



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 30117.3-2019

**Photobiological safety of lamps and lamp systems -- Part 3:
Guidelines for the safe use of intense pulsed light source
equipment on humans**

Issued on: October 18, 2019

Implemented on: May 1, 2020

Issued by: SAMR; SAC

Table of Contents

Foreword...	3
1 Scope and Object...	5
1.1 Scope...	5
1.2 Object...	5
2 Normative References...	5
3 Terms and Definitions...	6
4 Responsibility for Safe Working Conditions...	7
5 Risks from Exposure to IPL Optical Radiation...	7
5.1 Risks to the eye...	7
5.2 Skin burns...	8
5.3 Scars...	8
5.4 Hyper/hypo-pigmentation...	8
5.5 Purpura...	9
5.6 Unrecognized malignancies or premalignant conditions on the treatment site...	9
5.7 Delicate anatomy or inappropriate treatment sites...	9
5.8 Drug-induced photosensitivity...	9
5.9 Contra-indicated CLIENT conditions...	9
6 Causes of Risks...	10
6.1 General...	10
6.2 Operator errors...	10
6.3 Poor CLIENT compliance...	12
6.4 IPL OUTPUT variability from older equipment...	12
6.5 Risks from other potential hazards...	13
6.6 Cleansing and disinfecting...	13
7 Risk Assessment...	13
8 Education and Training...	15
Annex A (Informative) Biological Effects, SKIN TYPES...	17
Annex B (Informative) Personal Eye Protection...	25
Annex C (Informative) IPL Technology, Classification...	26
Annex D (Informative) Warning Sign...	27
Annex E (Informative) Local Rules...	28
Bibliography...	33

Foreword

GB/T 30117 Photobiological Safety of Lamps and Lamp Systems consists of the following parts.

- Part 1.General Requirements;
- Part 2.Guidance on Manufacturing Requirements Relating to Non-Laser Optical Radiation Safety;
- Part 3.Guidelines for the Safe Use of Intense Pulsed Light Source Equipment on Humans;
- Part 4.Measuring Methods;
- Part 5.Image Projectors;
- Part 6.Ultraviolet Lamps Products.

This Part is Part 3 of GB/T 30117.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part used translation method to equivalently adopt IEC TR 62471-3:2015
Photobiological

Safety of Lamps and Lamp Systems - Part 3.Guidelines for the Safe Use of Intense Pulsed
Light Source Equipment on Humans.

This Part made the following editorial modifications.

- Change the explanatory phrase in "3.6 Responsible Person" in the international standard into "NOTE";
- Change the explanatory phrase in "5.9 Contraindications" in the international standard from "Currently using photosensitizing drugs for treatment. See 5.9 for details of the drugs" into "Currently using photosensitizing drugs for treatment. See 5.8 for details of the drugs."

Please note some contents of this Document may involve patents. The issuing agency of this

Document shall not assume the responsibility to identify these patents.

This Part was proposed by China Machinery Industry Federation.

This Part shall be under the jurisdiction of National Technical Committee on Optical
Radiation

Safety and Laser Equipment of Standardization Administration of China (SAC/TC 284).

Drafting organizations of this Part. Hangzhou Zhejiang University Sensing Instruments Co., Ltd.; Xiamen Institute of Measurement and Testing; Puyang Quality and Technical Supervision

Inspection and Testing Center; Zhejiang Smart Lighting Technology Co., Ltd.; People's Liberation Army General Hospital; Wenzhou Medical University; Hangzhou Santai Testing Photobiological Safety of Lamps and Lamp Systems - Part

3 Guidelines for the Safe Use of Intense Pulsed Light Source

Equipment on Humans

1.1 Scope

This Part of GB/T 30117 provides guidelines for the safe use of INTENSE PULSED LIGHT (IPL) source equipment in professional premises.

This Part sets out the control measures recommended for the safety of recipients of IPL treatment, staff, service, maintenance personnel and others. Engineering controls which form

part of the IPL equipment or the installation are also briefly described to provide an understanding of the general principles of protection.

1.2 Object

The object of this Part is to provide information which helps to protect persons from hazardous

exposure to optical radiation and other associated hazards by providing guidance on how to establish safety measures and procedures.

NOTE. Although the manufacturers provide treatment information in their instructions for use, such

information may not be exhaustive or applicable to all CLIENT treatment conditions.

If IPLs are applied to patients in medical premises, the physician is deemed to be responsible

for all medical aspects of the treatment including his or her decisions about questions of indication and contraindication such as found in Clauses 5 and 6.

2 Normative References

The following documents, in whole or in part, are normatively referenced in this document and

are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments)

applies.

.....