Making the Most of the Academy of Laser Dentistry’s 30th Annual Conference and Exhibition:

A Practical Orientation for Attendees

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Academy of Laser Dentistry
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Dallas, Texas

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Checklist for Evaluating Lasers

A. Determine Your Specific Clinical Needs
   1. Experience
   2. Preferences

B. Clinical Applications of Specific Device
   1. Regulatory Marketing Clearances
   2. Range of Applications
   3. Speed of Performance
   4. Precision and Controllability

C. Design
   1. Specifically Designed for Intraoral Use?
   2. Operational Noise Level

D. Limitations
   1. Electrical Power Requirements
   2. External Cooling System Requirements
   3. Inadvertent Interaction with Infrared-Controlled Office Devices

E. Safety
   1. Built-In Features
   2. Adjunct Measures Necessary for Safe Performance
   3. Concerns, including:
      a. Is it possible to defeat the safety interlock?
      b. Is it possible to activate the laser at zero power setting?
      c. Is the laser adequately protected from spills?

F. Cleaning, Sterilization, and Disinfection
   1. Instrument
   2. Delivery System

G. Device-Specific Supporting Research
   1. Scientifically Rigorous?
   2. Peer-Reviewed?

H. Device-Specific Training
   1. Adequacy
   2. Convenience
   3. Frequency
   4. Cost
   5. Credentials and Disclosures
   6. Ongoing Support

I. Documentation – Organization, Illustrations, Comprehensiveness, Ease of Use, Troubleshooting
   1. Operator Manual
   2. Clinical Applications Manual

J. Ergonomics
   1. Ease of Set-Up
   2. Ease of Use
   3. Control Panel
   4. Visibility and Usefulness of Displays
   5. Ease of Display Navigation
   6. User-Controllable Presets
   7. Activation Force of Foot Pedal or Hand Switch
Checklist for Evaluating Lasers

K. Portability
   1. Size
   2. Weight
   3. Maneuverability
   4. Storage of Accessories

L. Controllability
   1. Power
   2. Pulse Frequency
   3. Pulse Duration
   4. Pulse Interval
   5. Air
   6. Water
   7. Spot Size
   8. Cutting Speed
   9. Timer for Duration of Exposure

M. Features
   1. Appropriateness for Dentistry
   2. Output Power
   3. Aiming Beam
      a. Available?
      b. Attenuated by Safety Glasses?
      c. Type?
      d. Controllable?
   4. Plume-Clearing Gas for Delivery System Optics and Waveguides
   5. Evacuation
   6. Emission Indicators
      a. Visual
      b. Audible
   7. Delivery System
      a. Flexibility
      b. Reach
      c. Efficiency in Energy Transmission
      d. Maintenance and Accessibility for Cleaning
      e. Damageability
      f. Storage and Fit Through Doorways
      g. Counterbalance
      h. Ease of Adjustment
      i. Ease of Mirror Alignment (If Articulating Arm)
      k. Cooling
   8. Galvanometers
   9. Water Reservoir
      a. Ease of Removal, Refill, Replacement
      b. Capacity
   10. Battery
      a. Function
      b. Life
      c. Ease of Replacement
   11. Built-In Printer for Treatment Record
   12. Video Compatibility
Checklist for Evaluating Lasers

N. Accessories
   1. Safety Eyewear
   2. Optic Fibers
   3. Waveguides
   4. Handpieces
   5. Micromanipulators
   6. Focusing Lenses
   7. Disposable Tips
   8. Tip Shape Configurations
   9. Diffusing Handpieces
  10. Scanning Handpieces
  11. Interchangeable Connectors
  12. Fiber Strippers
  13. Fiber Cleavers
  14. Fiber Inspection Microscope
  15. Laser Safety Signs

O. Delivery System Components
   1. Longevity
   2. Autoclaveable
   3. Ease of Use
   4. Ease of Change
   5. Disposable
   6. Cost

P. Quality of Construction
   1. Ruggedness
   2. Beam Alignment
   3. Calibration

Q. Reliability

R. Service
   1. Factory
   2. On-site
   3. Packaging
      a. Durability
      b. Reusability
      c. Cost
      d. Ease of Repacking

S. Cost
   1. Initial
   2. Maintenance
   3. Replacement Parts

T. Upgradeability
   1. Hardware
   2. Software

U. Warranty
   1. Duration
   2. Parts
   3. Labor
   4. Shipping
Checklist for Evaluating Lasers

V. Track Record
   1. Number of Installations
   2. Availability for Follow-Up
   3. Performance
   4. Safety
      a. Incident Report History and Policy
   5. Service
      a. Response Time
      b. Hours of Operation
      c. Reliability of Repair
      d. Loaner Policy
   6. Parts and Accessories
      a. Available When Needed
      b. Delivery
      c. Ease of Ordering (Telephone, Fax, Online)
      d. Warranty
   7. Customer Satisfaction
   8. Repeat Customers
Critically Evaluating the Dental Literature 
and Health Information on the Internet

Suggested Resources


11. CEBD. Centre for Evidence-Based Dentistry. 2023. Available at: http://www.cebd.org/.


Critically Evaluating the Dental Literature and Health Information on the Internet


The preceding Web sites were accessed on April 16, 2023.
Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Carbon Dioxide
- Nd:YAG
- Argon
- Ho:YAG
- Er:YAG
- Nd:YAP
- Er:YSGG
- Diode
- Frequency-Doubled Nd:YAG
- Diode-Pumped 2.01-micron

Curing of Composite Materials
- Argon

Aphthous Ulcer Treatment
- Er,Cr:YSGG
- Carbon Dioxide
- Nd:YAG
- Diode
- Er:YAG
- Frequency-Doubled Nd:YAG

Tooth Whitening
- Carbon Dioxide
- Argon
- Diode
- Frequency-Doubled Nd:YAG

Sulcular Debridement
- Nd:YAG
- Diode
- Er:YAG
- Er:YSGG
- Carbon Dioxide

Caries Removal, Cavity Preparation, Enamel Roughening
- Er:YAG
- Er:YSGG

Illumination for Caries Detection
- Argon

Illumination for Endodontic Orifice Location
- Argon

Soften Gutta Percha
- Argon
- Frequency-Doubled Nd:YAG

Removal of Coronal Pulp, Adjunct to Root Canal Procedures
- Nd:YAG
- Diode
U.S. FDA Marketing Clearances
by Indication for Use
(Appplies to Certain Models Only)

Pulpotomy as Adjunct to Root Canal Procedures
- Diode
- Nd:YAP
- Nd:YAG
- Er,Cr:YSGG
- Er:YAG

Selective Removal of Enamel (First Degree) Caries
- Nd:YAG

Removal of Filling Materials as Adjunctive Treatment during Root Canal Retreatment
- Nd:YAP
- Nd:YAG
- Diode

Aid in Diagnosis of Dental Caries
- Diode

Treatment of Herpetic Lesions
- Er,Cr:YSGG
- Nd:YAG
- Frequency-Doubled Nd:YAG
- Diode
- Er:YAG

Blood Flow Measurements
- Diode

Tooth Preparation to Obtain Access to Root Canal, Pulp Extirpation, Root Canal Debridement and Cleaning, Root Canal Preparation including Enlargement
- Er,Cr:YSGG
- Er:YAG

Enameloplasty, Excavation of Pits and Fissures for Placement of Sealants
- Er,Cr:YSGG
- Er:YAG

Cutting, Shaving, Contouring and Resection of Oral Osseous Tissues (Bone)
- Er,Cr:YSGG
- Er:YAG
- Carbon Dioxide

Apicoectomy Surgery
- Er,Cr:YSGG
- Er:YAG

Coagulation of Extraction Sites
- Diode
- Carbon Dioxide

Ostectomy, Osteotomy, Osseous Crown Lengthening, Osteoplasty
- Er,Cr:YSGG
- Er:YAG
Laser-Assisted New Attachment Procedure (cementum-mediated periodontal ligament new-attachment to the root surface in the absence of long junctional epithelium)
- Nd:YAG
- Carbon Dioxide
- Er,Cr:YSGG
- Diode

Cutting Bone to Prepare a Window Access to the Apex (Apices) of the Root(s)
- Er:YAG
- Er,Cr:YSGG

Root End Preparation for Retrofill Amalgam or Composite
- Er:YAG
- Er,Cr:YSGG

Reduction of Bacterial Level (Decontamination) and Inflammation
- Diode

Aid in Detection and Localization of Subgingival Dental Calculus
- Diode

Root Canal Disinfection after Endodontic Instrumentation / Treatment
- Er,Cr:YSGG
- Er:YAG

Removal of Subgingival Calculi in Periodontal Pockets
- Er:YAG
- Er,Cr:YSGG

Removal of Highly Inflamed Edematous Tissue Affected by Bacterial Penetration of the Pocket Lining and Junctional Epithelium
- Diode
- Er,Cr:YSGG

Removal of Pathological Tissues (i.e., Cysts, Neoplasm or Abscess) and Hyperplastic Tissues (i.e., Granulation Tissue) from around the Apex
- Er,Cr:YSGG
- Er:YAG

Ablation of Hard Tissue for Caries Removal and Cavity Preparation
- Carbon Dioxide

Diagnostic Aid for Detection of Open or Incipient Caries Lesions Above the Gingiva and for Monitoring the Progress of Such Lesions, includes Detection of Cracks
- Diode

Root Canal Cleaning and Debridement
- Diode
- Er,Cr:YSGG

Periodontal Regeneration – True Regeneration of the Attachment Apparatus (New Cementum, New Periodontal Ligament, and New Alveolar Bone) on a Previously Diseased Root Surface When Used Specifically in the LANAP® Protocol
- Nd:YAG
U.S. FDA Marketing Clearances
by Indication for Use
(Applies to Certain Models Only)

Photoinitiation of Gingival Barriers and Dams
• Diode

Facilitation of Subgingival Calculus Removal
• Nd:YAG

Modification of the Dentin Surface, Including Increasing the Mineral and Decreasing the Organic Composition of the Dentin Surface, Reducing Bacteria on the Dentin Surface, Improving the Shear Bond Strength of Composite Resin, Reducing the Adhesive Failure of Composite Resin, and Removing Demineralized Dentin Surface
• Nd:YAG

Removal of Porcelain and Ceramic Crowns and Veneers
• Er,Cr:YSGG
• Er:YAG

Curing Photoactivated Dental Restorative Materials and Adhesives
• Diode

Diagnostic Aid for Viewing the Interproximal Areas of Dental Anatomy to Detect and Monitor the Progression of Proximal Carious Lesions Above the Gingiva D4D
• Diode

Aiding in the Reduction of Mineral Loss in Dental Enamel
• Carbon Dioxide
U.S. FDA Marketing Clearances
by Wavelength
(Appplies to Certain Models Only)

Carbon Dioxide
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Aphthous Ulcer Treatment
- Tooth Whitening
- Sulcular Debridement
- Coagulation of Extraction Sites
- Laser-Assisted New Attachment Procedure (cementum-mediated periodontal ligament new-attachment to the root surface in the absence of long junctional epithelium)
- Ablation of Hard Tissue for Caries Removal and Cavity Preparation
- Cutting, Shaving, Contouring and Resection of Oral Osseous Tissue (Bone)
- Aiding in the Reduction of Mineral Loss in Dental Enamel

Nd:YAG
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Aphthous Ulcer Treatment
- Sulcular Debridement
- Removal of Coronal Pulp, Adjunct to Root Canal Procedures
- Selective Removal of Enamel (First Degree) Caries
- Pulpotomy as Adjunct to Root Canal Retreatment
- Removal of Filling Materials as Adjunctive Treatment During Root Canal Retreatment
- Treatment of Herpetic Lesions
- Laser-Assisted New Attachment Procedure (cementum-mediated periodontal ligament new-attachment to the root surface in the absence of long junctional epithelium)
- Periodontal Regeneration – True Regeneration of the Attachment Apparatus (New Cementum, New Periodontal Ligament, and New Alveolar Bone) on a Previously Diseased Root Surface When Used Specifically in the LANAP® Protocol
- Facilitation of Subgingival Calculus Removal
- Modification of the Dentin Surface, Including Increasing the Mineral and Decreasing the Organic Composition of the Dentin Surface, Reducing Bacteria on the Dentin Surface, Improving the Shear Bond Strength of Composite Resin, Reducing the Adhesive Failure of Composite Resin, and Removing Demineralized Dentin Surfaces

Argon
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Curing of Composite Materials
- Tooth Whitening
- Illumination for Caries Detection
- Illumination for Endodontic Orifice Location
- Soften Gutta Percha

Ho:YAG
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)

Er:YAG
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Caries Removal, Cavity Preparation, Enamel Roughening
- Aphthous Ulcer Treatment
- Sulcular Debridement
- Pulpotomy as Adjunct to Root Canal Retreatment
U.S. FDA Marketing Clearances  
by Wavelength  
(Appplies to Certain Models Only)

**Er:YAG (continued)**
- Tooth Preparation to Obtain Access to Root Canal, Pulp Extirpation, Root Canal Debridement and Cleaning, Root Canal Preparation including Enlargement
- Enameloplasty, Excavation of Pits and Fissures for Placement of Sealants
- Cutting, Shaving, Contouring and Resection of Oral Osseous Tissue (Bone)
- Treatment of Herpetic Lesions
- Apicoectomy Surgery
- Ostectomy, Osteotomy, Osseous Crown Lengthening, Osteoplasty
- Cutting Bone to Prepare a Window Access to the Apex (Apices) of the Root(s)
- Root End Preparation for Retrofill Amalgam or Composite
- Removal of Subgingival Calculi in Periodontal Pockets
- Removal of Pathological Tissues (i.e., Cysts, Neoplasm or Abscess) and Hyperplastic Tissues (i.e., Granulation Tissue) from around the Apex
- Removal of Porcelain and Ceramic Crowns and Veneers
- Root Canal Disinfection after Endodontic Treatment

**Er,Cr:YSGG**
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Aphthous Ulcer Treatment
- Cavity Preparation, Caries Removal, Tooth Etching
- Sulcular Debridement
- Treatment of Herpetic Lesions
- Pulpotomy as Adjunct to Root Canal Retreatment
- Tooth Preparation to Obtain Access to Root Canal, Pulp Extirpation, Root Canal Debridement and Cleaning, Root Canal Preparation including Enlargement
- Enameloplasty, Excavation of Pits and Fissures for Placement of Sealants
- Cutting, Shaping, Contouring and Resection of Oral Osseous Tissues (Bone)
- Apicoectomy Surgery
- Ostectomy, Osteotomy, Osseous Crown Lengthening, Osteoplasty
- Cutting Bone to Prepare a Window Access to the Apex (Apices) of the Root(s)
- Root End Preparation for Retrofill Amalgam or Composite
- Root Canal Disinfection after Endodontic Instrumentation
- Removal of Highly Inflamed Edematous Tissue Affected by Bacteria Penetration of the Pocket Lining and Junctional Epithelium
- Removal of Pathological Tissues (i.e., Cysts, Neoplasm or Abscess) and Hyperplastic Tissues (i.e., Granulation Tissue) from around the Apex
- Removal of Subgingival Calculi in Periodontal Pockets
- Removal of Porcelain and Ceramic Crowns and Veneers

**Diode**
- Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Aphthous Ulcer Treatment
- Sulcular Debridement
- Removal of Coronal Pulp, Adjunct to Root Canal Procedures
- Pulpotomy as Adjunct to Root Canal Retreatment
- Tooth Whitening
- Aid in Diagnosis of Dental Caries
- Blood Flow Measurements
U.S. FDA Marketing Clearances
by Wavelength
(Applies to Certain Models Only)

Diode (continued)
• Treatment of Herpetic Lesions
• Coagulation of Extraction Sites
• Reduction of Bacterial Level (Decontamination) and Inflammation
• Aid in Detection and Localization of Subgingival Dental Calculus
• Removal of Highly Infamed Edematous Tissue Affected by Bacteria Penetration of the Pocket Lining and Junctional Epithelium
• Laser-Assisted New Attachment Procedure (Cementum-Mediated Periodontal Ligament New-Attachment to the Root Surface in the Absence of Long Junctional Epithelium)
• Diagnostic Aid for Detection of Open or Incipient Caries Lesions Above the Gingiva and for Monitoring the Progress of Such Lesions, includes Detection of Cracks
• Root Canal Cleaning and Debridement
• Photoinitiatio of Gingival Barriers and Dams
• Curing Photoactivated Dental Restorative Materials and Adhesives
• Diagnostic Aid for Viewing the Interproximal Areas of Dental Anatomy to Detect and Monitor the Progression of Proximal Carious Lesions Above the Gingiva

Nd:YAP
• Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
• Pulpotomy as Adjunct to Root Canal Retreatment
• Removal of Filling Materials as Adjunctive Treatment During Root Canal Retreatment

Frequency-Doubled Nd:YAG
• Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
• Tooth Whitening
• Aphthous Ulcer Treatment
• Treatment of Herpetic Lesions
• Soften Gutta Percha

Diode-Pumped 2.01-micron
• Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
# Selected U.S. FDA Marketing Clearances
## Lasers for Intraoral Use by Company and Device
### May 1990 – March 31, 2023

This list generally designates laser instruments cleared by the U.S. FDA for intraoral use and generally available in the United States between May 1990 and March 31, 2023. It therefore is not intended to be comprehensive. Some devices are no longer marketed. Some are designed specifically for dentistry, while others are medical lasers with some intraoral applications. Information is accurate at date of compilation based upon available resources including www.fda.gov. Substantiated additions and revisions are respectfully solicited. Interested parties are advised to consider the clinical, risk, legal/regulatory, and ethical issues related to off-label use of medical devices.

### Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating)
- Nd:YAG
  - Sunrise Technologies – dLase 300, 8 Watt Pulsed Dental Laser, Upgraded Package for dLase 300
  - Pfizer Laser Systems – Pegasus
  - Laser Endo Technic – Laser 35, Laser 6, Laser 12
  - Excel Technologies – Excel DuoPulse
  - Incisive Technologies – PulseMasters, dLase 300 Upgrade
  - Sciton – Contour Profile, mJOULE
  - Incisive LLC – InPulse, PinPointe FootLaser
- Millennium Dental Technologies – PerioLase
- Lares Research – SunLase 800 P (PocketPro)
- Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker, Dynamis, Dynamis Pro
- Cynosure – Smart File Laser
- Quanta System – Ultrawave III EX 1320, MDK Multi-Applications, Chrome
- PathoLase – PinPointe and PinPointe FootLaser
- PinPointe USA – PinPointe FootLaser
- Nuvolase – PinPointe FootLaser
- El.En. Electronic Engineering – DEKA SmartPerio
- Carbon Dioxide
  - NIIC USA – NIIC Laser System
  - Satelec – Lasersat CO2
  - Luxar – Model LX-20 CO2 Laser
  - Ion Laser Technology – ILT CO2 Surgical Laser
  - Jammar Medical Systems – Chrys XX CO2 Surgical Laser System
  - Clinicon Corporation – C4 CO2 Laser, C-LAS, SureLase
  - Medical Laser Technologies – MLT 30 CO2 Laser
  - OpusDent – Opus 20, Spectrum, OpusDuo EC
  - Lumenis – UltraPulse Encore
  - Lumenis – UltraPulse SurgiTouch, UltraPulse, UltraPulse DUO
  - Cynosure – Smart CO2, Smart US 20 D, UltraSpeed, Smart Clinic, Affirm CO2 and Affirm CO2 HP, Cortex
  - PhotoMedex – LaserPro CO2
  - Diamond Age Systems – Azuryt Model CTL 1401
  - Lumenis – OpusDent Family
  - MAX Engineering – Spectra-SP
  - Asclepion Laser Technologies – MultiStar
  - Lasering – SLIM Evolution Family, SLIM Evolution II
  - El.En. Electronic Engineering – SmartXide, Smart US20D, Smartxide 50 HS/MS, DEKA Smartxide2, DEKA Smartxide Ultraspeed, DEKA Smartxide Touch, DEKA Smartxide Punto, DEKA Smartxide Trio CO2
  - Alma – ThermoXEL, Pixel CO2
  - Lumenis – AcuPulse 30 and 40, AcuPulse 30/40ST and 40WG, UltraPulse, UltraPulse DUO, AcuPulse, AcuPulse DUO
  - Advanced Technology Laser – ATL-150, ATL-250, eBeam
  - Lutronic – DENTA III, DENTA III+, Spectra DENTA II
  - Beijing Syntech Laser – Triixel, Triixel II
  - Quanta System – YOULASER
Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating) (continued)

- Carbon Dioxide (continued)
  - Yoshida Dental Mfg. Co. – OPELASER PRO II and OPELASER Lite II
  - Convergent Dental – Solea
  - Whitecap Technologies – CYMA
  - Syneron Medical - CO2RE Laser System
  - Shanghai Wonderful Opto-Electrics Tech. Co. – Matrix LS-40 CO2 Laser System
  - Beijing Adss Development – CO2 Laser Therapy Machine
  - Jeisys Medical – EdgeOne CO2 Laser
  - Iiloda – Fraxis CO2 Laser
  - Bio-Med USA Cellene CO2 Laser
  - Shangdong Huamei Technology – CO2 Laser Therapy System
  - Beijing Superlaser Technology – CO2 Laser System
  - Zhuolu Jontelaser Manufacturing Technology – Dermatological CO2 Laser Systems
  - Zhengzhou Bestview – BW-203B CO2 Laser
  - Beijing Globalipl Development – CO2 Laser Equipment
  - Laser Engineering – Aurora MD-30

- Argon
  - HGM Medical Systems – Argon Ion Lasers

- Ho:YAG
  - Excel Technologies – Excel DuoPulse

- Er:YAG
  - Pfizer Laser Systems – Centauri YAG Laser
  - Continuum Electro-Optics – Multilite
  - Laserscope – Laserscope Erbium Laser
  - Xintec – Protégé, Protégé LP, Protégé II
  - KaVo America – KEY Laser 1242, KEY Laser 1242, 1243+
  - Innotech USA – Friendly Light
  - Sciton – Contour Profile, Profile 3000
  - American Dental Technologies – PulseMaster Erbium
  - Asclepion-Meditec – Dermastar
  - OpusDent – OpusDuo EC
  - Cell Robotics – Ultra-Light Laser System
  - International Biophysics – Laser Peel System
  - Cynosure – Smart 2940D
  - HOYA ConBio – VersaWave
  - Cynosure – MCL 30 Dermablate
  - Lumenis – OpusDent Family
  - MSq(MF) – Lovely II and Lovely III
  - WaveLight Laser Technologie – Burane XL, Burane
  - Light Instruments – LiteTouch, LiteDuo
  - Alma Lasers – Harmony XL
  - Global USA Distribution – LaserPeel Soft-MET Modified Erbium Laser
  - Asclepion Laser Technologies – Dermablate Effect, MCL 31 Dermablate
  - LaserOptek – Lotus II, Lotus III
  - J. Morita Mfg. Corp. – AdvErL EVO MEY-1-A
  - Sheaumann Laser – NeoLas Er:YAG
  - Bios – Superbium Er:YAG
  - Focus Medical – Lite Touch
  - Lutronic – Action II
  - LightMed Dental Technology – LightMed
  - Sciton – Joule diVa
Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating) (continued)

- Nd:YAP
  - Lokki – Lokki DT
- Er,Cr:YSGG
- Diode
  - Premier Laser Systems – Aurora Surgical Diode Laser, Aurora HL Diode Laser System
  - American Dental Technologies – PulseMaster 1000 ST DioLase ST
  - CeramOptec – Cerelas Diode Model D15, Cerelas Diode Model D10
  - Dentek-Lasersystems – Dentek LD-15 Dental Laser
  - BioLase Technology – Twilight Dental Diode Laser
  - OpusDent – Opus 10
  - Continuum Electro-Optics – DioDent Dental Laser System
  - American Dental Technologies – DioLase 980 D
  - BioLase Technology – LaserSmile, EZLase, ezlase 10W, iLase, EPIC 10, Diolase 105, Epic 105, Epic Pro, Epic Pro 940, Epic 980
  - MSq(MF) – Dio-Dent 10
  - Biolitec – Ceralas D810, Ceralas D980, Ceralas D100, Ceralas D150, Ceralas D15, Ceralas D25, Ceralas E 980 (E15/980, E30/980), 50W Ceralas D 1950, 180W Ceralas D 980 (D180), Ceralas Multiwavelength 980/1470 nm Diode Laser System, Ceralas D50, Ceralas D120, Ceralas D180, Evolve HPD 980, Evolve 980/1470 nm Multiwavelength Diode Laser (Evolve Dual)
  - HOYA ConBio – LVI Lase, DioDent II
  - PhotoMedex – LaserPro 810, 940 and 980
  - Ivoclar Vivadent – Odyssey 2.4G
  - Diomed – Delta 15, Delta 30
  - Sirona Dental Systems – SIROLaser, SIROLaser Advance, SIROLaser Advance+, SIROLaser Blue
  - Vision Lasertechnik – MDL-10/15
  - Asclepion Laser Technologies – QuadroStar 980, Orion
  - ProSurg – LaserTx
  - Xintec – Vectra
  - INTERmedic Arfran – INTERmedic, INTERmedic Diode Laser 980 nm System
  - Spectrum International – Prometey
  - B&W Tek – BW-5
  - Lasering – Velure S9/7D, Velure S9/15D
  - Flexxion – Claros Dental Laser System, Claros Nano
  - Ivoclar Vivadent – Odyssey Navigator
  - Quanta System – Diode Medical Laser Family (808, 940, 980 nm), Polysurge Diode Laser Family (808, 940, 980, 1064)
  - KaVo America – GENTLEray 980
  - A.R.C. Laser – Fox Q-810, Q-980, Q-1064, Wolf 445nm, Fox 810, Fox 980
  - Valam – Fox 940
  - Light Instruments – LiteDuo
  - OroScience – Curative 980
  - Fotona – XD Diode Laser, SkyPulse, XPulse Pro, XPulse 810, XPulse 980, XPulse 1064
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - Lambda Scientifica – Doctor Smile A-810, B-980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Light Instruments – D-STORM
Intraoral Soft Tissue Surgery (Ablating, Incising, Excising, Coagulating) (continued)

- Diode (continued)
  - LiteCure – BWF-5 Medical Laser Series (810, 930, 980, 1080, 1320 nm)
  - Eufoton – Lasemar 800, 1000, 1500
  - Focus Medical – NaturaLase 980
  - China Daheng Group – DenLase-810/7, DenLase-980/7, PenLase
  - Dental Photonics – stLase
  - Lambda – Doctor Diode (810, 940, 980, 1064 nm)
  - Discus Dental – SL3
  - Den-Mat Holdings – Sapphire ST, Sapphire Plus STM, SOL Portable Diode Laser
  - MedArt, Medart 720
  - Mira Lasers – Zeno 2, Zeno 4
  - El.En. – S DEKA SmartXide^2 940 and 980, DEKA SmartXide^2 Trio 940 and 980
  - Zolar Technology – Photon/Photon Plus
  - G.N.S. neoLaser – neoV Diode Laser Family (neoV810, neoV980, neoV1064, neoV1470)
  - Azena Medical – ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
  - Sheumann Laser – NeoLas 810 nm
  - Wuhan Gigaa Optronics Technology – VELASII-30A/30B
  - VIAx Dental Lab – Lucerna VDL980-1
  - Bio-med USA – Dental 5 Multi Diode Laser
  - Lazon Medical Laser – SOLASE-808, SOLASE-976
  - Shanghai Apolo Medical Technology – HS-890Z 980 Diode Laser Therapy Device
  - HULASER – K2 Module
  - DentLight – Ultrafast, Ultrafast Plus, Ultrafast Lite
  - Guilin Woodpecker Medical Instrument – D-Laser Blue, D-Laser 16
  - ELESTA SPA – Echolaser X4
  - Shenzhen Soga Technology – SOGA Laser I, SOGA Laser ILaser II
  - Sciton – Joule diVa
  - Squalus Med – MANTA 810, 980, 1064, 1470, 1940

- Frequency-Doubled Nd:YAG
  - Fisma – Corium 200, Corium 400
  - Lumenis – Novus Spectra
  - Cynosure – SmartLume D
  - Quanta System – MDK Multi-Applications, Chrome

- Diode-Pumped 2.01-micron
  - AllMed Systems – RevoLix, RevoLix Jr.

Curing of Composite Materials

- Argon
  - HGM Medical Laser Systems – HGM Argon Ion Laser
  - ILT Systems – ACL-5500, CL-5500, Argon HP
  - LaserMed – AccuCure 3000, AccuCure 1000, Pulstar
  - Premier Laser Systems – Arago Curing Laser, Arago II
  - Fisma – Dental 200, Dental 300, Dental 400

Tooth Whitening

- Carbon Dioxide
  - ILT Systems – ILT Genesis 2000
  - Sharplan Lasers – Model 15F CO₂ Laser
Tooth Whitening (continued)

- **Argon**
  - ILT Systems – ACL-5500
  - Fisma – Dental 200, Dental 300, Dental 400
  - LaserMed – AccuCure 3000, AccuCure 1000, Pulstar
  - Premier Laser Systems – Arago II
  - ICS of North America – Cyber-Lase 2000

- **Diode**
  - CeramOptec – Model D15 Cerelas
  - BioLase Technology – Twilight Dental Diode Laser
  - OpusDent – Opus 10
  - Continuum Electro-Optics – DioDent
  - American Dental Technologies – DioLase 980 D
  - BioLase Technology – LaserSmile
  - MSq(MF) – Dio-Dent 10
  - HOYA ConBio – LVI Lase, DioDent II
  - Biolitec – Ceralas D100, Ceralas D150, Ceralas D15, Ceralas D25, Ceralas D980, Ceralas E 980 (E15/980, E30/980), 180W Ceralas D 980 (D180), Ceralas Multiwavelength 980/1470 nm Diode Laser System, Evolve HPD 980, Evolve 980/1470 nm Multiwavelength Diode Laser (Evolve Dual)
  - ProSurg – LaserTx
  - Xintec – Vectra
  - INTERmedic Arfran – INTERmedic, INTERmedic Diode Laser 980 nm System
  - Spectrum International – Prometey
  - Lasering – Velure S9/7D, Velure S9/15D
  - Flexxion – Claros Dental Laser System, Claros Nano
  - Quanta System – Diode Medical Laser Family (808, 980 nm), Polysurge Diode Laser Family (808, 980)
  - KaVo America – GENTLEray 980
  - Light Instruments – LiteDuo
  - OroScience – Curative 980
  - BioLase Technology – ezlase, EPIC 10, Epic Pro, Epic Pro 940, Epic 980
  - Fotona – XD Diode Laser, SkyPulse, XPulse Pro, XPulse 810, XPulse 980
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus
  - Lambda Scientifica – Doctor Smile A-810, B-980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Light Instruments – D-STORM
  - Dental Photonics – stLase
  - Lambda – Doctor Diode (810, 980 nm)
  - Discuss Dental – SL3
  - Den-Mat Holdings – Sapphire ST
  - Asclepion Laser Technologies – Orion
  - Mira Lasers – Zeno 2, Zeno 4
  - Zolar Technology – Photon Plus, Photon
  - Azena Medical - ELUMI 810 + 980
  - VIAX Dental Lab – Lucerna VDL980-1
  - Bio-med USA – Dental 5 Multi Diode Laser
  - Dentply Sirona – SIROLaser Advance+, SIROLaser Blue
  - Lazon Medical Laser SOLASE-808, SOLASE-976
  - HULASER – K2 Module
  - Guilin Woodpecker Medical Instrument – D-Laser Blue, D-Laser 16
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Tooth Whitening (continued)
- Frequency-Doubled Nd:YAG
  - Fisma – Corium 200, Corium 400
  - Lumenis – Novus Spectra
  - Cynosure – SmartLite D

Aphthous Ulcer Treatment
- Er,Cr:YSGG
- Carbon Dioxide
  - ILT Systems – ILT Genesis 2000
  - Lumenis – UltraPulse Encore
  - Lumenis – UltraPulse SurgiTouch, UltraPulse, UltraPulse DUO
  - PhotoMedex – LaserPro CO2
  - Lumenis – OpusDent Family
  - MAX Engineering – Spectra-SP
  - Cynosure - Smart US 20 D, UltraSpeed, Smart Clinic
  - Alma – ThermoXEL, Pixel CO2
  - Lumenis – AcuPulse 30 and 40, AcuPulse 30/40ST and 40WG, AcuPulse, AcuPulse DUO
  - Advanced Technology Laser – ATL-150, ATL-250, eBeam
  - Lutronic – DENTA III, DENTA III+, Spectra DENTA II
  - Lasering – SLIM Evolution II
  - Syneron Medical - CO2RE Laser System
  - EL.EN Electronic Engineering – DEKA Smartxide Ultraspeed
  - Bio-Med USA Cellene CO2 Laser
- Nd:YAG
  - American Dental Technologies – PulseMasters
  - Incisive LLC – InPulse, PinPointe FootLaser
  - Millennium Dental Technologies – PerioLase
  - Lares Research – SunLase 800P (PocketPro)
  - Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker, Dynamis, Dynamis Pro
  - PathoLase - PinPointe and PinPointe FootLaser
  - PinPointe USA – PinPointe FootLaser
  - Nuvolase – PinPointe FootLaser
  - El.En. Electronic Engineering – DEKA SmartPerio
- Diode
  - American Dental Technologies – PulseMaster 1000 ST DioLase ST
  - Dentek Lasersystems – Dentek LD-15
  - CeramOptec – Cerelas Diode Model D15, Cerelas Diode Model D10
  - BioLase Technology – Twilight, EZLase, ezlase 10W, iLase, EPIC 10, Epic Pro, Epic Pro 940, Epic 980
  - OpusDent Ltd. – Opus 10
  - Continuum Electro-Optics – DioDent Dental Laser System
  - American Dental Technologies – DioLase 980 D
  - BioLase Technology – LaserSmile
  - MSq(M2) – Dio-Lase 10
  - HOYA ConBio – LVI Lase, DioDent II
  - Ivoclar Vivadent – Odyssey 2.4G
Aphthous Ulcer Treatment (continued)

- **Diode (continued)**
  - Biolitec – CeraLas D100, CeraLas D150, CeraLas D15, CeraLas D25, CeraLas D980, CeraLas E 980 (E15/980, E30/980), 180W CeraLas D 980 (D180), CeraLas Multiwavelength 980/1470 nm Diode Laser System, Evolve HPD 980, Evolve 980/1470 nm Multiwavelength Diode Laser (Evolve Dual)
  - Sirona Dental Systems – SIROLaser, SIROLaser Advance, SIROLaser Advance+, SIROLaser Blue
  - Vision Lasertechnik – MDL-10/15
  - ProSurg – LaserTx
  - Xintec – Vectra
  - Spectrum International – Prometey
  - Flexxion – Clarus Dental Laser System
  - Ivoclar Vivadent – Odyssey Navigator
  - Quanta System – Diode Medical Laser Family (940, 980 nm), Polysurge Diode Laser Family (940, 980)
  - KaVo America – GENTLEray 980
  - Light Instruments – LiteDuo
  - OroScience – Curative 980
  - Fotona – XD Diode Laser, SkyPulse, XPulse Pro, XPulse 810, XPulse 980, XPulse 1064
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - Lambda Scientifica – Doctor Smile A-810, B-980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Light Instruments – D-STORM
  - Dental Photonics – stLase
  - Lambda – Doctor Diode (810, 940, 980 nm)
  - Discus Dental – SL3
  - Den-Mat Holdings – Sapphire ST, Sapphire Plus STM
  - China Daheng Group – PenLase
  - Asclepion Laser Technologies – Orion
  - Mira Lasers – Zeno 2, Zeno 4
  - Zolar Technology – Photon/Photon Plus
  - Den-Mat – SOL Portable Diode Laser
  - Azena Medical – ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
  - Sheumann Laser – NeoLas 810 nm
  - VIAX Dental Lab – Lucerna VDL980-1
  - Bio-med USA – Dental 5 Multi Diode Laser
  - Lazon Medical Laser SOLASE-808, SOLASE-976
  - HULASER – K2 Module
  - DentLight – Ultrafast, Ultrafast Plus, Ultrafast Lite
  - Guilin Woodpecker Medical Instrument – D-Laser Blue, D-Laser 16
  - Shenzhen Soga Technology – SOGA Laser ILaser I, SOGA Laser ILaser II
- **Frequency-Doubled Nd:YAG**
  - Fisma – Corium 200, Corium 400
  - Lumenis – Novus Spectra
  - Cynosure – SmartLite D
- **Er:YAG**
  - KaVo America – KEY Laser 1242, KEY Laser 1242, 1243+
  - HOYA ConBio – VersaWave
  - J. Morita Mfg. Corp. – AdvErL EVO MEY-1-A
Sulcular Debridement

- Nd:YAG
  - American Dental Technologies – PulseMasters
  - Lares Research – SunLase 800P (PocketPro)
  - Incisive LLP – InPulse, PinPointe FootLaser
  - Millennium Dental Technologies – PerioLase
  - Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker
  - PathoLase – PinPointe and PinPointe FootLaser
  - PinPointe USA – PinPointe FootLaser
  - Nuvolase – PinPointe FootLaser
  - El.En. Electronic Engineering – DEKA SmartPerio

- Diode
  - American Dental Technologies – PulseMaster 1000 ST DioLase ST
  - Premier Laser Systems – Aurora, Aurora HL
  - CeramOptec – Cerelas Diode Model D15, Cerelas Diode Model D10
  - Dentek Lasersystems – Dentek LD-15
  - BioLase Technology – Twilight
  - OpusDent Ltd. – Opus 10
  - Continuum Electro-Optics – DioDent Dental Laser System
  - American Dental Technologies – DioLase 980 D
  - BioLase Technology – LaserSmile, EZLase, ezlase 10W, iLase, EPIC 10, Epic Pro, Epic Pro 940, Epic 980
  - MSq(MF) – Dio-Dent 10
  - HOYA ConBio – LVI Lase, DioDent II
  - Ivoclar Vivadent – Odyssey 2.4G
  - Biolitec – Ceralas D100, Ceralas D150, Ceralas D15, Ceralas D25, Ceralas D980, Ceralas E 980 (E15/980, E30/980), 180W Ceralas D 980 (D180), Ceralas Multiwavelength 980/1470 nm Diode Laser System, Evolve HPD 980, Evolve 980/1470 nm Multiwavelength Diode Laser (Evolve Dual)
  - Sirona Dental Systems – SIROLaser, SIROLaser Advance, SIROLaser Advance+, SIROLaser Blue
  - ProSurg – LaserTx
  - Xintec – Vectra
  - Spectrum International – Prometey
  - Elexxion – ClaroS Dental Laser System, ClaroS Nano
  - Ivoclar Vivadent – Odyssey Navigator
  - Quanta System – Diode Medical Laser Family (940, 980 nm), Polysurge Diode Laser Family (940, 980)
  - KaVo America – GENTLEray 980
  - Light Instruments – LiteDuo
  - OroScience – Curative 980
  - Fotona – XD Diode Laser, SkyPulse, XPulse Pro, XPulse 980, XPulse 1064
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - Lambda Scientifica – Doctor Smile A-810, B-980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Light Instruments – D-STORM
  - Dental Photonics – stLase
  - Lambda – Doctor Diode (810, 940, 980 nm)
  - Discus Dental – SL3
  - Den-Mat Holdings – Sapphire ST, Sapphire Plus STM
  - China Daheng Group – PenLase
  - Asclepion Laser Technologies – Orion
  - Mira Lasers – Zeno 2, Zeno 4
Sulcular Debridement (continued)

- **Diode (continued)**
  - Zolar Technology - Photon/Photon Plus
  - Den-Mat - SOL Portable Diode Laser
  - Azena Medical - ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
  - VIAX Dental Lab - Lucerna VDL980-1
  - Bio-med USA - Dental 5 Multi Diode Laser
  - Lazon Medical Laser SOLASE-808, SOLASE-976
  - HULASER - K2 Module
  - DentLight - Ultrafast, Ultrafast Plus, Ultrafast Lite
  - Guilin Woodpecker Medical Instrument - D-Laser Blue, D-Laser 16
  - Shenzhen Soga Technology - SOGALaser ILaser I, SOGALaser ILaser II
- **Er, Cr:YSGG**
- **Er:YAG**
  - KaVo America - KEY Laser 1242, KEY Laser 1242, 1243+
  - Fotona - Fidelis, Fidelis III, LightWalker, SkyPulse
  - OpusDent - OpusDuo EC
  - HOYA ConBio - VersaWave
  - Lumenis - OpusDent Family
  - Sciton - Profile
  - Light Instruments - LiteTouch, LiteDuo
  - J. Morita Mfg. Corp. - AdvErL EVO MEY-1-A
  - Sheaumann Laser - NeoLas Er:YAG
  - LightMed Dental Technology - LightMed
- **Carbon Dioxide**
  - OpusDent - OpusDuo EC
  - Cynosure - Smart US 20 D, UltraSpeed, Smart Clinic, PerioPulse
  - Lutronic - DENTA III, DENTA III+, Spectra DENTA II
  - EL.EN Electronic Engineering - DEKA Smartxide Ultraspeed

Caries Removal, Cavity Preparation, Enamel Roughening

- **Er:YAG**
  - Premier Laser Systems - Centauri
  - Continuum Biomedical - DeL 2940 Dental Erbium Laser, DeLite Dental Erbium Laser
  - Kavo KEY Laser 1242, KEY Laser 1242, 1243+
  - Fotona - Fidelis, Dualis, Fidelis III, LightWalker, SkyPulse
  - OpusDent Ltd. - Opus 20, Spectrum
  - American Dental Technologies - PulseMaster Erbium
  - Cynosure - Smart 2940D
  - HOYA ConBio - VersaWave
  - Lumenis - OpusDent Family
  - Sciton - Profile
  - Light Instruments - LiteTouch, LiteDuo
  - J. Morita Mfg. Corp. - AdvErL EVO MEY-1-A
  - LightMed Dental Technology - LightMed
- **Er, Cr:YSGG**
Illumination for Caries Detection
- Argon
  - Premier Laser Systems – Arago II
  - Fisma – Dental 200, Dental 300, Dental 400

Aid in Diagnosis of Dental Caries
- Diode
  - KaVo America Corporation – DIAGNOdent Laser Fluorescence Caries Detection Device, DIAGNOdent 2095, DIAGNOdent 2190
  - Quantum Dental Technologies – The Canary System
  - Kaltenbach & Voigt – DIAGNOcam 2170
  - D4D Technologies – TIA Tip, Cariosity, Transillumination Accessory Tip

Illumination for Endodontic Orifice Location
- Argon
  - Premier Laser Systems – Arago II
  - Fisma – Dental 200, Dental 300, Dental 400

Removal of Coronal Pulp, Adjunct to Root Canal Procedures
- Nd:YAG
  - Premier Laser Systems – Pegasus
- Diode
  - Premier Laser Systems – Aurora

Pulpotomy as Adjunct to Root Canal Retreatment
- Diode
  - CeramOptec – Ceralas D15, Ceralas Diode Model D10
  - Dentek Lasersystems – Dentek LD-15
  - BioLase Technology – Twilight, EZLase, ezlase 10W, iLase, EPIC 10, Epic Pro, Epic Pro 940, Epic 980
  - Premier Laser Systems – Aurora HL
  - OpusDent – Opus 10
  - Continuum Electro-Optics – DioDent Dental Laser System
  - American Dental Technologies – DioLase 980 D
  - BioLase Technology – LaserSmile
  - MSq(M²) – Dio-Dent 10
  - HOYA ConBio – DioDent II
  - Biolitec – Ceralas D810, Ceralas D980, Ceralas D100, Ceralas D150, Ceralas E 980 (E15/980, E30/980), 180W Ceralas D 980 (D180), Ceralas Multiwavelength 980/1470 nm Diode Laser System, Evolve HPD 980, Evolve 980/1470 nm Multiwavelength Diode Laser (Evolve Dual)
  - Sirona Dental Systems – SIROLaser, SIROLaser Advance, SIROLaser Advance+, SIROLaser Blue
  - Vision Lasertechnik – MDL-10/15
  - ProSurg – LaserTx
  - Xintec – Vectra
  - INTERmedic Arfran – INTERmedic, INTERmedic Diode Laser 980 nm System
  - Spectrum International – Prometey
  - Elexxion – Claros Dental Laser System, Claros Nano
  - Quanta System – Diode Medical Laser Family (808, 940, 980 nm), Polysurge Diode Laser Family (808, 940, 980)
  - KaVo America – GENTLEray 980
  - Light Instruments – LiteDuo
  - OroScience – Curative 980
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Pulpotomy as Adjunct to Root Canal Retreatment (continued)

- Diode (continued)
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - Lambda Scientifica – Doctor Smile A-810, B-980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Light Instruments – D-STORM
  - Dental Photonics – stLase
  - Lambda – Doctor Diode (810, 940, 980 nm)
  - Asclepion Laser Technologies – Orion
  - Zolar Technology – Photon/Photon Plus
  - Azena Medical - ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
  - Sheaumann Laser – NeoLas 810 nm
  - Bio-med USA – Dental 5 Multi Diode Laser
  - Lazon Medical Laser SOLASE-808, SOLASE-976
  - Fotona – SkyPulse, XPulse Pro, XPulse 980, XPulse 1064
  - HULASER – K2 Module
  - DentLight – Ultrafast, Ultrafast Plus, Ultrafast Lite
  - Guulin Woodpecker Medical Instrument – D-Laser Blue, D-Laser 16
  - Shenzhen Soga Technology – SOGALaser I, SOGALaser II

- Nd:YAP
  - Lokki – Lokki DT

- Nd:YAG
  - Incisive LLC – Inpulse, PinPointe FootLaser
  - Lares Research – SunLase 800P (PocketPro)
  - Millennium Dental Technologies – PerioLase
  - Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker
  - PathoLase – PinPointe and PinPointe FootLaser
  - PinPointe USA – PinPointe FootLaser
  - Nuvolase – PinPointe FootLaser
  - El.En. Electronic Engineering – DEKA SmartPerio

- Er,Cr:YSGG

- Er:YAG
  - Continuum Electro-Optics – DELight Dental Laser System
  - OpusDent – OpusDuo EC
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - KaVo, KEY Laser 1242, 1243+
  - Sciton – Profile 2940
  - Light Instruments – LiteTouch, LiteDuo
  - Fotona – Fidelis III, LightWalker, SkyPulse
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - LightMed Dental Technology – LightMed
Selective Removal of Enamel (First Degree) Caries

- Nd:YAG
  - American Dental Technologies – PulseMasters
  - Incisive LLC – InPulse, PinPointe FootLaser
  - Lares Research – SunLase 800P (PocketPro)
  - Millennium Dental Technologies – PerioLase
  - PathoLase – PinPointe and PinPointe FootLaser
  - PinPointe USA – PinPointe FootLaser
  - Nuvolase – PinPointe FootLaser
  - El.En. Electronic Engineering – DEKA SmartPerio

Removal of Filling Materials as Adjunctive Treatment During Root Canal Retreatment

- Nd:YAP
  - Lokki – Lokki DT
- Nd:YAG
  - Incisive LLC – InPulse, PinPointe FootLaser
  - Lares Research – SunLase 800P (PocketPro)
  - Millennium Dental Technologies – PerioLase
  - Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker
  - PathoLase – PinPointe and PinPointe FootLaser
  - PinPointe USA – PinPointe FootLaser
  - Nuvolase – PinPointe FootLaser
  - El.En. Electronic Engineering – DEKA SmartPerio
- Diode
  - Fotona – SkyPulse, XPulse 1064

Treatment of Herpetic Lesions

- Er,Cr:YSGG
- Nd:YAG
  - Lares Research – SunLase 800P (PocketPro)
  - Fotona – Fidelis Plus, Fidelis III, Fotona XP, LightWalker, Dynamis Pro
- Frequency-Doubled Nd:YAG
  - Fisma – Corium 200, Corium 400
  - Lumenis – Novus Spectra
  - Cynosure – SmartLite D
- Diode
  - BioLase Technology – LaserSmile, EZLase, ezlase 10W, iLase, EPIC 10, Diolase 10S, Epic 10S, Epic 980
  - Vision Lasertechnik – MDL-10/15
  - Spectrum International – Prometey
  - ElecXion – Claros Dental Laser System, Claros Nano
  - Quanta System – Diode Medical Laser Family (940 nm), Polysurge Diode Laser Family (940)
  - OroScience – Curative 980
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - Lambda Scientifica – Doctor Smile A-810
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Lambda – Doctor Diode (810, 940 nm)
  - Sirona Dental Systems – SIROLaser Advance, SIROLaser Advance+, SIROLaser Blue
  - Zolar Technology – Photon/Photon Plus
  - Azena Medical – ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
  - Sheumann Laser – NeoLas 810 nm
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Lasers for Intraoral Use
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Treatment of Herpetic Lesions (continued)

- Diode (continued)
  - Fotona – SkyPulse, XPulse Pro, XPulse 810, XPulse 1064
  - HULASER – K2 Module
  - DentLight – Ultrafast, Ultrafast Plus, Ultrafast Lite
  - Guilin Woodpecker Medical Instrument – D-Laser Blue, D-Laser 16
  - Shenzhen Soga Technology – SOGALaser ILaser I, SOGALaser ILaser II
- Er:YAG
  - KaVo America – KEY Laser 1242, KEY Laser 1242, 1243+
  - HOYA ConBio – VersaWave
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
- Frequency-Doubled Nd:YAG
  - Fisma – Cortum 200, Corium 400

Blood Flow Measurements

- Diode
  - Moor Instruments – DRT4 Laser Doppler Perfusion and Temperature Monitor, moorVMS-LDF1 and VMS-LDF2 Laser Doppler Perfusion and Temperature Monitor, moorLDLS-BI Laser Doppler Burns Imager

Tooth Preparation to Obtain Access to Root Canal, Pulp Extirpation, Root Canal Debridement and Cleaning, Root Canal Preparation including Enlargement

- Er, Cr:YSGG
- Er:YAG
  - Continuum Electro-Optics – DELight Dental Laser System
  - OpusDent – OpusDuo EC
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - KaVo, KEY Laser 1242, 1243+
  - Sciton – Profile 2940
  - Light Instruments – LiteTouch, LiteDuo
  - Fotona – Fidelis III, LightWalker, SkyPulse
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - LightMed Dental Technology – LightMed

Enameloplasty, Excavation of Pits and Fissures for Placement of Sealants

- Er:YAG
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - Sciton – Profile
  - Light Instruments – LiteTouch, LiteDuo
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - LightMed Dental Technology – LightMed

- Er, Cr:YSGG
Selected U.S. FDA Marketing Clearances
Lasers for Intraoral Use
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Cutting, Shaving, Contouring and Resection of Oral Osseous Tissues (Bone)

- **Er,Cr:YSGG**

- **Er:YAG**
  - HOYA ConBio – DELight Dental Laser System
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - Sciton – Profile
  - Light Instruments – LiteTouch, LiteDuo
  - Fotona – Fidelis III, LightWalker, SkyPulse
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - LightMed Dental Technology – LightMed

- **Carbon Dioxide**
  - Convergent Dental – Solea

Apicoectomy Surgery

- **Er,Cr:YSGG**

- **Er:YAG**
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - Sciton – Profile
  - Light Instruments – LiteTouch, LiteDuo
  - Fotona – Fidelis III, LightWalker, SkyPulse
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - LightMed Dental Technology – LightMed

Coagulation of Extraction Sites

- **Diode**
  - MSq(M²) – Dio-Dent 10

- **Carbon Dioxide**
  - PhotoMedex – LaserPro CO2
  - Lumenis – AcuPulse 30/40ST and 40WG, AcuPulse, AcuPulse DUO
  - Bio-Med USA Cellene CO₂ Laser

Ostectomy, Osteotomy, Osseous Crown Lengthening, Osteoplasty

- **Er,Cr:YSGG**

- **Er:YAG**
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - Sciton – Profile
  - Light Instruments – LiteTouch, LiteDuo
  - Fotona – Fidelis III, LightWalker, SkyPulse
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
Selected U.S. FDA Marketing Clearances
Lasers for Intraoral Use
by Company and Device (continued)
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Laser-Assisted New Attachment Procedure (cementum-mediated periodontal ligament new-attachment to the root surface in the absence of long junctional epithelium)

- Nd:YAG
  - Millennium Dental Technologies – PerioLase
  - Fotona – Lightwalker
  - El.En. Electronic Engineering – DEKA SmartPerio

- Carbon Dioxide
  - Cynosure – Smart US 20 D, UltraSpeed, Smart Clinic, PerioPulse
  - Lutronic – DENTA III, DENTA III+, Spectra DENTA II
  - El.EN Electronic Engineering – DEKA Smartxide Ultraspeed

- Er,Cr:YSGG
  - Biolase Technology – Waterlase MD, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus

- Diode
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus

Cutting Bone to Prepare a Window Access to the Apex (Apices) of the Root(s)

- Er:YAG
  - HOYA ConBio – VersaWave
  - Lumenis – OpusDent Family
  - Sciton – Profile
  - Light Instruments – LiteTouch, LiteDuo
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - Fotona – LightWalker, SkyPulse

- Er,Cr:YSGG
  - Biolase Technology – Waterlase, Waterlase MD, Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus

Root End Preparation for Retrofit Amalgam or Composite

- Er:YAG
  - HOYA ConBio – VersaWave
  - J. Morita Mfg.Corp. – AdvErL EVO MEY-1-A
  - Sheaumann Laser – NeoLas Er:YAG
  - Fotona – LightWalker, SkyPulse

- Er,Cr:YSGG
  - Biolase Technology – Waterlase 3.0, Waterlase MD, Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus

Reduction of Bacterial Level (Decontamination) and Inflammation

- Diode
  - BioLase Technology – Twilight, Epic 980
  - OroScience – Curative 980
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Azena Medical - ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980

Aid in Detection (and Localization) of Subgingival Dental Calculus

- Diode
  - KaVo America Corporation – DIAGNOdent Perio Tip, DIAGNOdent 2190 with Periodontal Probe
Selected U.S. FDA Marketing Clearances
Lasers for Intraoral Use
by Company and Device (continued)
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Root Canal Disinfection after Endodontic Instrumentation / Treatment
- Er,Cr:YSGG
  - Biolase Technology – Waterlase, Waterlase MD, Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, EdgePro, Waterlase iPlus
- Er:YAG
  - Fotona – LightWalker, SkyPulse

Removal of Subgingival Calculi in Periodontal Pockets
- Er:YAG
  - KaVo - KEY Laser III 1243
  - Fotona - LightWalker, SkyPulse
  - J. Morita Mfg. Corp. – AdvErL EVO MEY-1-A
- Er,Cr:YSGG
  - Biolase Technology – Waterlase MD, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus

Removal of Highly Inflamed Edematous Tissue Affected by Bacteria Penetration of the Pocket Lining and Junctional Epithelium
- Diode
  - BioLase – Lasersmile, Epic 980
  - AMD Lasers – Picasso, Picasso Lite, Picasso Perio, Picasso Plus, Picasso Lite Plus
  - QuickLase – QuickLase DUAL+, 810, 980 Dental Lasers
  - Zolar Technology - Photon, Photon Plus
  - Azena Medical - ELUMI 810 + 980, Gemini 810 + 980, Gemini 2 810 + 980
- Er,Cr:YSGG
  - Biolase Technology – Waterlase, Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus
- Er:YAG
  - J. Morita Mfg. Corp. – AdvErL EVO MEY-1-A
  - Sheaumann Laser – NeoLas Er:YAG
  - Fotona – LightWalker, SkyPulse

Removal of Pathological Tissues (i.e., Cysts, Neoplasm or Abscess) and Hyperplastic Tissues (i.e., Granulation Tissue) from around the Apex
- Er,Cr:YSGG
  - Biolase Technology – Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, Waterlase iPlus
- Er:YAG
  - J. Morita Mfg. Corp. – AdvErL EVO MEY-1-A
  - Sheaumann Laser – NeoLas Er:YAG
  - Diode
    - Sheaumann Laser – NeoLas 810 nm

Ablation of Hard Tissue for Caries Removal and Cavity Preparation
- Carbon Dioxide
  - Convergent Dental – Solea
Selected U.S. FDA Marketing Clearances
Lasers for Intraoral Use
by Company and Device (continued)
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Diagnostic Aid for Detection of Open or Incipient Caries Lesions Above the Gingiva and for Monitoring the Progress of Such Lesions, includes Detection of Cracks
- Diode
  - Kaltenbach & Voigt – DIAGNOcam 2170

Root Canal Debridement and Cleaning
- Er,Cr:YAG
  - Biolase – Waterlase C100, Waterlase MD Turbo Plus, Orthopedic iPlus, Waterlase Express, EdgePro, Waterlase iPlus
- Diode
  - Sheaumann Laser – NeoLas 810 nm

Periodontal Regeneration – True Regeneration of the Attachment Apparatus (New Cementum, New Periodontal Ligament, and New Alveolar Bone) on a Previously Diseased Root Surface When Used Specifically in the LANAP® Protocol
- Nd:YAG
  - Millennium Dental Technologies – PerioLase

Photoinitiation of Gingival Barriers and Dams
- Diode
  - VIAX Dental Lab – Lucerna VDL980-1

Periodontal Regeneration – True Regeneration of the Attachment Apparatus (New Cementum, New Periodontal Ligament, and New Alveolar Bone) on a Previously Diseased Root Surface
- Nd:YAG
  - Fotona – Lightwalker

Facilitation of Subgingival Calculus Removal
- Nd:YAG
  - Millennium Dental Technologies – PerioLase

Modification of the Dentin Surface, Including Increasing the Mineral and Decreasing the Organic Composition of the Dentin Surface, Reducing Bacteria on the Dentin Surface, Improving the Shear Bond Strength of Composite Resin, Reducing the Adhesive Failure of Composite Resin, and Removing Demineralized Dentin Surfaces
- Nd:YAG
  - Millennium Dental Technologies – PerioLase

Removal of Porcelain and Ceramic Crowns and Veneers
- Er,Cr:YSGG
  - Biolase – Waterlase, Waterlase iPlus
- Er:YAG
  - Fotona – LightWalker, SkyPulse

Curing Photoactivated Dental Restorative Materials and Adhesives
- Diode
  - CAO Group – Monet Curing Laser
Selected U.S. FDA Marketing Clearances
Lasers for Intraoral Use
by Company and Device (continued)
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Diagnostic Aid for Viewing the Interproximal Areas of Dental Anatomy to Detect and Monitor the Progression of Proximal Carious Lesions Above the Gingiva
- Diode
  - D4D Technologies – TIA Tip, Cariosity, Transillumination Accessory Tip

Aiding in the Reduction of Mineral Loss in Dental Enamel
- Carbon Dioxide
  - Convergent Dental – Solea