



Food and Drug Administration  
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September 20, 2016

Optimedica Corporation  
Mr. Ankur Kaushal  
Manager, Regulatory Affairs  
1310 Moffet Park Drive  
Sunnyvale, CA 94089

Re: K161455  
Trade/Device Name: Catalys Precision Laser System  
Regulation Number: 21 CFR 886.4390  
Regulation Name: Ophthalmic Laser  
Regulatory Class: Class II  
Product Code: OOE  
Dated: August 19, 2016  
Received: August 22, 2016

Dear Mr. Kaushal:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the [Federal Register](#).

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling; medical device reporting (reporting of medical device-related adverse

events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation , please contact the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Industry and Consumer Education at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

*Kesia Alexander*

for Malvina B. Eydelman, M.D.  
Director  
Division of Ophthalmic and Ear,  
Nose and Throat Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known): K161455

Device Name: Catalys Precision Laser System

Indications for Use: The OptiMedica Catalys Precision Laser System is indicated for use in patients undergoing cataract surgery for removal of the crystalline lens. Intended uses in cataract surgery include anterior capsulotomy, phacofragmentation, and the creation of single plane and multi-plane arc cuts/incisions in the cornea, each of which may be performed either individually or consecutively during the same procedure.

Prescription Use    
 (Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use   
 (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

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**510(k) Summary**

The following 510(k) summary is submitted in accordance with the requirements of 21 CFR 807.92:

**5.1.1. Applicant**

OptiMedica Corporation  
(A subsidiary of Abbott Medical Optics Inc.)  
1310 Moffett Park Drive  
Sunnyvale, CA 94089  
Phone: 408.792.8207  
Fax: 408.850.8595

**5.1.2. Contact Person**

Ankur Kaushal  
Manager, Regulatory Affairs  
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**5.1.3. Date Prepared**

19 August 2016

**5.1.4. Classification**

Class II  
Regulation Number: 21 CFR 886.4390  
Regulation Name: Ophthalmic laser  
Classification Product Code: OOE  
Classification Product Code Name: Ophthalmic Femtosecond Laser

**5.1.5. Trade Name**

Catalys Precision Laser System

**5.1.6. Predicate Devices**

Catalys Precision Laser System; K141079, cleared 11 Sept 2014

**5.1.7. Intended Use**

The *OptiMedica Catalys*<sup>1</sup> Precision Laser System is indicated for use in patients undergoing cataract surgery for removal of the crystalline lens. Intended uses in cataract surgery include anterior capsulotomy, phacofragmentation, and the creation of single plane and multi-plane arc cuts/incisions in the cornea, each of which may be performed either individually or consecutively during the same procedure.

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### **5.1.8. Device Description**

The Catalys Precision Laser System (“Catalys System” or “System”) is an ophthalmic surgical laser system indicated for use in cataract surgery to create a precise anterior capsulotomy and/or to effect lens fragmentation, thus facilitating efficient lens removal. The System also creates single plane and multi-plane arc cuts/incisions in the cornea, each of which may be performed either individually or consecutively during the same procedure. The System employs femtosecond (“FS”) laser technology with integrated Optical Coherence Tomography (“OCT”), all of which are controlled and monitored by dedicated electronics. The System utilizes a common optical path for the OCT and femtosecond treatment laser (including the three-dimensional scanner and *Liquid Optics*<sup>2</sup>[patient] Interface). As such, the beams are intrinsically co-registered and provide for precise overlap between imaging and treatment beams. Ocular surfaces recognized by the system software include anatomy within the anterior chamber, such as the anterior and posterior corneal surfaces and the anterior and posterior surfaces of the crystalline lens. Detailed axial or sagittal cross-sectional views are available via OCT, to demarcate proposed incisions versus adjacent ocular structures (for example, iris, pupil and limbus).

Per 21 CFR 1040.10 and 1040.11, the Catalys Precision Laser System is classified as a Class 4 laser.

### **5.1.9. Substantial Equivalence**

The Catalys Precision Laser System is substantially equivalent to the predicate device (as cleared via K141079) in terms of indications for use, technological characteristics and fundamental scientific technology. The mechanism of laser cutting is the same for both systems, in that the ultra-short laser pulses create a highly localized plasma and subsequent cavitation event that, when controlled by a computerized scanning system, direct the laser beam through a three-dimensional pattern to produce a precise capsulotomy, fragment the crystalline lens and create arc cuts/incisions in the cornea.

As compared to the predicate device, the subject device has an upgraded system software version cOS 3.90. Software version cOS 3.90 now provides additional software based surveillance of the vacuum pressure applied to the Liquid Optics Interface (LOI), as well as other indicators of LOI suction during docking and monitoring of the video image for fluid loss during treatment.

### **5.1.10. Summary of Bench and Animal Performance Testing**

Software specific bench testing of the Catalys System was conducted to demonstrate the System’s ability to meet all intended design specifications related to the software design changes.

Bench testing of the predicate device (resident in K141079) with regards to the ability to deliver a variety of laser patterns intended for capsulotomy, phacofragmentation and corneal incisions with corresponding accuracy and

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precision is directly applicable to the subject device as there are no significant changes to the subject device other than the design changes resident in the software.

Animal testing of the predicate device (resident in K141079) with regards to the assessment of the safety of the Catalys Precision Laser System, with respect to corneal incisions is directly applicable to the subject device as there are no significant changes to the subject device other than the design changes resident in the software.

Clinical testing of the Catalys System predicate device (resident in K141079) is directly applicable to the subject device as there are no significant changes to the subject device other than the design changes resident in the software.

The bench, animal and clinical performance testing provided in K141079, when coupled with the software verification and validation testing presented for the subject device, provides reasonable assurance that the System is safe and effective for its intended use and furthermore, that it is substantially equivalent to the identified predicate device.