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

GB/T 7247.5-2024

**Safety of laser products - Part 5: Manufacturer's checklist for
GB/T 7247.1**

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 5 of GB/T 7247 Safety of Laser Products. GB/T 7247 has been published in the following parts.

- Part 1: Equipment classification and requirements;
- Part 2: Safety of optical fiber communication systems (OFCS);
- Part 3: Guidelines for laser shows and performances;
- Part 4: Laser protection screens;
- Part 5: Producer's checklist for GB/T 7247.1;
- Part 9: Maximum permissible exposure to incoherent optical radiation;
- Part 13: Classification and measurement of laser products;
- Part 14: User Guide.

This document replaces GB/T 7247.5-2017 "Safety of Laser Products Part 5: Inspection Checklist for Manufacturers in Respect of GB 7247.1" Compared with GB/T 7247.5-2017, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The instructions for use of the checklist have been changed (see 4.2.2.2, Chapter 5 of

the 2017 edition);

b) Added inspection contents for classification measurement of laser products (see 5.1.3, 5.1.4, 5.1.5);

c) The content of the classification procedure has been changed, and a new category, Class 1C, has been introduced (see Chapter 6, Chapter 7 of the 2017 edition);

d) Changed the warnings on invisible and visible laser radiation (see 7.2, 8.1.2, 8.1.3 and 8.1.4 of the 2017 edition);

e) Added alternative marking for Class 1 laser products (see 7.3.2);

f) The content of the Class 1M laser product marking has been changed (see 7.4.1, 8.3 of the 2017 edition);

g) Added alternative markings for Class 1M laser products (see 7.4.2);

h) Added content for Class 1C laser products (see 7.5);

i) Added alternative marking for Class 2 laser products (see 7.6.3);

j) The content of the Class 2M laser product marking has been changed (see 7.7.2, 8.5 of the 2017 edition);

k) Added alternative markings for Class 2M laser products (see 7.7.3);

l) Added alternative markings for Class 3R laser products (see 7.8.3);

m) Added alternative markings for windows of Class 3R laser products (see 7.8.5);

n) Added alternative marking for Class 3B laser products (see 7.9.3);

o) Added alternative markings for Class 3B laser product windows (see 7.9.5);

p) Added alternative markings for Class 4 laser products (see 7.10.3);

q) Added alternative markings for windows of Class 4 laser products (see 7.10.5);

r) The radiation output and standard description have been changed (see 7.11, 8.9 of the 2017 edition);

s) Added warnings about potential hazards to the skin or eyes (see 7.12);

t) Added protection cover inspection requirements (see 8.1.2, 8.1.3 and 8.1.4);

u) Changed the inspection requirements for baffles and safety interlocks (see 8.2, 9.2 of the 2017 edition);

v) The manual reset content has been changed (see 8.4, 9.4 of the 2017 edition);

w) Added scanning safety device for Class 1C products (see 8.11);

x) Added power limiting circuit (see 8.15);

y) The content of non-light hazards has been modified (see 8.14.1, 9.14.1 of the 2017 edition);

z) Other informative requirements have been changed (see Chapter 9, Chapter 10 of the 2017 edition).

This document is equivalent to IEC TR60825-5:2019 "Safety of Laser Products Part 5: Manufacturer's Regulations on IEC 60825-1" Checklist", the document type was adjusted from IEC technical report to my country's national standard.

The following minimal editorial changes were made to this document.

--- In order to coordinate with the existing standards, the name of the standard is changed to "Safety of Laser Products Part 5: Producers' Relations with GB/T 7247.1 Checklist for

--- There are editorial errors in 8.10 of the original English text. This has been revised in conjunction with the 2017 edition of this document and GB/T 7247.1-2024.

Content has been corrected.

Introduction

GB/T 7247 is intended to consist of the following parts.

--- Part 1: Classification and requirements of equipment. Due to the wide range of wavelength, energy and pulse characteristics of laser beams, when using laser products, the degree of potential hazards varies greatly, and it is not possible to simply classify laser products using a unified safety limit.

The classification system for the degree of optical radiation hazards of devices and laser products is evaluated and control measures are determined.

--- Part 2: Safety of optical fiber communication systems (OFCS). Based on the safety of reasonably foreseeable fault conditions [such as cable break, optical the level is divided according to the degree of exposure to optical radiation in the case of loose fiber connectors, etc.

The corresponding hazard level of accessible locations is specified based on the characteristics of the accessible locations to determine the equivalent safety protection measures.

--- Part 3: Guide to laser shows and performances. For use in theater projections and stage performances and other similar places 3B and 4 laser any possible occurrence during laser operation that exceeds the maximum permissible exposure that may cause biological effects and hazards to human eyes and skin the MPE is designed to clarify the responsibilities of on-site design, installation, operation and performance personnel, as well as the risk control and evaluation Estimate to reduce risk.