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

GB 18100-2025

**Provisions for the installation of lighting and light-signalling
devices for motorcycles and mopeds**

摩托车和轻便摩托车道路照明及光信号装置的安装规定

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1 Scope

GB 18100-2025 is the Chinese national standard on provisions for the installation of lighting and light-signalling devices for motorcycles and mopeds, in the field of road vehicles engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 30 May 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2026. Classification: ICS 43.040.20, CCS T38. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the general requirements, special provisions, inspection rules, requirements for determining the same type of lighting and light signaling devices for motorcycles and mopeds. This document applies to two-wheeled mopeds (L1 category), front-wheeled three- wheeled mopeds (L2 category), two-wheeled motorcycles (L3 category), sidecar three- wheeled motorcycles (L4 category), front-wheeled three-wheeled motorcycles (L5 category).

2 Normative references

The contents of the following documents, through normative references, constitute essential provisions of this document. For dated references, only the version corresponding to that date applies to this document. For undated references, the latest version (including all amendments) applies to this document.

GB 4599 Road illumination devices and systems for motor motorcycles

GB 4785 Prescription for installation of the external lighting and light-signalling devices for motor motorcycles and their trailers

GB/T 5359.1 Term for motorcycles and mopeds - Part

3 Terms and definitions

The terms and definitions defined in GB 4785 and GB/T 5359.1, as well as the following terms and definitions, apply to this document.

3.1 Extreme outer edge A plane parallel to the longitudinal plane of symmetry of the motorcycle and in contact with the outer edge of the motorcycle.

Note. The outer edge of a motorcycle does not include the following protrusions. rearview mirrors, turn signal lamps, front position lamps, rear position lamps, retroreflectors.

3.2 Horizontal inclination The angle between the headlamp beam of an unladen motorcycle and the headlamp beam when the motorcycle is tilted.

Note. A schematic diagram is provided in Appendix A.

3.3 Horizontal inclination adjustment system (HIAS) A device that maintains the horizontal inclination of a motorcycle's headlights at zero.

3.4 Bank angle The angle between the longitudinal plane of symmetry and the vertical plane when the motorcycle is tilted.

Note. A schematic diagram is provided in Appendix A.

3.5 HIAS signal Any control signal or additional control signal input to the HIAS, or a control signal output from the HIAS to the motorcycle.

Note. This is referred to as "HIAS signal".

3.6 HIAS signal generator A device used for HIAS testing that repeatedly generates one or more horizontal inclination signals.

Note. This is referred to as "HIAS signal generator".

3.7 HIAS test angle The angle between the low-beam cutoff line and the H-H line of a headlamp.

Note. This is referred to as the "HIAS test angle". In Figure A.1, delta is used to represent the HIAS test angle.

4 General requirements

4.1 The installation of lighting and light-signaling devices shall comply with the requirements for the installation of the respective devices in this document under normal use, even when subjected to vibration.

4.2 Lighting devices shall be mounted so as to facilitate correct adjustment of their aim.

4.3 The reference axes of all lighting and light-signaling devices installed on a motorcycle must be parallel to the motorcycle's resting surface on the road. Except for side retroreflectors, the reference axes of all lighting and light-signaling devices must be parallel to the motorcycle's longitudinal plane of symmetry; the reference axes of side retroreflectors must be perpendicular to the motorcycle's longitudinal plane of symmetry. The tolerance in each direction is $\pm 3^\circ$.

4.4 When inspecting the mounting height and orientation of lamps, the motorcycle under test must be unloaded and placed on a level surface, with its longitudinal plane of symmetry vertical and the handlebars or front wheels in the forward-facing, straight-ahead position. Tire inflation pressure must comply with the motorcycle manufacturer's specifications.

4.5 The installation of single or multiple lamps on a motorcycle must meet the following requirements.

a) For single-mounted lamps (for Category L4 motorcycles, only single lamps installed on the main motorcycle are considered), their reference center shall be located on the motorcycle's longitudinal plane of symmetry, with the following exceptions. 1) High beam lamps installed in accordance with 5.1.3.1.1 or 5.1.3.1.2; 2) Low beam lamps installed in accordance with 5.2.3.1.1 or 5.2.3.1.2; 3) Front fog lamps installed in accordance with 5.3.3.1.1; 4) Daytime running lamps installed in accordance with 5.4.3.1.1 or 5.4.3.1.2; 5) Front position lamps installed in accordance with 5.5.3.1.1 or 5.5.3.1.2.

b) Lamps installed in pairs on L1, L2, L3, L5, L4 main motorcycles shall meet the following requirements. 1) They shall be installed symmetrically on the motorcycle with respect to the motorcycle's longitudinal plane of symmetry. 2) The luminaire's shape and light-transmitting surface must be symmetrical relative to the motorcycle's longitudinal plane of symmetry. For luminaires with illuminated logos, the illuminated logos themselves may be asymmetrical. 3) They must meet the same chromaticity requirements and have consistent photometric characteristics. 4) They must illuminate and deactivate simultaneously (except for turn signals).

c) For luminaires mounted on the sidecars of category L4 motorcycles, and for category L5 motorcycles with a front track greater than 460 mm equipped with three or four rear retro-reflectors, the provisions for the corresponding luminaires in Chapter 5 must apply.

4.6 Combined, mixed, or hybrid luminaires, as well as single luminaires, must meet the following requirements.

a) Luminaires may be combined, hybrid, or composited with each other, provided that their respective light color, mounting position, orientation, geometric visibility, circuit connection, and other requirements are met, meanwhile the following requirements are met. 1) When all other luminaires in the combined, hybrid, or composite are off, the luminaire must meet its photometric and chromaticity requirements. For the case where the front position lamp or rear position lamp is mixed with one or more functions and operates simultaneously, it shall be ensured that the chromaticity requirements of the function are met when the function and the front position lamp or rear position lamp are turned on at the same time. 2) "D"-shaped rear position lamps shall not be mixed with brake lamps. 3) If a brake lamp is combined with a turn signal lamp, the boundaries of adjacent areas of different colors formed by the projection of their visual surfaces in a direction perpendicular to the reference axis shall ensure that no horizontal or vertical straight line crosses the aforementioned