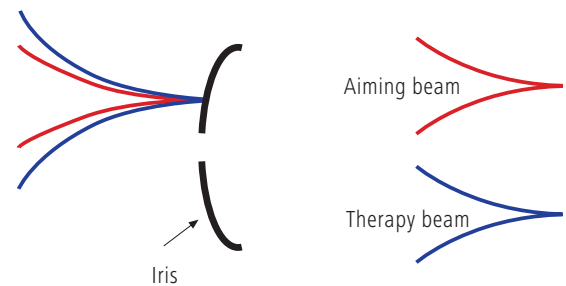
## Variable focus shift



*Posterior focus shift, e.g. posterior capsulotomy*



*Anterior focus shift, e.g. lens polishing*



*Focus shift "0", e.g. iridotomy*

# Perfectly Dosed Laser.

## Energy optimally minimized

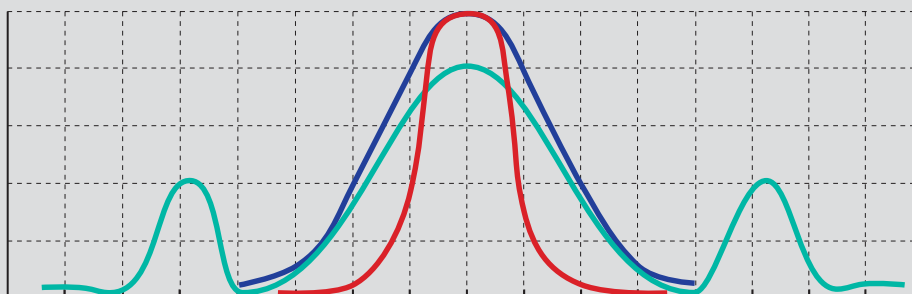
The highly-accurate beam profile, the Super-Gaussian mode, focuses as much energy as possible, and as little as needed on the target. As a result, the disruption, or optical breakdown, occurs at this point with as little as 2.5mJ in air. What does this mean? A minimum amount of laser energy is needed to guarantee gentle and highly-accurate treatment.

## Finely-tuned energy

A broad selection of 22 energy levels is available for various therapies. The energy increments of the laser-beam source, particularly fine in lower settings, guarantee a minimal dosage, which leads to optimal energy selection for each procedure, while providing the patient with gentle care.



## Mode structures



**—** Super-Gaussian laser VISULAS YAG III  
Optical breakdown approx. 2.5mJ

**—** Fundamental mode laser  
Optical breakdown approx. 4mJ

**—** Multimode laser  
Optical breakdown approx. 8mJ

# VISULAS YAG III Lasers Can Do More.

A wide selection of accessories is available for procedure-oriented expansion of the performance potential:

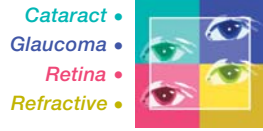
- Co-observation and documentation equipment:  
co-observation tube or DigiCam adapter for various digital camcorders and cameras.
- Contact lenses for all common applications:  
high-quality coatings
- Attractively designed laser protective eyewear:  
reliable protection as per DIN EN 207.
- Transport box for mobility:  
professionally packed for the next use.
- Vertically-adjustable instrument table:  
also suitable for patients in wheelchairs,  
or in combination with VISULAS 532s
- Combined use:  
in combination with the VISULAS 532s,  
the VISULAS YAG III considerably expands the spectrum  
of potential laser therapies.



# Technical Data.

Laser wavelength	1064 nm
Mode	Super-Gaussian
Optical breakdown	typically 2.5mJ in air
Pulse length	< 4ns (type 2 - 3ns)
Max. laser energy	single pulse typically 10mJ, double pulse typically 23mJ, triple pulse typically 35mJ
Energy levels	22 steps
Pulse repetition frequency	max. 2.5Hz
Focus diameter	10 $\mu$ m in air (1/e <sup>2</sup> )
Angle of exit aperture	16°
Aiming beam	laser diode approx. 670nm, power 5 $\mu$ W - 150 $\mu$ W, 4-point aiming beam system for focusing
Focus shift variable	+150 $\mu$ m; 0; -150 $\mu$ m
Electrical connection	100 - 240V, $\pm$ 10%, 50 - 60Hz, max. 1.4 - 0.7A, temporary max. 2.2A (< 1 sec.)
Illumination	12V, 30W halogen lamp, adjustable
Magnification	5, 8, 12, 20, 32x through Galilean changer with 10x eyepieces and tube f = 140mm
Tube	parallel tube f = 140mm with PD adjustment 55 - 78mm, optional convergence tube
Eyepiece	10x high-eyepoint eyepiece for eyeglass wearers with $\pm$ 8D compensation for ametropia, optional 12.5x
Slit adjustment	width: 0 - 14mm, continuous, length: in steps 1/3/5/9/14mm
Dimensions (H x W x D)	slit lamp with laser head: 623 x 400 x 350mm, control panel: 135 x 210 x 330mm
Weight	slit lamp with laser head: 11kg control panel: 4kg
Temperature	10 - 40°C
Humidity	0 - 90% (no condensation)





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Publication No.: 000000-1305-244

Specifications subject to change. Printed in Germany. w.a.l 04/04  
Printed on environment-friendly paper, bleached without the use of chlorine.



**Carl Zeiss Meditec AG**

Goeschwitzer Str. 51-52  
07745 Jena  
Germany

Phone: +49 (0) 36 41 / 22 0-3 33  
Fax: +49 (0) 36 41 / 22 0-2 82  
info@meditec.zeiss.com  
www.meditec.zeiss.com

**Carl Zeiss Meditec Inc.**

5160 Hacienda Drive  
Dublin, CA 94568  
USA

Toll Free: (800) 342-9821  
Phone: +1 (925) 557-4651  
Fax: +1 (925) 557-4217  
info@meditec.zeiss.com  
www.meditec.zeiss.com