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

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**Provisions for installation of lighting and light-signalling
devices for motorcycles -- Part 2: Two wheels moped
(English Translation)**

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1 Scope

This part of GB 18100 specifies the requirements and special requirements for the installation of lighting and light-signaling devices for two-wheeled mopeds (class L1).

This Part applies to two-wheeled mopeds (hereinafter referred to as mopeds).

2 Normative references

The terms in the following documents become the provisions of this part by reference to this part of GB 18100. For dated references, all subsequent amendments (not including errata content) or revisions do not apply to this Part.

However, parties to agreements based on this Part are encouraged to study whether the latest versions of these documents can be used. For undated references, the latest edition applies to this Part.

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 5948 Photometric characteristics of motorcycle headlamps equipped with filament light sources

GB 11564 Retro-reflector device for motor vehicles

GB 17509 Photometric characteristics of direction indicators for motor vehicles and their trailers

GB 17510 Photometric characteristics of light-signaling devices for motorcycles

GB 19152 Photometric characteristics of moped headlamps

4.6 Invisibility requirements for front-view red light and rear-view white

light

No red light shall be observed from the front of the moped. White light shall not be observed from behind the moped. It is allowed to be tested as follows (see

Appendix A):

a) Invisibility of the front-view red light: Red light shall not be directly seen when the observer moves and observes in the zone-I of the cross section

25 m in front of the moped;

b) Invisibility of rear-view white light: White light shall not be seen directly when the observer moves and observes in the zone-II of the cross section

25 m behind the moped.

Within the above two cross sections, the range of the zone-I and the zone-II where the observer performs visual inspection is as follows:

a) In the height direction: It is defined by two horizontal planes each with a height of 1 m and 2.2 m above ground;

b) In the lateral direction: It is defined by two vertical planes with an outward angle of 15° to the longitudinal symmetrical plane of the vehicle in front and behind of the moped. These planes shall pass through the corresponding intersection line (i.e., the intersection line between the plane parallel to the longitudinal symmetry plane of moped and limiting the moped width and the plane perpendicular to the longitudinal symmetry plane of moped and limiting the moped length).

4.7 Basic requirements for lamp position measurement

4.7.1

The maximum and minimum heights from the ground shall be measured from the highest and lowest points of the apparent surface in the direction of the reference axis. For low-beam, the minimum height from the ground shall be measured from the lowest point of the effective diameter of the optical system (such as mirror, light distribution mirror, projection lens). If the (maximum and minimum) height above ground is obviously satisfactory, it is not required to determine the precise edge of any surfaces.

The spacing between two lamps in the lateral direction shall be determined from the inner edge of the apparent surface in the direction of the reference axis. If the lateral installation position is clearly satisfactory, it is not required to determine the precise edge of any surfaces.

4.7.2 Unless otherwise specified, when inspecting the installation height and

direction of the luminaire, the moped shall be unloaded and placed on a level ground; the longitudinal symmetry plane shall be plumb; the steering handle the moped. When the vehicle is equipped with a single high-beam lamp, or the high-beam lamp is mixed with the front position lamp near the low-beam lamp, their reference center shall be symmetrical to the longitudinal symmetry plane of the moped.

If two low-beam lamps are installed, one or two of them are mixed with other lamps on the front of the moped, their reference centers shall be symmetric to the longitudinal symmetry plane of the moped.

The distance between the two low-beam lamp's illumination surfaces shall not exceed 200 mm.

5.2.3.2 In the height direction: the height from the ground is not less than 500 mm and not more than 1200 mm.

5.2.3.3 In the longitudinal direction: It is in front of the vehicle. The emitted light shall not cause driver discomfort directly or indirectly through the rear-view mirror or other reflective surfaces of the moped.

5.2.4 Geometric visibility

The requirements for geometric visibility are as follows:

Vertical direction angle α : 15° up and 10° down;

Horizontal direction angle β :

45° to the left and right for a single lamp.

For pairs of lamps, 45° outward, 10° inward.

The presence of headlamps adjacent to other components shall not cause discomfort to other road users due to secondary effects.

5.2.5 Direction

Facing forward, it is allowed to rotate with the steering handle.

5.2.6 Circuit connection

When changing to the low-beam, all the high-beam lamps shall be turned off at the same time.

5.2.7 Indicator

Optional. If installed, it shall be a non-flashing green signal lamp.

5.2.8 Other requirements

The requirements for geometric visibility are as follows:

Horizontal direction angle β : 80° outward, 20° inward;

The vertical direction angle α : 15° upward from the horizontal surface and 15° downward. If the lamp height is below 750 mm, the vertical angle below the horizontal plane is allowed to be reduced to 5°

5.3.5 Direction

Allows the front turn signal lamp to rotate with the steering handle.

5.3.6 Circuit connection

The turn signal lamp shall be turned on separately; all turn signal lamps on the same side of the moped shall be turned on and off simultaneously by the same control.

5.3.7 Other requirements

The turn signal lamp shall not be combined with any other lamps.

The turn signal lamp shall not be mixed with any other lamps.

The requirements for electrical performance are as follows: Except for the load that the engine and the device shall normally operate, the electrical system shall not be connected to other loads when making the following measurements:

- The flicker frequency shall be (90 ± 30) times/min;
- the turn signal lamps on the same side of the moped allows simultaneous or alternate flashing;
- The lamp shall be light up 1 s after the light signal control switch is turned on and extinguishes for the first time within 1.5 s;
- If a turn signal lamp fails due to other reasons than a short circuit, other turn signal lamps in the same direction shall continue to flash or remain lit, at which point the flicker frequency is allowed to differ from the above.