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# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA



# GB 5920-2024

Replacing GB 5920-2019

## Light-signalling devices and systems for motor vehicles and their trailers

汽车和挂车光信号装置及系统

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**Standardization Administration of China**

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## 1 Scope

GB 5920-2024 is the Chinese national standard on light-signalling devices and systems for motor vehicles and their trailers, 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 29 September 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2025. 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 same type determination, general requirements, light source requirements, photometric characteristics requirements, chromaticity requirements, test methods and inspection rules of light-signally devices and devices and systems for motor vehicles and their trailers. This Document applies to the design, manufacture and acceptance of light-signaling devices and systems such as front position lamps, rear position lamps, direction-indicator lamps, stop lamps, reversing lamps, end-outline marker lamps, parking lamps, daytime running lamps, rear- registration plate illuminating devices, rear fog lamps, maneuvering lamps, side marker lamps, and light-signaling projection units used in Categories-M, -N, and -O vehicles.

## 2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

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

37 Uniform provisions concerning the approval of filament lamps for use in approved lamp units of power-driven vehicles and of their trailers, UN UN R 128 Uniform provisions concerning the approval of light emitting diode (LED) light sources for use in approved lamp units on power-driven vehicles and their trailers, UN R.E.5 Consolidated Resolution on the

common specification of light source categories, UN

## 3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB 4785 and the following apply.

3.1 Light-signaling device A unit or unit group that is used to send out light signals to other road users to indicate the presence or change of the vehicle's motion state and to achieve one or more functions. NOTE. In this Document, it is referred to as "device", which includes one or more of the following. front position lamp, rear position lamp, direction-indication lamp, stop lamp, reversing lamp, end-outline marker lamp, parking lamp, daytime running lamp, rear- registration plate illuminating device, rear fog lamp, maneuvering lamp, side marker lamp, and light-signaling projection unit.

3.2 Light-signaling system A system consisting of multiple devices and controllers on the same or both sides, used to send light signals to other road users to indicate the presence of a vehicle or a change in its motion state. NOTE. It is referred to as "system" in this Document.

3.3 Stop lamp A lamp that indicates to other road users behind the vehicle that the vehicle is braking. [Source: GB 4785-2019, 3.9.10, modified]

3.5 Rear position lamp A lamp that indicates the presence and width of a vehicle when viewed from behind. [Source: GB4785-2019, 3.9.13]

3.6 End-outline marker lamp The lamp with the installation position that is close as possible to the outer edge and roof of the vehicle to indicate the width of the vehicle. [Source: GB4785-2019, 3.9.21]

## 4 Judgment of the Same Type

Devices that do not differ in the following main features are considered to be of the same type.

--- Manufacturer;

--- The number, type, lighting principle, and light source module structure of the used replaceable or non-replaceable light sources;

--- The number and structure of main optical components (e.g., reflectors, photometric mirrors, light guides, variable light intensity controllers, etc.).

### 5.4 Light-signaling devices and systems with luminous logos

5.5 Stop lamp The apparent surface area of Categories-S1 and -S2 stop lamps in the direction of the reference axis shall be no less than 15cm

2.This requirement is not assessed when the rear fog lamps are turned on.

5.6 Daytime running lamp The apparent surface area of daytime running lamps in the direction of the reference axis shall be no less than 25cm2 and no more than 200cm2.

### 5.7 Rear fog lamp

5.8 Rear-registration plate illuminating device The rear-registration plate illuminating device shall make the entire registration plate visible within the angles given in C.4 of Appendix C. The device shall not emit direct light to the rear, except when combined with other lamps and composited to emit red light.

### 6.1 Replaceable light sources

6.1.1 The light source shall be able to be installed in the correct position of the lamp even in

### 7.1 Requirements within the light intensity distribution range

7.1.1 The light intensity in the direction of the reference axis shall meet the requirements of

7.1.2 The light intensity distribution of each light-signaling device shall comply with the requirements of Appendix D. If visual inspection finds that the light intensity varies significantly, the light intensity measured between any two measuring directions shall be no less than 50% of the lower light intensity measured value in the two measuring directions.

7.1.3 For rear position lamps and/or end-outline marker lamps mixed with stop lamps, when both functions are lit simultaneously and when the rear position lamps or rear end-outline marker lamps are lit separately, the measured light intensity ratio within the range of 5° above and below the H-H line and 10° to the left and right of the V-V line shall be at least 5.1.If one or two of the above-mentioned mixed lamps contain more than one light source and are single lamps, the measurement results shall take all light sources into account.

7.1.4 For rear position lamps, end-outline marker lamps and/or rear parking lamps mixed with stop lamps, the maximum light intensity limit in the plane 5° below the H-H line and below it shall be 60cd.

### 7.2 Requirements for light intensity within the photometric angle range

7.2.1 The photometric angle shall comply with the requirements of Appendix C. The minimum light intensity within the photometric angle range shall comply with the requirements of Table 2; and the maximum light intensity shall not exceed the maximum value specified in Table 1.

7.2.2 The photometric angle shall comply with the requirements of Appendix C. The maximum light intensity of the reversing lamps, maneuvering lamps and light-signaling projection functions shall comply with the requirements of Table 3.