

# Novus Varia

The Premier Multicolor  
Photocoagulation Laser System



Versatile | Dependable | Superior

 **LUMENIS** | Vision  
Enhancing Life. Advancing Technology.

# Passion for ophthalmic lasers that dates back more than 40 years!

At Lumenis, we truly understand multi-wavelength photocoagulation technology; that is after all only one of the privileges reserved for the foremost pioneer in this field. It is also precisely the reason why the decisive majority of general ophthalmologists and retina specialists around the globe have actively chosen to purchase Lumenis multicolor lasers - making Lumenis the global market leader and the company with the largest installed-base of multicolor ophthalmic laser products worldwide.



## More Colors; More Choices

Customized treatment for optimal clinical outcome

### Lumenis Multicolor Photocoagulators

Addressing the specific clinical needs of your patients

The Novus Varia multicolor photocoagulator enhances the physician's ability to treat patients by utilizing wavelengths with different light absorption characteristics - specifically targeting the three endogenous chromophores that are of primary relevance in retinal surgery: melanin, hemoglobin, and xanthophyll.

With the ability to choose from multiple colors of light that also differ in their penetration characteristics, the Novus Varia allows the retinal specialist to select a specific wavelength that will reach and be maximally absorbed by the target chromophore while minimally absorbed by competing chromophores.

**The result is a customized laser treatment with optimal clinical outcome and fewer side effects.**

## Green (532 nm)

Green laser light is a clinically-proven wavelength that is excellent at targeting the melanin-containing retinal pigment epithelium (RPE), through clear ocular media. It is well suited for a variety of retinal treatments in which melanin is the target chromophore, such as pan-retinal photocoagulation (PRP).

## Yellow (561 nm)

Yellow laser light offers the clinician maximal absorption in hemoglobin with zero or negligible absorption in macular xanthophyll.

In addition to easily penetrating through nuclear sclerotic cataracts, the yellow wavelength is desirable when it is necessary to penetrate through fluid, such as when treating a retinal detachment or tear. It also penetrates mild pigmentary disturbances and so is well suited for conditions where the target lies in a region of previous photocoagulation treatment.

One of the main advantages of yellow laser light stems from the fact that it approximates the peak absorption of hemoglobin, but it is not highly absorbed by melanin in the retinal pigment epithelium (RPE) or xanthophyll in the neurosensory retina. Therefore, it is recommended for focally treating extrafoveal microaneurysms or other vascular lesions in the macular region that may cause macular edema.

In addition, yellow laser produces significantly less light scatter, allowing for more efficient treatment and requiring lower energy levels to achieve desirable clinical outcome; this creates significantly less discomfort for the patient during and following the laser procedure.

## Red (659 nm)

Red laser light offers excellent penetration through hemoglobin, making it the wavelength of choice in situations where it is necessary to penetrate through preretinal, subretinal or intraretinal hemorrhage.

It is also the optimal wavelength for achieving deeper penetration into the choroid to treat choroidal melanomas or other deep pigmented lesions.

It is also the preferred wavelength for treating infant eyes with ROP because it penetrates through the tunica vasculosa lentis, the vascular network surrounding the lens. Absorption by those vessels is associated with higher risk for secondary cataract formation.

# SureSpot™ Optics

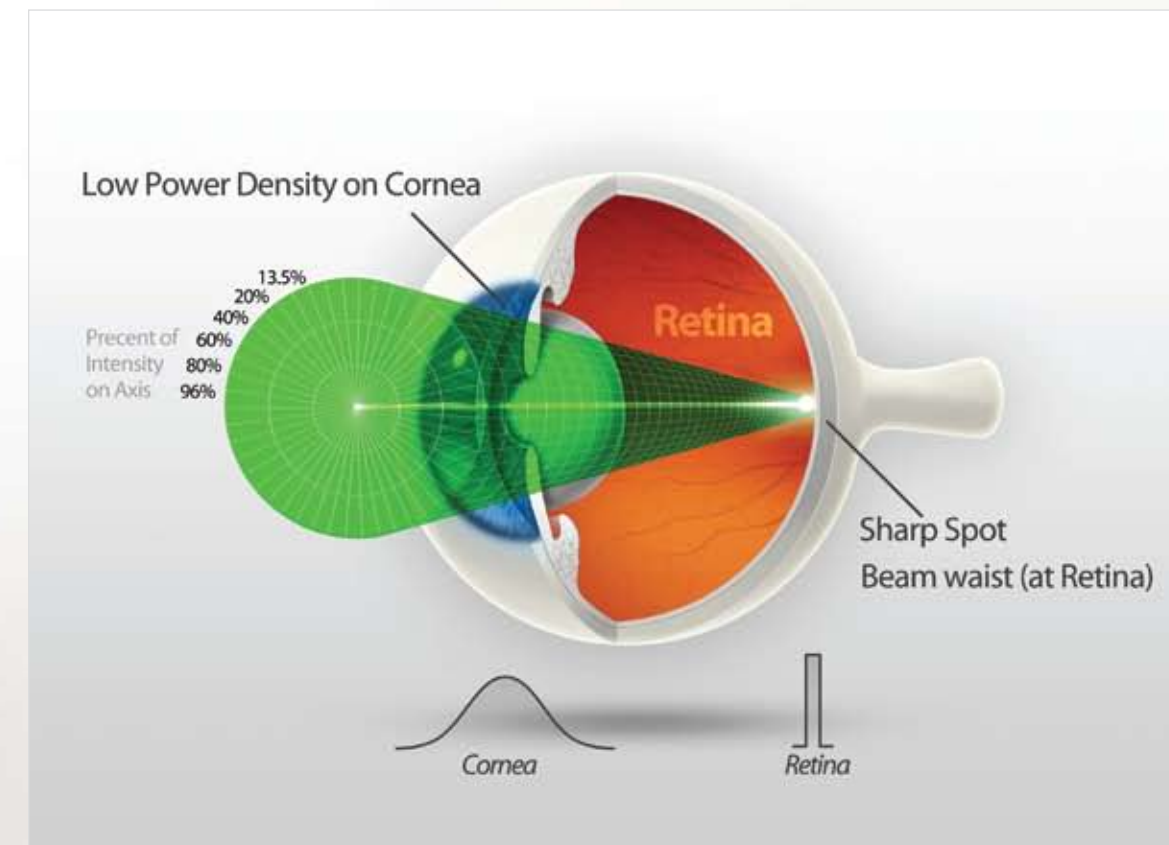
The unique and patented SureSpot optics technology from Lumenis ensures that the focal point of the laser beam is maintained on the retina while power density on the cornea and lens is minimized for increased safety.

SureSpot optics also creates a true 50-micron laser spot. That capability distinguishes the Lumenis technology from other lasers that may have a 100-micron minimum spot size and/or project a fuzzy laser spot on the retina.

In essence, SureSpot optics improves treatment efficacy and precision while reducing the potential for damage to anterior-segment tissues. The latter occurrence is especially a concern when using wide-angle lenses that enhance light uptake by the cornea and lens.

Sharply defined and evenly distributed power on the retina;  
Safe & low-power density at the cornea and the lens

	Defocus Optics	Lumenis Patented SureSpot™ Optics	Parfocal Optics
Titration	YES	YES ✓	NO
Low Power density on the cornea	YES	YES ✓	NO
Sharp spot on retina	NO	YES ✓	YES



*Sophisticated, yet simple!*



## Superior Optics you can trust

### Homogeneous laser spot at target tissue

Our advanced optics and laser delivery technology features uniform energy distribution across the entire laser spot area for more precise and safer treatment. The result is a homogenous laser spot with evenly distributed power across the full diameter of the spot, eliminating the potential risk for the formation of “hot spots”.

## Dependability you can count on

### CaseSaver™ mode

Dependability is of crucial importance in both the OR and Office settings.

The Novus Varia is the only multicolor laser currently available in the market with the patented and breakthrough technology featuring three independent diode-pumped solid-state laser cavities in a single resonator.

In the unlikely event that one of the laser wavelengths were to become inoperable, the other two wavelengths will remain operational - allowing you to keep on treating your patients until the unit is promptly serviced by a qualified Lumenis Engineer - part of the largest service network in the industry.

## Convenience & Flexibility

### Dual Fiber Port

Changing delivery devices is fast and easy. The Novus Varia automatically senses the delivery devices connected to it. Laser parameters are adjusted internally to compensate for the chosen delivery device to maintain selected power density on the target tissue.

## Intelligent

### Smart™ Fiber Technology

The Novus Varia features Smart fiber technology that allows the laser system to distinguish an LIO from an endoprobe or LaserLink and will automatically adjust power settings to increase safety parameters. The Lumenis Smart fiber technology also alerts the surgeon and staff if the physician eye safety filter, remote control, footswitch and delivery devices are properly attached to the laser console.

## User-Friendly

### Touch screen & remote keypad

A color touch screen and illuminated remote keypad put all operations literally at your fingertips. Easily adjust parameters or instantly switch between treatment wavelengths. Conveniently position the remote control on either side of the slit lamp, or in a sterile cover for the operating room.

The Lumenis \*PowerEase™ footswitch provides hands-free power adjustment of the laser by toggling left or right within the footswitch housing.

The Lumenis \*Smart™ footswitch contains an integrated proximity sensor which inserts and removes the physician eye safety filter at the moment you slide your foot in and out of the footswitch housing.

\* Optional accessory

## ClearView™ Filters

### Optimized view of treatment site

The Lumenis ClearView™ filters' photopic balanced coating eliminates color distortion of the treatment site while optimizing white light transmission or “brightness” of the physician's view.

## Versatile

### Compatibility with a wide variety of delivery devices

The Novus Varia is compatible with a wide variety of accessories and delivery devices - meeting your specific preferences in the outpatient clinic and the OR. The Lumenis family of LaserLinks will transform most commercially available slit lamps into advanced laser delivery devices with superior optics capabilities.

Choose a multicolor Laser Indirect Ophthalmoscope that suits your preferences. Both our Heine™ and Keeler™ models are rugged, lightweight and equipped with the most advanced laser delivery technology in the market.

Lumenis offers a comprehensive and wide selection of ophthalmic endophotocoagulation probes to meet every clinical need and indication.

Lumenis also developed an integrated laser slit lamp with the retina specialist in mind. The Lumenis 1000 is a fully integrated Slit Lamp and laser delivery system, complete with advanced parallel optics for enhanced depth perception and superior peripheral visualization.

## Lumenis Vision - Your Preferred Partner

Lumenis Vision is the world leader in laser technologies for ophthalmic applications. Our company offers the widest range of products, an unparalleled product support system, the largest global installed-base of ophthalmic laser products and the largest investment in research and development in our industry.

Since introducing the first laser photocoagulator to ophthalmology in 1970, Lumenis Vision has focused on providing ophthalmologists with innovative laser therapies to preserve and improve the sight of patients worldwide.

Lumenis Vision is renowned for technological breakthroughs and a long list of industry gold standards. Our company pioneered the first argon laser photocoagulator for ophthalmology; the first approved marketer of Nd:YAG photodisruptor lasers; developed and introduced the breakthrough technology of multicolor photocoagulation along with the world's first Laser Indirect Ophthalmoscope (LIO); developed and brought to market the revolutionary SLT technology for managing POAG, and more.

Today, Lumenis Vision offers you the confidence of doing business with a company that is truly committed to ophthalmology and to meeting your needs.

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# Novus Varia Specifications

Laser System	Diode-pumped solid-state
Wavelength	532nm Green, 561nm Yellow, 659nm Red
Pulse Duration	.01-3.0 seconds
Pulse Rate	.05-1.0 second and single pulse
Energy Settings	Green: 50 mW to 1500 mW, Yellow: 50 mW to 600 mW, Red: 50 mW to 600mW
Spot Size	50-1000 microns with LaserLink Z-1000
Aiming Beam	Contrasting color, adjustable intensity 635nm nominal, <1.0 mW
Cooling System	Air-cooled, enhanced with thermoelectric cooling
Power Requirements	100-230 VAC ± 10%, 50/60 Hz; <10 Amps, 1
Dimensions (Console)	102 cm x 46 cm x 64 cm; 40 in x 18 in x 25 in (H x W x D)
Weight	52.2 kg or 115 lbs
Delivery Systems	LaserLink Z-1000 Slit Lamp adapter (for Zeiss SL130, 30SL, 20SL and 125SL Slit Lamps) Converging Optics LaserLink for the Lumenis 990 Slit Lamp LIO (Keeler®, Heine® models) Comprehensive selection of standard, straight, curved, aspirating, illuminating and stepped endophotocoagulation probes in 20, 23 and 25 gauge sizes, among others Endo-ocular probes
Standard Accessories	Standard footswitch, remote control
Optional Accessories	Smart and PowerEase foot switches Physician eye safety filters Comprehensive selection of standard, straight, curved, aspirating, illuminating and stepped endophotocoagulation probes in 20, 23 and 25 gauge sizes, among others Leica® and Zeiss®: moving and fixed safety filter for surgical microscopes

## Lumenis® Certified Service | Certified Engineers & Parts > Reliable Performance > Superior Value > Satisfied Customers

Optimize your investment in Lumenis' world-leading innovation - choose the industry's largest Service team with the deepest medical laser, light- and RF-based system expertise. Our Customer Engineers are fully certified, trained and updated on Lumenis technology to ensure compliance with government safety and performance standards. As the original manufacturer, we are best equipped to provide service and certified parts to maximize the availability of your critical assets in active clinical settings, throughout your system's lifecycle. We provide thorough and complete system servicing on each maintenance visit, backed by unsurpassed technological expertise and support at the local, regional and company level. Our mission is to deliver a timely and effective response to your system maintenance needs - your satisfaction is our ultimate goal!

USA Toll-free 1-877-LUMENIS (1-877-586-3647)

For outside the USA, visit [www.lumenis.com](http://www.lumenis.com), click 'Service & Support', contact your local Lumenis representative

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