

ICS 43.040.20
CCS T 38



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

GB 18099-2013

**Photometric characteristics of side-marker lamps for motor
vehicles and their trailers**

机动车及挂车侧标志灯配光性能

(English Translation)

Issued on: September 18, 2013

Implemented on: July 1, 2014

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

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Foreword

Clauses 5, 6, 7 of this Standard are mandatory; the rest are recommendatory.

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard uses redrafting method to modify and adopt United Nations Economic Commission for Europe ECE R91-2008 Uniform Provisions on the Certification of Motor Vehicles and Their Side Trailers (E/ECE/324-E/ECE/TRANS/505 Rev.1/Add.90/Rev.2, 19 September 2008), including three amendments (E/ECE/324-E/ECE/TRANS/505 Rev.1/Add.90/Rev.2/Amend. 1,

4 November 2008;

E/ECE/324/Rev.1/Add.90/Rev.2/Amend.2-E/ECE/TRANS/

505/Rev.1/Add.90/Rev.2/Amend.2, 25 January 2011; E/ECE/324/Rev.1/Add.90/Rev.2/Amend. 3-E/ECE/TRANS/505/Rev.1/Add.90/ Rev.2/Amend. 3. 7, July 2011). It is not equivalent with ECE R91-2008 on consistency. The main differences are as follows.

- deleted the terms of management;
- deleted the annex of "Minimum requirements for production conformance control procedures";

- deleted the annex of "Minimum requirements for inspector sampling";
- added inspection rules.

The main technical requirements, such as the general requirements - photometric characteristics - light color - test method are consistent with the above regulations.

This Standard replaces GB 18099-2000 Photometric characteristics of side-marker lamps for motor vehicles and their trailers. Compared with the previous edition, the main changes are as follows.

- modified Clause 2 "Normative references" of the previous edition;
- modified Clause 3 "Definitions" of the previous edition to "Terms and definitions";
- modified Clause 5 "Test methods" of the previous edition to Clause 6 "Test methods" of this edition;
- modified Clause 6 "Inspection rules" of the previous edition to Clause 7 "Inspection rules" of this edition;
- added the category definition of the side-marker lamps;

Photometric characteristics of
side-marker lamps for motor vehicles and their trailers

1 Scope

This Standard specifies the technical requirements, test methods and inspection rules of side-marker lamps for motor vehicles and their trailers.

This Standard is applicable to side-marker lamps irrespective of types used by M, N and O categories of vehicles.

2 Normative references

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

GB 4599, Motor vehicle headlamps equipped with filament lamps

GB 4785, Prescription for installation of the external lighting and light-signaling devices for motor vehicles and their trailers

GB 15766.1, Lamps for road vehicles - Dimensional electrical and luminous requirements

ECE R37, Uniform provisions concerning the approval of filament lamps for use in approved lamp units of power-driven vehicles and of their trailers

3 Terms and definitions

The terms and definitions specified in GB 4785, GB 15766.1 and ECE R37 as well as the following ones apply to this Standard.

3.1 SM1 category of side-marker lamps

side-marker lamps applicable to all types of vehicles

3.2 SM2 category of side-marker lamps

side-marker lamps applicable to M1 category of vehicles

4 Different types of side-marker lamps

It refers to the side-marker lamps which have differences in the following aspects.

- a) Trade names or trademarks;
 - b) Characteristics of the optical system (luminous intensity level, light distribution angle, type of filament lamp or light source module used, etc.);
- however, filament lamp color or filter color change does not affect the type of change.

5.1.1 The side-marker lamps shall be designed and manufactured to, under normal conditions of use, even when subjected to vibration, meet the requirements for use and comply with the provisions of this Standard.

5.1.2 The replaceable light source used for the side-marker lamps shall be

the one complying with the provisions of GB 15766.1 or ECE R37. The design of side-marker lamps should make replaceable light source be only loaded in its correct design position.

5.1.3 The light source modules used for the side-marker lamps should only

be installed in their correct design positions and should only be disassembled by using tools. If more than one light source modules are used in a side-marker lamp, the light source modules with different characteristics in the same lamp house shall not be interchangeable. The light source module should be able to prevent movement. In the mechanical structure, the light source module should not be interchangeable with the replaceable light source specified in GB

5.2 Light color and color characteristics

The light color and chromaticity characteristics of the side-marker lamps shall comply with the provisions of GB 4785. Beyond the geometrical visibility range specified in 5.3.1, a significant change in light color shall not be observed.

5.3.1 The geometrical visibility of the side-marker lamps shall comply with the

provisions of GB 4785. The luminous intensity should be consistent with the provisions of Table 1.

measurement, to make its optical properties tend to be stable.

6.1.5 The measurement distance should ensure that the inverse square law

of distance in photometry can be applied.

6.1.6 Observed from the reference center, the angle of the light receiver is

between 10' and 1°.

6.1.7 The angle deviation of each measuring direction should not be more

than 15'.