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**NATIONAL STANDARD OF THE
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GB/T 46926-2025

**Technical requirements and test methods for the field of vision
assistance systems of light-duty vehicles**

轻型汽车视野辅助系统技术要求及试验方法

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Table of Contents

Foreword...	4
1 Scope...	5
2 Normative References...	5
3 Terms and Definitions...	5
4 General Requirements...	9
4.1 Area Division of Forward Field of Vision...	9
4.2 Functional Requirements...	10
4.3 Requirements for Display Information...	10
4.4 Requirements for Area Obstruction...	11
4.5 Requirements for System Failure...	12
4.6 Requirements for Functional Safety...	12
4.7 System Shutdown Time...	12
4.8 Information Format...	12
4.9 Eyebow Height Adjustment...	13
5 Image Performance Requirements...	13
5.1 Operating Temperature Range...	13
5.2 Resistance to Sunlight Backflow...	13
5.3 Noise...	13
5.4 Virtual Image Distance...	14
5.5 Downward Angle of Visibility...	14
5.6 Left Angle of Visibility...	14
5.7 Field of View...	14
5.8 Eyebow Dimensions...	14
5.9 Ghosting...	14
5.10 Binocular Parallax...	14
5.11 Distortion...	14
5.12 Rotation...	15
5.13 Modulation Transfer Function...	15
5.14 Stray Light...	15
5.15 Brightness...	15
5.16 Contrast Ratio...	15
5.17 Brightness Uniformity...	15

1 Scope

GB/T 46926-2025 is the Chinese national standard covering the cameras and mirrors that show a driver what they cannot see directly - the reversing and surround view systems, the blind spot and the camera monitor systems replacing mirrors, with the fields they must cover, the latency and the behaviour in darkness and glare. First edition, 22,500 words. It was issued on 31 December 2025 and has been in force since 1 July 2026, as a first edition. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the technical requirements for field of vision assistant system of light-duty vehicles and describes the corresponding test methods. This document applies to Category-M1 and Category-N1 vehicles equipped with field of vision assistant system. Other vehicles may take this document as a reference. NOTE. on the premise of not causing any confusion, "field of vision assistant system" in this document is abbreviated as the "system".

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB 3100 SI Units and Recommendations for the Use of Their Multiples and of Certain Other Units

GB 11562 Requirements and Measurement Methods of Light-duty Vehicles Forward Visibility for Drivers

GB/T 28046.4-2011 Road Vehicles - Environmental Conditions and Testing for Electrical and Electronic Equipment - Part

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 forward field of vision The driver's 180° forward field of vision through the transparent area of the front windshield glass and other glass surfaces (including side windows).

3.2 transparent area

4.1 Area Division of Forward Field of Vision

4.1.1 The positions and ranges of area 1 and area 2 are shown in Figure 2 and Figure 3. Figure 3 -- Schematic Diagram of Area 1 and Area 2 (front view)

4.1.2 Area segmentation angle α , as shown in Figure 4, it is calculated in accordance with Formula (1). Where, h

--the height of the driver's eye point (DEP) from the ground, expressed in (m). In accordance with 6.1.4.1, carry out the test. The static information size of the system shall conform to the provisions of Table 2. The unit system of the display information shall meet the requirements of GB 3100.

4.8.2 Information flickering The flickering frequency of copied information shall be consistent with that of the source information. The flickering frequency of non-copied information shall be tested in accordance with 6.1.4.2, and should ideally be 60 ~ 120 times/min. NOTE. information flickering refers to the cyclical phenomenon of the same type of display information appearing and disappearing in the same location, repeating completely at least twice.

4.9 Eyebow Height Adjustment Systems with an eyebow vertical dimension less than 120 mm shall have an eyebow height adjustment function.

5 Image Performance Requirements

5.1 Operating Temperature Range In accordance with the method of 6.2.2, carry out the test. Within the range of 40 °C ~ 85 °C, the system display information shall be visible, without black screen, shutdown, or image abnormalities.

5.2 Resistance to Sunlight Backflow In accordance with 6.2.3, carry out the test. During sunlight exposure, the system display information shall be visible, without black screen, shutdown, or image abnormalities. After returning to normal temperature, the system shall not have any visible appearance damage, and its functions shall be normal.

5.3 Noise In accordance with 6.2.4, carry out the test. During system startup, shutdown and height adjustment, the noise shall be less than 40 dB(A).

5.4 Virtual Image Distance In accordance with 6.2.5, carry out the test. The virtual image distance of the system shall not be less than 2 m.

5.5 Downward Angle of Visibility In accordance with 6.2.6, carry out the test. The downward angle of visibility of the system shall not be less than 1°.

5.6 Left Angle of Visibility In accordance with 6.2.7, carry out the test. The left angle of visibility of the system shall be within the range of 0.5° ~ 0.5°, preferably 0°.

5.7 Field of View In accordance with 6.2.8, carry out the test. The horizontal field of view of

the system shall not be less than 3.5° , and the vertical field of view shall not be less than 0.5° .

5.8 Eyebox Dimensions In accordance with 6.2.9, carry out the test. The eyebox dimensions of the field of vision assistant system shall meet the following requirements.

a) If the eyebox height is adjustable, the horizontal dimension shall be no less than 120 mm, the vertical dimension shall be no less than 40 mm, and the height adjustment stroke range shall be no less than 80 mm;

b) If the eyebox height is not adjustable, the horizontal dimension and vertical dimension shall both be no less than 120 mm.

5.9 Ghosting In accordance with 6.2.10, carry out the test. The horizontal and vertical ghosting of the system's virtual image shall not exceed 3. NOTE. ghosting refers to an additional image whose brightness ratio to the original image is greater than 10%.

5.10 Binocular Parallax In accordance with 6.2.11, carry out the test. The horizontal average value of binocular parallax of the system's virtual image shall not exceed 10, and the vertical average value of binocular parallax shall not exceed 7.5.

5.11 Distortion In accordance with 6.2.12, carry out the test. The horizontal and vertical static distortion of the system's virtual image shall not exceed 5%, the horizontal dynamic distortion shall be less than 36, and the vertical dynamic distortion shall be less than 20.

5.12 Rotation In accordance with 6.2.13, carry out the test. The average values of the horizontal and vertical rotation angles of the system's virtual image shall be within the range of $2^{\circ} \sim 2^{\circ}$.