

ICS 03.220.20, 35.240.60
CCS R 86



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

GB/T 48111-2026

**Traffic information collection - Roadside traffic condition
detector by millimeter-wave radar
(English Translation)**

Issued on: August 28, 2026

Implemented on: March 1, 2027

Issued by: State Administration for Market Regulation

Table of Contents

Preface
1 Scope
2 Normative References
3 Terms, Definitions, and Abbreviations
4 Composition and Model
5 Technical Requirements
6 Test Methods
7 Inspection Rules
Appendix A (Normative) Data Reporting Interface Message Frame Requirements
Appendix B (Normative) Functional and Performance Testing
Appendix C (Informative) Functional and Performance Simulation Test
References

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

1 Scope

This document also covers transportation and storage, and describes the corresponding test methods.

This document applies to the production, use, and inspection of roadside millimeter-wave radar traffic condition detectors in the highway sector, and can be used as a reference for urban roads.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, 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/T 191 Packaging and Storage Graphic Symbols

GB/T 2423.1 Environmental testing of electrical and electronic products - Part 2: Test methods - Test A. Low temperature

GB/T 2423.2 Environmental testing of electrical and electronic products - Part 2: Test methods - Test B. High temperature

GB/T 2423.3 Environmental testing - Part 2: Test methods - Test Cab. Constant damp heat test

GB/T 2423.10 Environmental testing - Part 2: Test methods - Test Fc. Vibration (sine wave)

GB/T 2423.17 Environmental testing - Part 2: Test methods - Test Ka. Salt spray

GB/T 2423.22 Environmental testing - Part 2: Test methods - Test N. Temperature change

GB/T 4208-2017 Degrees of protection provided by enclosures (IP code)

GB/T 5080.7 Verification Test Scheme for Failure Rate and Mean Time Between Failures under the Constant Failure Rate Assumption in Equipment Reliability Testing

GB/T 9254.2 Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers - Part 2: Immunity requirements

GB/T 13384 General Technical Requirements for Packaging of Mechanical and Electrical Products

GB/T 20609 Microwave Traffic Flow Detector for Traffic Information Collection

GB/T 22040 Weather resistance requirements and test methods for plastic products used in roadside facilities

3.1 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1

It emits low-power millimeter-wave signals into the detection area and identifies the reflections from targets such as motor vehicles, non-motor vehicles, pedestrians, and discarded objects.

Equipment for detecting the status of motor vehicles, traffic flow, and traffic incidents using millimeter-wave signals.

3.1.2 Vehicle volume

The number of vehicles passing through the detection section within a statistical unit of time. [Source: GB/T 24726-2021, 3.3, with modifications]