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

GB 17509-2008

**Photometric characteristics of direction indicators for motor
vehicles and their trailers**
(English Translation)

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Foreword

All the technical content of this Standard is mandatory.

This Standard corresponds to United Nations Economic Commission for Europe ECE R6 Rev.3 Amend.5 "Uniform Provisions Concerning the Approval of Direction Indicators for Power-driven Vehicles and Their Trailers". This Standard is not equivalent to ECE R6 Rev.3 Amend.5, with the main differences as follows.

- it deletes the administrative articles;
- it deletes the Annex "Minimum requirements for conformity of production control procedures";
- it deletes the Annex "minimum requirements for sampling by an inspector"; and
- it adds the inspection rules.

The main technical specifications are the same as ECE R6 Rev.3 Amend.5, such as general specifications, photometric performance, light colour, test procedures.

This Standard replaces GB 17509-1998 "Uniform Provisions Concerning the Approval of Direction Indicators for Power-driven Vehicles and Their Trailers". Compared with the previous edition, the main changes are as follows.

- it modifies Chapter 2 "Normative References" of the previous edition;
- it modifies Chapter 3 "Terms and Classification" of the previous edition, which is

changed into Chapter 3 "Terms and Definitions" and Chapter 4 "Classification";

- it modifies Chapter 4 "Photometric Characteristics" of the previous edition, which is changed into Chapter 6 "Specifications" of this edition;
- it deletes Chapter 5 "Provisions on Lamps" of the previous edition and the relevant content added is included in Chapter 6 "Specifications" of this edition;
- it modifies Chapter 6 "Photometric Measurement Method" of the previous edition, which is changed into Chapter 7 "Test Procedure" of this edition;
- it deletes Chapter 7 "Chromatic Measurement Method" of the previous edition and the relevant content added is included in Chapter 6 "Specifications" and Chapter

7 "Test Procedure" of this edition;

- it modifies Chapter 8 "Inspection Provisions" of the previous edition, which is changed into Chapter 8 "Inspection Rules" of this edition;
- it adds the content related to light source module(s);
- it adds the test requirements of flash lighting;
- it adds the measurement method of direction indicators with non-replaceable light sources;
- it adds the photometric measurement requirement that the installation height of direction indicators shall not be more than 750 mm; and
- it adds the photometric measurement requirements for direction indicators at more than one position or different positions within a zone.

For the newly-applied type approval tests of direction indicators for motor vehicles and their trailers, this Standard is implemented from January 1, 2010; and for the direction indicators for motor vehicles and their trailers which have passed type approval tests before the implementation of this Standard, this Standard is implemented from January 1, 2012.

This Standard was proposed by the National Development and Reform Commission. This Standard shall be under the jurisdiction of the National Technical Committee of Auto Standardization.

This Standard was drafted by Shanghai Institute of Automotive Lamps.

1 Scope

This Standard specifies the technical specifications, test methods and inspection rules of photometric performance of direction indicators for motor vehicles and their trailers.

This Standard applies to all types of direction indicators for vehicles of categories M, N and O.

In this Standard, the above-mentioned direction indicators are also called devices.

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB 4599 Motor Vehicle Headlamps Equipped with Filament Lamps

GB 4785 Prescription for Installation of the External Lighting and Light-Signalling Devices for Motor Vehicles and Their Trailers

3 Terms and Definitions

For the purpose of this Standard, the terms and definitions given in GB 4785 apply.

4.1 Categories of direction indicators

The categories and minimum angles of light distribution of devices are specified in accordance with their installation positions and functions on the vehicle (See Figure 1).

4.2 In Figure 1, the vertical angle V corresponds to the horizontal plane, with the positive above the horizontal plane and the negative below the horizontal plane;

5 Direction Indicators of Different Types

Lamps which differ in such essential respects as.

6.1 The devices shall be so designed and constructed that under normal conditions

of use and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Standard.

6.3 The devices equipped with replaceable light sources shall be equipped with filament lamps meeting the specifications of GB 15766.1 or ECE R37.

6.4 The light source modules used shall be so designed that even if in the dark, they

can be installed at the correct positions; and that they can prevent maloperation.

6.5.1 See Figure 2 for the requirements for light distribution. The numbers at the intersections of grid lines in Figure 2 indicate the minimum values of luminous intensity in the direction and the reference axis direction [categories 1, 1a, 1b, 2a, 2b, 3 and 4 (forward)] or the ratios of the minimum values of luminous intensity of direction A (category 6), direction A meaning the direction $H = 5^\circ$ and $V = 0^\circ$.

6.5.3 Within the luminous intensity distribution field (see Figure 2), except in the reference axis direction and A direction.

6.5.4 The requirements for all categories of devices within the minimum angle of light

distribution (See Figure 1).

6.5.4.2 Outside of the field 10° (i.e. $H = \pm 10^\circ$, $V = \pm 10^\circ$), the luminous intensity of devices of categories 1, 2b (by night), 3 (forward) and 4 (forward) shall not be more than the limits of Table 2; in the zone (including boundary) between field 10° and field 5° (i.e. $H = \pm 5^\circ$, $V = \pm 5^\circ$), the allowable maximum luminous intensity of these devices