IRIDEX

IQ 577™ Laser System

True-Yellow 577 nm Laser with MicroPulse® Technology*

The Advantages of Innovation

- True yellow, 577 nm wavelength for peak absorption in oxygenated hemoglobin
- Patented MicroPulse technology for Fovea-friendly™ MicroPulse Laser Therapy for retinal disorders, and repeatable MicroPulse Laser Trabeculoplasty for glaucoma therapy
- DualSense™ provides quick and simple selection of multiple delivery devices for RFID and SMA
- Voice confirmation to aid surgical techniques
- Intuitive graphical touch screen interface with high contrast color display

Ergonomic and Easy to Use

- Dual port for simultaneous connectivity of laser delivery devices
- Convenient 3-knob control offers dedicated interface to minimize steps in making adjustments
- 10 programmable user presets

Optional Accessories

- **Full-Featured Remote Control**
  - Compact design for easy placement on a slit lamp table or use in the operating room
  - Displays can be seen from multiple vantage points, allowing more convenient usage of space
- **Wireless Footswitch**
  - No cord, no clutter, no limitations
  - Available with power-adjust to control laser actuation and power settings

*MicroPulse is an optional module available at time of purchase only.

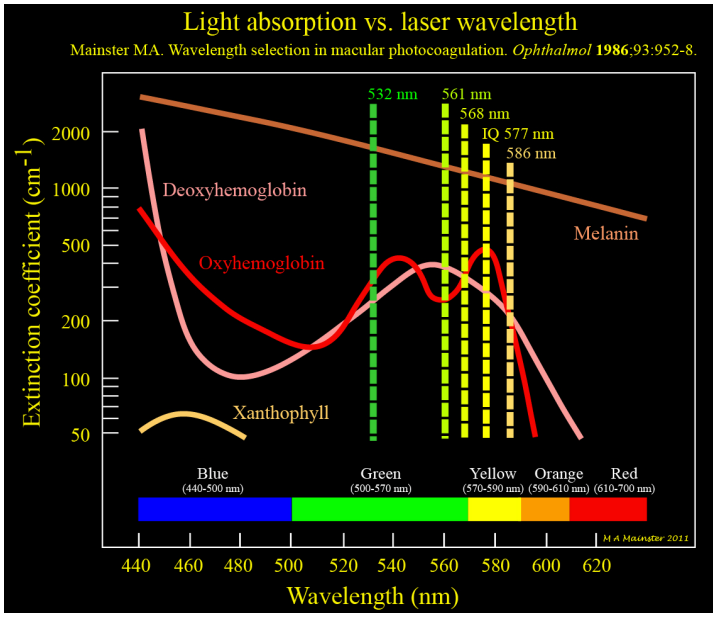
MicroPulse®
First, do no harm

Why 577?

The IRIDEX IQ 577™ laser system offers a true-yellow, 577 nm, wavelength with peak absorption in oxyhemoglobin and is minimally absorbed by xanthophll (see Figure 1) which allows treatment closer to the fovea. It also offers:

- High transmission through dense ocular media[1, 2] and less light scattering than shorter wavelengths which minimizes spot size and reduces thermal spread
- Consistent laser lesions for fast procedure time (see Figure 2)
- Enhanced visibility for reduced intraretinal damage[2] enabling early observation of very light tissue reactions at the level of the retinal pigment epithelium (RPE)
- Lower transmission to deeper tissues,[2,4] and low power requirements for increased patient comfort[3]

Figure 1

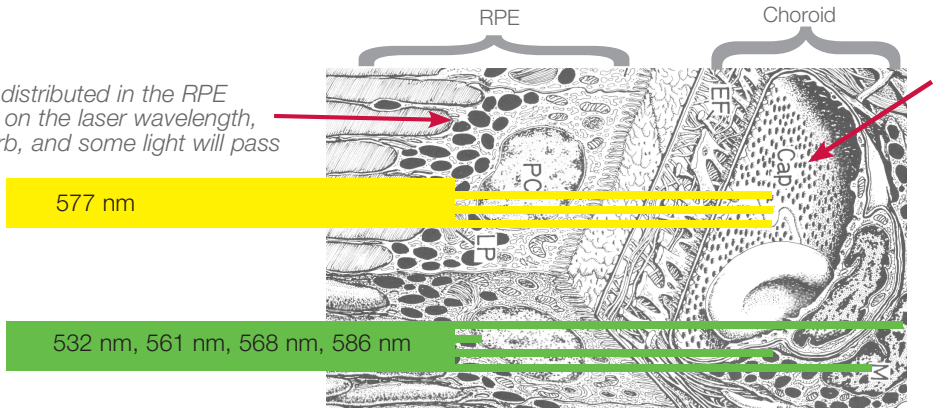


"The IQ 577 produces less collateral damage than a traditional green-wavelength laser during the treatment of macular edema. It's more efficient and increases patient comfort for panretinal photocoagulation."
– Dr. Jonathan Walker, Fort Wayne, IN

"The IQ 577 has simplified and improved the efficiency of laser clinics dramatically."
– Dr. Christopher Riemann, Cincinnati, OH

Figure 2

Melanin is unevenly distributed in the RPE and choroid. Based on the laser wavelength, some light will absorb, and some light will pass through.



Hemoglobin in the choriocapillaris is more uniformly distributed for a more consistent uptake of laser light.

The lower absorption and increased transmission of 577 nm through the non-uniform melanin granules of the RPE is more than compensated by the higher absorption of 577 nm in the underlying more uniformly distributed hemoglobin-rich choriocapillaris.

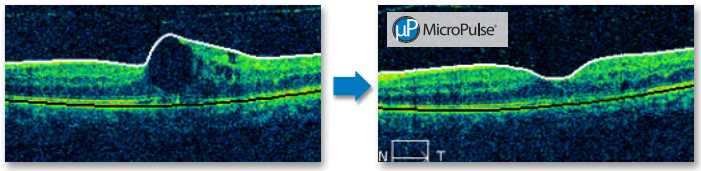
Standard Photocoagulation & MicroPulse® Therapy in One Laser

MicroPulse Applications

- Fovea-Friendly™ MicroPulse Laser Therapy for retinal disorders[5]

MicroPulse®
First, do no harm

- Repeatable MicroPulse Laser Trabeculoplasty (MLT) for glaucoma therapy



VA 20/50 | CRT 434 µm

3 Mos Post-Op | VA 20/30 | CRT 314 µm

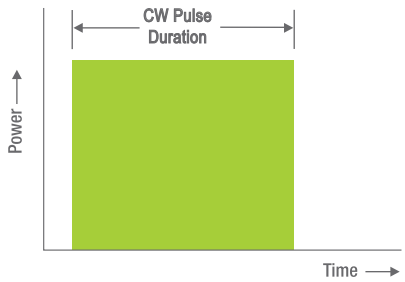
Trabecular meshwork after ALT

Trabecular meshwork after MLT

What is MicroPulse Technology?

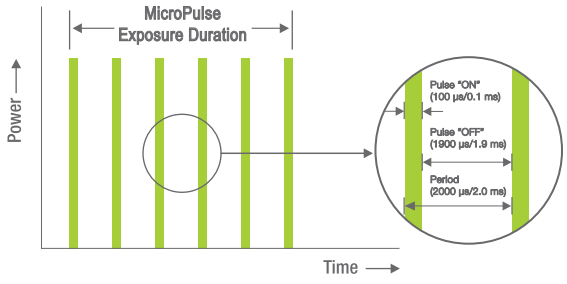
CW-Pulse™ (Continuous-Wave) Mode

CW lasers deliver a steady stream of laser energy, even with the shortest exposure duration. This results in a significant thermal rise and consequent coagulation used clinically for many applications.



MicroPulse Mode*

MicroPulse technology finely controls thermal elevation by "chopping" a continuous-wave (CW) beam into an envelope of repetitive short pulses allowing tissue to cool between pulses and reduce thermal buildup.



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2. Mainster MA. Wavelength selection in macular photocoagulation. Tissue optics, thermal effects, and laser systems. Ophthalmology 1986;93(7):952-8
3. Castillejos-Rios D, Devenyl R, Moffat K, Yu E. Dye yellow vs argon green laser in panretinal photocoagulation for proliferative diabetic retinopathy: A comparison of minimum power requirements. Can J Ophthalmol 1992;27(5):243-244
4. Brooks HL, Jr., Eagle RC, Jr., Schroeder RP, Annesley WH, Shields JA, Augsburger JJ. Clinicopathologic study of organic dye. Laser in the human fundus. Ophthalmology 1989;96(6):822-34.
5. Bhagat N, Zarbin M, Mansour S, Chong V, and Cardillo JA. Fovea-friendly MicroPulse Laser. Supplement to Retina Today, May/June 2012
*MicroPulse is an optional module.

IQ 577™ Laser System

Specifications

Wavelength:	577 nm Yellow
Weight:	9.0 kg (19.2 lb)
Dimensions:	30.5 cm x 35.6 cm x 21.4 cm (12 in W x 14 in D x 8.5 H)
Connector Type:	RFID | Resistor
Electrical:	100–240 VAC, 50/60 Hz
Cooling:	Air/TEC cooled
Exposure Duration:	CW-Pulse™: 10 ms – 3000 ms or CW to 60 seconds
Exposure Interval:	CW-Pulse: 10 ms – 3000 ms or single pulse
MicroPulse® Duration:	MicroPulse: 0.05–1.00 ms
MicroPulse Interval:	MicroPulse: 1.00–10.00 ms
Aiming Laser:	Diode laser, 635 nm nominal
Delivery Device Power Output:	TxCell™: 0-2000 mW SLA: 0–2000 mW LIO: 0–2000 mW EndoProbe®: 0–2000 mW

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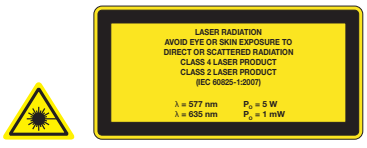
IRIDEX®

Elegantly simple solutions™



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