



December 4, 2023

Shenzhen Greatro Electronic Technology Co., Ltd.
% Bing Huang
Registration Engineer
Feiyang Drug & Medical Consulting Technical Service Group
Rm 2401 Zhenye International Center, No. 3101-90
Qianhai Road, Nanshan District
Shenzhen, Guangdong 518000
China

Re: K232932

Trade/Device Name: Intense Pulse Light Therapeutic Apparatus
Regulation Number: 21 CFR 878.4810
Regulation Name: Laser Surgical Instrument For Use In General And Plastic Surgery And In Dermatology
Regulatory Class: Class II
Product Code: OHT
Dated: September 19, 2023
Received: September 20, 2023

Dear Bing Huang:

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 (the 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. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database available at <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm> identifies combination product submissions. 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.

Additional information about changes that may require a new premarket notification are provided in the FDA guidance documents entitled "Deciding When to Submit a 510(k) for a Change to an Existing Device" (<https://www.fda.gov/media/99812/download>) and "Deciding When to Submit a 510(k) for a Software Change to an Existing Device" (<https://www.fda.gov/media/99785/download>).

Your device is also subject to, among other requirements, the Quality System (QS) regulation (21 CFR Part 820), which includes, but is not limited to, 21 CFR 820.30, Design controls; 21 CFR 820.90, Nonconforming product; and 21 CFR 820.100, Corrective and preventive action. Please note that regardless of whether a change requires premarket review, the QS regulation requires device manufacturers to review and approve changes to device design and production (21 CFR 820.30 and 21 CFR 820.70) and document changes and approvals in the device master record (21 CFR 820.181).

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 (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR Part 803) for devices or postmarketing safety reporting (21 CFR Part 4, Subpart B) for combination products (see <https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products>); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR Part 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR Parts 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems>.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance>) and CDRH Learn (<https://www.fda.gov/training-and-continuing-education/cdrh-learn>).

Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (<https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice>) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

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Tanisha Hithe
Assistant Director
DHT4A: Division of General Surgery Devices
OHT4: Office of Surgical
and Infection Control Devices
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

Indications for Use

510(k) Number (if known)

K232932

Device Name

Intense Pulse Light Therapeutic Apparatus, Model(s): IPL-1 PRO, IPL-1, IPL-12, IPL-17

Indications for Use (Describe)

Intense Pulse Light Therapeutic Apparatus is an over-the-counter device intended for removal of unwanted body hair.

Type of Use (Select one or both, as applicable)

☐ Prescription Use (Part 21 CFR 801 Subpart D)

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

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary K232932

"510(k) Summary" as required by 21 CFR Part 807.92.

Date: 2023-11-24

I. Submitter

Shenzhen Greatro Electronic Technology Co., Ltd
East Side, 4/F Building A1, Xu'xing'da Industrial Park, Shiyan Sub-district, Bao'an District ,
Shenzhen, China
Post code: 518108
Tel.: +86 755 86321189

Xinhua Yue
Project Manager
Tel.: + 86 139 2374 2027
Email: janis@jrdmic.com

II. Device

Name of Device: Intense Pulse Light Therapeutic Apparatus
Model(s): IPL-1 PRO, IPL-1, IPL-12, IPL-17
Common or Usual Name: Light Based Over-The-Counter Hair Removal
Classification Name: Laser surgical instrument for use in general and plastic surgery and in dermatology
Regulatory Class: II
Product Code: OHT
Regulation Number: 21 CFR 878.4810

III. Predicate Device

Primary Predicate device:
510(k) number: K230097
Manufacturer: Shenzhen BSX Technology Electronics Co., Ltd.
Trade name: IPL Hair Removal Device, BSXT101
Product code: OHT
Approval date: April 6, 2023

Reference device:
510(k) number: K220669
Manufacturer: Shenzhen Junbobeauty Technology Co., Ltd.
Trade name: IPL HAIR REMOVAL HANDSET, MODEL: IPL-666
Product code: OHT
Approval date: May 16, 2022

IV. Device Description

The Intense Pulse Light Therapeutic Apparatus is a personal, light-based, hair reduction device intended to be sold over-the-counter directly to the end user. The device provides hair reduction using Intense Pulsed Light (IPL) technology, and it works below the skin's surface and does not involve any cutting or pulling, reducing hair growth with minimal pain.

The Intense Pulse Light Therapeutic Apparatus is only powered by the external power adapter and its IPL emission activation is by finger switch. The device contains a Xenon lamp and its built-in skin sensor to detect appropriate skin contact. If the device is not properly and fully applied to the treated skin, the device will not emit the light pulse.

There are IPL-1 PRO, IPL-1, IPL-12, and IPL-17 four models in this application. Their work principle, function, intended use, structure, and composition are the same, with differences being product appearance, size are slight differences, but these parameters are within the predicate device and do not affect or change the intended use of the device.

V. Indications for Use

Intense Pulse Light Therapeutic Apparatus is an over-the-counter device intended for removal of unwanted body hair.

VI. Comparison of Technological Characteristics With the Predicate Device

The subject device Intense Pulse Light Therapeutic Apparatus has the same intended use, mode of action and similar operational characteristics as the predicate device. Any minor differences between the subject device and the listed predicate device do no raise any issues of safety or efficacy. Performance data supports that the device is safe and as effective as the predicate device for its intended use. Therefore, the subject device may be found substantially equivalent to its predicate device.

The subject device is compared with the following Predicate Device in terms of intended use, design, specifications, and performance:

<u>Comparison Elements</u>	<u>Subject Device</u>	<u>Predicate device K230097</u>	<u>Reference device K220669</u>
K Number	Pending	K230097	K220669
Trade name	Intense Pulse Light Therapeutic Apparatus	IPL Hair Removal Device, BSXT101	IPL HAIR REMOVAL HANDSET , Model: IPL-666
Regulation number	21CFR 878.4810	21CFR 878.4810	21CFR 878.4810
Device class	II	II	II
Product code	OHT	OHT	OHT
Applicable skin	Fitzpatrick Skin Type I-V	Fitzpatrick Skin Type I-V	Fitzpatrick Skin Type I-V
Wavelength range	510~1200nm	470~1200nm	470~1000nm
Energy medium	Xenon Arc Flashlamp	Xenon Arc Flashlamp	Xenon Arc Flashlamp
Energy density	Max 4.92 J/cm ²	Max 5.0J/cm ²	1.3~2.49 J/cm ²

<u>Comparison Elements</u>	<u>Subject Device</u>	<u>Predicate device K230097</u>	<u>Reference device K220669</u>
Spot size	3.3+/-0.25 cm ²	3.0cm ² +/-0.5 cm ²	3 cm ²
Output energy	Level 1: 6.0J Level 2: 7.5J Level 3: 9.5J Level 4: 11.0J Level 5: 12.5J Error is ±20%	Range in 5~12.5J (±20%)	Range in 3.9J~7.47 (±20%)
Output energy level	1 to 5 level	5 level	5 level
Pulse duration	5.84~9.24ms	4~10ms	11.5~15ms
Pulsing control	Finger switch	Finger switch	Finger switch
Delivery device	Direct illumination to tissue	Direct illumination to tissue	Direct illumination to tissue
Indication for use/Intended use	The Intense Pulse Light Therapeutic Apparatus is an over-the-counter device intended for removal of unwanted body hair.	The IPL Hair Removal Device is an over-the-counter device intended for removal of unwanted body and/ or facial hair.	The IPL HAIR REMOVAL DEVICE is an over-the-counter device intended for removal of unwanted body and/ or facial hair.
Location for use	OTC	OTC	OTC
Treatment time	Once a week for 12 weeks	Once a week for 12 weeks	Use one time every two weeks for up to six times; Use one time every four weeks when using 6-10 times.
Sterilization	Not required	No required	No required
Power supply	Input: AC100~240V 50/60z Output: DC12V 3A	100-240v, 50/60Hz	100~240V AC Input 12V 3A DC output

VII. Performance Data

The following performance data were provided in support of the substantial equivalence determination.

1) Biocompatibility Safety

The materials of the patient-directly contacting components of the subject device was performed the biocompatibility evaluation in accordance with the "Use of International Standard ISO 10993-1, 'Biological Evaluation of Medical Devices –Part 1: Evaluation and Testing Within a Risk Management Process, Document issued on Sep. 4, 2020", as recognized by FDA. The battery of testing was performed to, and passed, including:

- ISO 10993-5 Biological Evaluation of Medical Devices –Part 5: Tests for In Vitro Cytotoxicity
- ISO 10993-10 Biological Evaluation of Medical Devices –Part 10: Tests for Skin Sensitization

- ISO 10993-23 Biological Evaluation of Medical Devices –Part 23: Tests for Irritation

2) Electrical Safety and EMC

Electrical safety and EMC testing was performed to, and passed, the following standards:

- IEC 60601-1-2 Medical electrical equipment –Part 1-2: General requirements for basic safety and essential performance –Collateral standard: electromagnetic compatibility
- IEC 60601-1 Medical electrical equipment –Part 1: General requirements for basic safety and essential performance
- IEC 60601-1-11 Medical Electrical Equipment –Part 1: General Requirements for Basic Safety and Essential Performance –Collateral Standard: Requirements for Medical Electrical Equipment and Medical Electrical Systems Used in the Home Healthcare Environment
- IEC 60601-2-83 Medical Electrical Equipment - Part 2-83: Particular Requirements For The Basic Safety And Essential Performance Of Home Light Therapy Equipment

3) Eye Safety

- IEC 62471 Photobiological safety of lamps and lamp systems

4) Software Verification and Validation

Software documentation consistent with *moderate level* of concern was submitted in this 510(k). System validation testing presented in this 510(k) demonstrated that all software requirement specifications are met and all software hazards have been mitigated to acceptable risk levels.

Summary

Based on the above performance as documented in this application, the subject device was found to have a safety and effectiveness profile that is similar to the predicate device.

VIII. Conclusions

In accordance with the Federal Food, Drug and Cosmetic Act, 21 CFR Part 807 and based on the comparison of intended use, design, materials and performance, the subject device Intense Pulse Light Therapeutic Apparatus is to be concluded substantial equivalent to its predicate device.