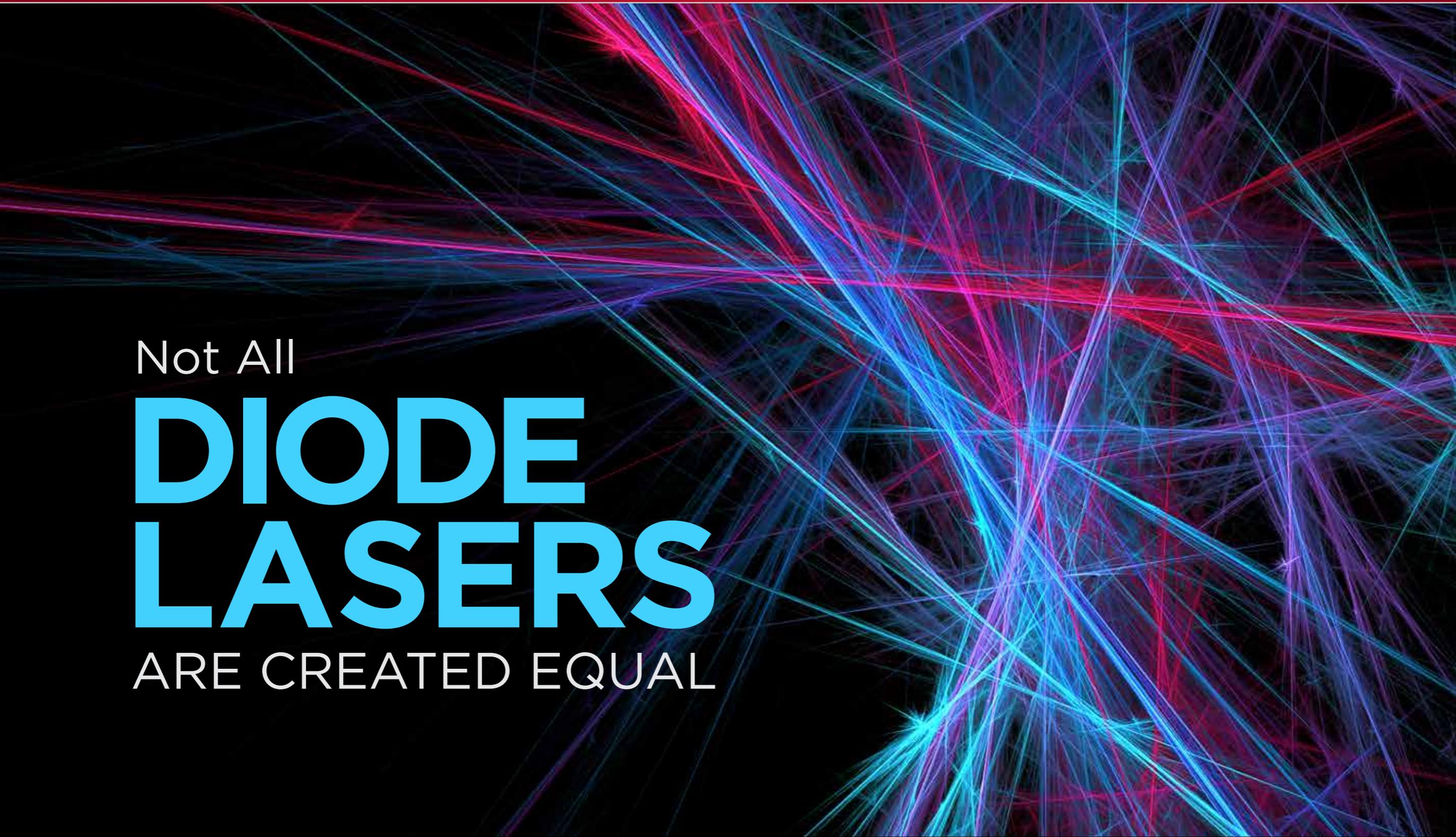


Not All

# **DIODE LASERS**

ARE CREATED EQUAL



# DIODE LASERS: WHERE ARE WE NOW?

The implementation of diode lasers in dentistry as soft-tissue surgical devices is becoming increasingly common, as their functions continue to expand. Certain diode lasers can be used for gingivectomy, frenectomy, lesion removal, periodontal treatment, crown lengthening, gingival sculpting, teeth whitening, and temporomandibular joint treatment. One of the most promising aspects of laser dentistry is the opportunity to do more with less anesthetic and less damage to tissues, addressing patient preferences for technologically advanced treatment.

Although diode lasers have been employed in dentistry for more than 20 years, the technology has now advanced to the point that oral healthcare practitioners and their patients are realizing its fundamental, everyday advantages. The global dental lasers market is expected to reach \$2.25 billion by 2020 (ReportBuyer, December 2015), with soft tissue lasers dominating the market due to the expansion of procedures and increasing demand.

However, until recently, many diode lasers lacked certain premium features that would facilitate next-level professional laser dentistry:

- Precise control over clinical and patient outcomes
- Professional-grade results
- Intelligent automated modes to enhance creativity and efficiency
- More robust, rugged device
- Faster, cleaner, more functional
- More stability and predictability in tissue results
- More fidelity in surgery

# SOFT-TISSUE MANAGEMENT

## REDEFINED

Major advancements in professional-grade diode lasers offer safer, more efficient, and more comfortable soft tissue procedures for experienced laser dentists practicing predictable, minimally invasive solutions for soft-tissue management. Available features now include:

### “SUPER THERMAL PULSE” TECHNOLOGY

—unlimited control parameters and very flexible preferences for how the laser interacts with the tissue

- Patient comfort
- Create incisions with pinpoint precision and much less collateral impact
- Better clinical results
- Low overall tissue impact for unique managed thermal relaxation

### REAL-TIME, AUTOMATIC POWER CONTROL (APC)

—controls the temperature of the fiber tip and prevents tip from overheating

- Consistent temperature at varying cutting speeds
- For soft tissue surgical applications, can cut 2-4x the speed of cutting with 3x greater precision than for classic diode lasers
- Better and faster cutting results with no tissue snagging, dragging, or tagging
- Prevent undesired tissue impact

### EFFICIENT, LASTING PRE-INITIATED TIPS

—where initiation material is fused inside of the quartz fiber material, creating a veneer-like surface on the fiber tip, built for robust and long-lasting performance

- Significantly reduces the time on tissue
- Clinical procedures become more efficient, with much lower collateral thermal effect
- Tips last up to 30x's longer than a tip initiated with cork and up to 6x's longer than standard pre-initiated tips

### ROBUST DIODE ENGINE

- All new design
- First industrial-strength diode in dentistry
- Longer life span
- Diode laser investment last longer
- Peace of mind with durable equipment
- Reliability for longer period

# SOLVING PRACTICE CHALLENGES



Laser Pocket Therapy



Gingival Troughing



Aphthous Ulcers



Implant Uncovery



Frenectomy



Gingivectomy



Soft-Tissue Crown Lengthening



Excision for Biopsy



Exposure of Unerupted Teeth

# CLINICAL IMPLICATIONS

## RESTORATIVE PROCEDURES

Many practices have subscribed to the hope that lasers might provide a safe and efficient way to perform soft-tissue troughing for restorations. But the drawbacks of classic diodes make it hard to achieve a consistently superior result, due to tissue tagging, inconsistent cutting, carbonization, and even black spots on dentin. The Epic Pro in STP mode has a special troughing setting that allows a clean bloodless trough without charring or carbonization, with perfect margins for digital imaging.

## ESTHETIC PROCEDURES

Correcting a gummy smile with a classic diode can be a long and arduous procedure, and often requires multiple retouching to overcome uneven gingival lines created by inconsistent diode power output. The Epic Pro System with its computer controlled APC mode can provide bloodless single-pass cutting that is fast and efficient without inconsistency or charring.

## IMPLANT PROCEDURES

Classic diode lasers are indicated for implant uncover; however, given their thermal nature, it is not recommended to use a classic diode laser around an implant for extended periods of time. Diodes will lose their initiation at least once, possibly several times during an implant uncover procedure, blasting unabsorbed laser light deep into tissue and overheating implants and bone. Because of the ultra-durable Epic Pro PI tips with almost complete conversion of laser light to thermal power, the Epic Pro is the only diode laser on the market today that can safely work around implants in the computer-controlled STP mode without fear of raising the internal temperature of the implant.

# PUTTING TECHNOLOGY

## INTO PRACTICE

Practitioners who thoroughly incorporate lasers into their clinical routines, taking full advantage of all the advanced features, can expect to expand their procedures and deliver them with increased predictability, comfort, and sophistication—impacting many aspects of their practice.

### FOR THE PATIENT

- Increased patient comfort
- Less invasive than other normal diode lasers
- Fewer postoperative complications
- Faster healing

### FOR THE CLINICIAN

- Better and faster cutting results
- Increased clinical precision and control
- Gentler interaction with tissue
- Better patient reported outcomes

### FOR THE TEAM

- Predictable results keep procedures on time
- Access more chair time by completing soft tissue cases faster
- Expanded procedures—hygiene, surgery, whitening

### FOR THE PRACTICE

- More durable laser design for longer life
- More affordable option vs. expensive Nd:YAG or CO<sub>2</sub> lasers
- Best-in-class price-to-feature ratio
- Increased efficiency and time savings

# DENTAL LASER INNOVATION

FOR YOUR PRACTICE The Epic Pro is the most advanced diode laser on the market—the first professional-grade diode laser in dentistry

- Offers the best-in-class price-to-feature ratio—a fraction of the cost and size of an Nd:YAG or CO<sub>2</sub> laser, with similar clinical outcomes
- Provides safer, more efficient, and more comfortable soft tissue procedures—the only laser on the market with Automatic Power Control, Super Thermal Pulse, and Smart Tip Technology
- Cuts 4X faster than a classic diode laser with minimal collateral damage—Automatic Power Control provides constant and reliable cutting conditions, adjusting laser energy in real time
- Provides 10X the peak power of a standard diode in short micro-pulses for the highest (up to 20,000 pulses per second)—Super Thermal Pulse provides increased precision and safety, providing tissue ample time to relax between pulses
- Includes easy-to-use graphical user interface with intuitive procedural categories and quick access factory presets and favorites—with the largest display for a diode and the only one to have standard and advanced modes for unlimited control and flexibility
- With new Epic pre-initiated Pro tips, factory built to ensure cutting is consistent, precise, and fast every time—Epic Pro has a built-in tip integrity indicator and PI Pro Tips can last up to 5-6 minutes of continuous use as compared to traditional tip initiation



# ABOUT THE COMPANY

BIOLASE, Inc. is a medical device company that develops, manufactures, markets, and sells laser systems in dentistry and medicine and also markets, sells, and distributes dental imaging equipment, including digital x-rays and CAD/CAM scanners. BIOLASE's products are focused on better enabling

clinicians to repair and restore patient's dental conditions while reducing the pain, fear, and anxiety generally associated with dentistry. BIOLASE is committed to elevating the standard of care in dentistry, while enabling clinicians to achieve better business returns.

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**Epic**  
*pro*<sup>™</sup>

## Soft-Tissue Management Redefined

Epic Pro<sup>™</sup> is the first premium diode laser in dentistry which offers practical, clinical, and financial value to dental practices looking to redefine what it means to manage soft-tissue.

Epic Pro features industry first, super thermal pulse technology, real-time automatic power control, and pre-initiated, bendable, disposable tips with smart tip technology, to provide unmatched cutting speed, consistency, safety, and precision.



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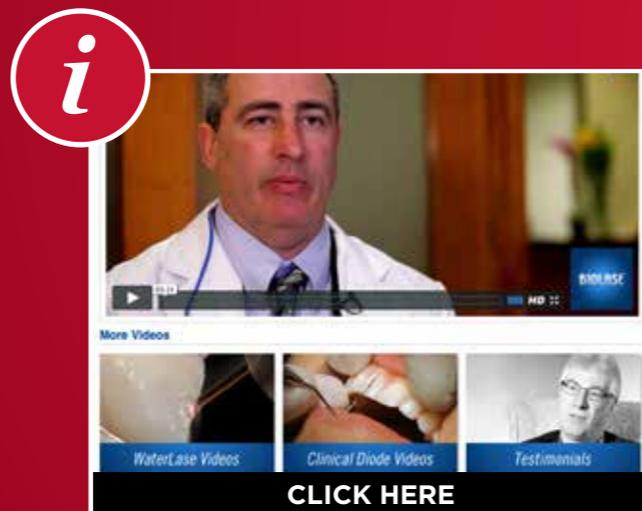
Experience the latest breakthrough in soft-tissue management.

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