easyret®

577nm Fiber Technology Laser

Peripheral and Macular Photocoagulation

Quantel medical

easyret®

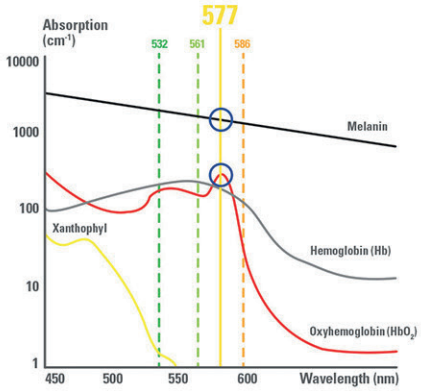
Easyret® is a fully integrated **577nm yellow photocoagulator** based on a **technological breakthrough: fiber laser technology.**
Available with Haag Streit or Zeiss type slit lamps, it offers a large choice of treatment settings well adapted to the treatment of macular and peripheral retinal pathologies.

Easyret®: Yellow, MultiSpot and MicroPulse®

Yellow Laser - 577nm Wavelength:

Presented as the most versatile wavelength in the scientific literature, the 577nm wavelength offers the following benefits:

- Excellent combined absorption by both melanin and oxyhemoglobin (peak absorption of oxyhemoglobin) [1,2]
- Very little absorption by macular xanthophyll pigments [1,2]
- Excellent penetration through cataracts and hazy media [1,2]

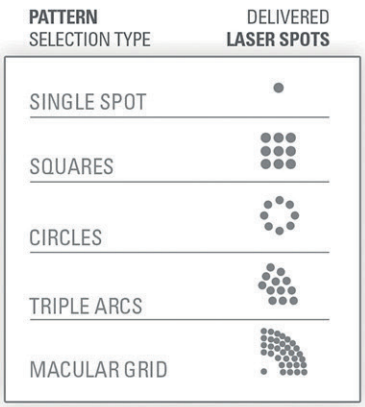


MultiSpot Mode:

Characterized by the use of short pulse durations from 10 to 20 ms, the MultiSpot treatment mode offers many advantages over classical treatments:

- Less heat diffusion to the retina and choroid, less damage to the retinal nerve fiber layer [3,4]
- Comfortable treatment better tolerated by patients [5]
- Treatment time reduction (full PRP in 1 session) [6]

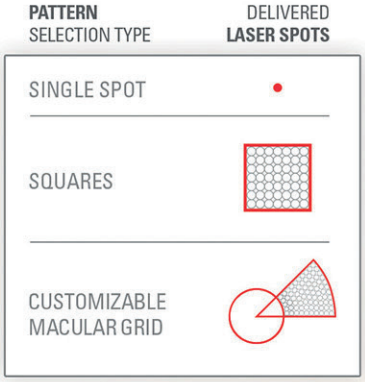
The MultiSpot treatment mode can be delivered through 5 customizable patterns for better adaptation to the treatment site.
Single spot - Squares - Circles - Triple arcs - Macular grid



MicroPulse® Mode:

Composed of a train of extremely short microsecond pulses, this subthreshold treatment mode (non-visible laser impacts) is a tissue sparing treatment mode avoiding scarring [7,8] while treating Diabetic Macular Edema [7] and Central Serous Chorioretinopathy [8].

The MicroPulse® treatment mode can be delivered through 3 customizable patterns for better adaptation to the treatment site.



Easyret®: Fully Integrated Design

Easyret® offers a fully integrated design in which the laser and the slit lamp are optimally integrated for better ergonomics and ease of use.
It is available with two types of slit lamps to adapt to the operator's working habits.

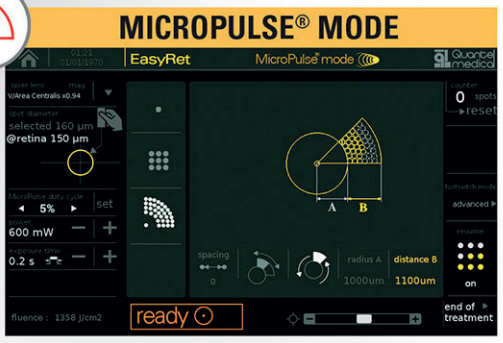
Both versions feature:

1 - an integrated laser adapter featuring a continuously variable parfocal zoom
2 - a large touch screen interface to monitor the treatment settings
3 - a click wheel to control the patterns settings
4 - an intelligent footswitch to control the laser settings

Easyret®:
Enhanced Software User Interface

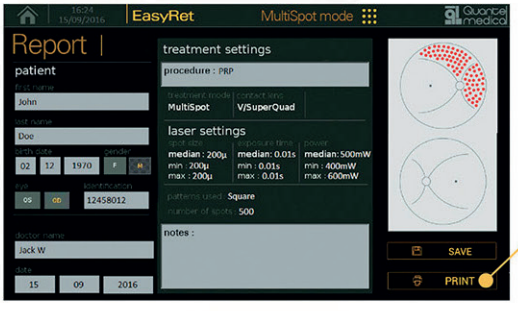
3 Treatment Modes / 3 Dedicated Targets:

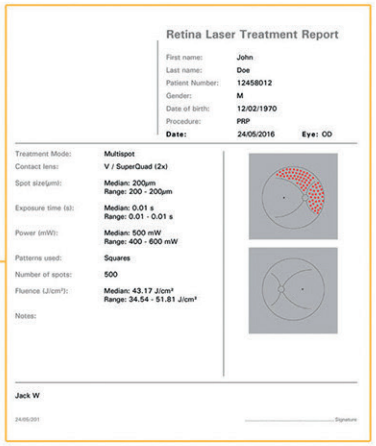
Easyret® provides an intuitive and versatile software user interface simplifying the use of the Single Spot, MultiSpot and MicroPulse® treatment modes.
Built in a clinically oriented manner, Easyret® offers 3 different types of visible targets (aiming beam) facilitating the implementation of the laser spots with each treatment mode.



Treatment Report:

After treatment, a detailed report can be generated in PDF format.
It can be printed and / or saved on a dedicated USB key.





A **WORLD FIRST** TO **MARKET** IN **PHOTOCOAGULATION:** FIBER LASER CAVITY

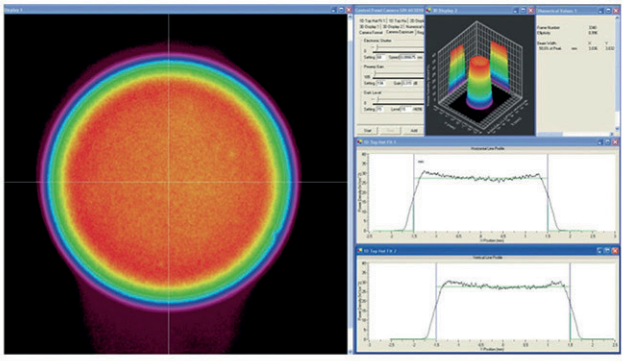
PROPRIETARY Elba™ Laser Cavity BY QUANTEL

Easyret®: Technology

Fiber Laser Technology:

Stemming from the ELBA™ technology, developed and successfully marketed by Quantel Laser for various applications, this new generation of laser cavity provides unique advantages:

- An excellent beam quality ensuring a homogeneous laser spot profile (top hat)
- The emission of pure 577nm yellow wavelength
- An extended lifetime thanks to a simple, compact and reliable technology

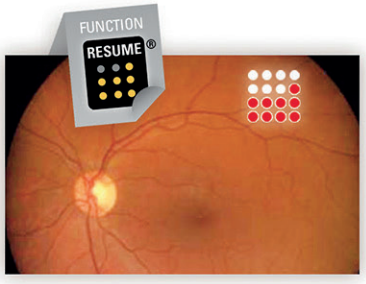


The fiber laser technology is a variation of the standard solid-state laser technology.
In fiber lasers, the lasing medium is composed of an optical fiber doped with rare earth elements and optically pumped by diodes.

Resume® Technology:

Easyret® features the proprietary Resume® function offering more flexibility to the operator in the implementation of the MultiSpot and the MicroPulse® treatment modes.

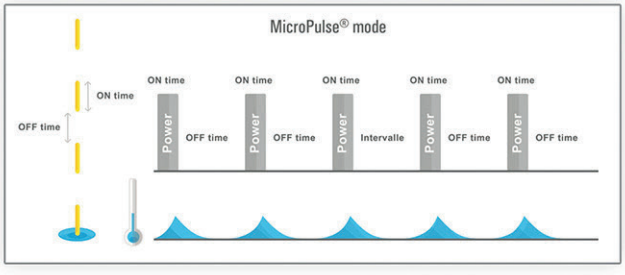
- In MultiSpot mode, the pattern delivery can be paused and resumed (the previous shots are remembered)
- In MicroPulse® mode, the treatment is combined with the pattern scan mode and delivered semi-automatically in several steps



MicroPulse® Technology:

In addition to SingleSpot and MultiSpot delivery modes, Easyret® features the MicroPulse® technology.

The use of this subthreshold treatment mode converts each laser shot into a "pulse envelope" composed of a customizable train of short pulses, allowing the operator to fully adjust the pulse duration (On Time) and interval (Off Time). This fined-tuned control of the laser treatment settings ensures a precise management of the thermal effect on the targeted tissues.



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TECHNICAL SPECIFICATIONS

1- *Vogel M, Schäfer FP, Stuke M, Müller K, Theuring S, Morawietz A.*
Animal, experiments for the determination of an optimal wavelength for retinal coagulations.
Graefes Arch Clin Exp Ophthalmol. 1989;227:277-280.

2- *Mainster MA. Wavelength selection in macular photocoagulation.*
Tissue optics, thermal effects, and laser systems.
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3- *Jain A, Blumenkranz MS, Paulus Y et al.*
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Arch Ophthalmol. 2008; 126:78-85.

4- *Yi-Ryeung Park, Donghyun Jee.*
Changes in Peripapillary Retinal Nerve Fiber Layer Thickness after Pattern Scanning Laser Photocoagulation in Patients with
Diabetic Retinopathy. Korean J Ophthalmol 2014;28(3):220-225.

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Single-Session vs Multiple-Session Pattern Scanning Laser Panretinal Photocoagulation in Proliferative Diabetic. Arch ophthalmol, 2010, 128 : 525-533

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The short-term efficacy of subthreshold micropulse yellow (577-nm) laser photocoagulation for diabetic macular edema.
Korean J Ophthalmol 2014;28(5):379-385

8- *Scholz P, Ersoy L, Boon CJF, Fauser S*
Subthreshold Micropulse Laser (577 nm). Treatment in Chronic Central Serous Chorioretinopathy.
Ophthalmologica 2015 DOI: 10.1159/000439600

EASYRET SPECIFICATIONS

Laser source:	fiber laser technology
Wavelength:	yellow 577nm
Power at tissue up to:	2000 mW
Pulse duration:	10 ms to continuous
Single spot modes:	single, repeat, painting, continuous
MicroPulse® Duty Cycle:	adjustable duty cycle: 5% to 100%
Patterns:	
MultiSpot mode:	single spot, squares, circles, triple arc, macular grid
MicroPulse® mode:	single spot, squares, customizable macular grid
Resume® function	
Spot size:	
Single spot:	continuously variable from 50 µm to 400 µm
Pattern:	continuously variable from 100 µm to 400 µm
Integrated slit lamps:	
Haag Streit type:	Quantel Medical (CSO 990 5x)
Zeiss type:	Quantel Medical (CSO 980 5x)
Aiming beam:	635 - 650nm
Size:	174.2 (H) x 97 (W) x 72 (D) cm 68.58" (H) x 38.19" (W) x 28.35" (D)
Weight:	64.80 kg - 142.86 lbs
Cooling:	by Peltier effect
Power requirements:	100 to 240 VAC, 350 VA, 50/60 Hz

OPTIONAL FEATURES

Second laser port	
Laser indirect ophthalmoscopes:	Heine Omega 500 or Keeler Vantage Plus

www.quantel-medical.com

A product by **Quantel Medical, France**

ISO 9001-13485

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