

ICS 29.140.20



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

GB/T 15766.3-2007

Replacing GB/T 15766.3-2000

Miniature lamps

小型灯

(English Translation)

Issued on: September 5, 2007

Implemented on: May 1, 2008

Issued by: SAMR; SAC

Table of Contents

Foreword	3
1 General	4
1.1 Scope	4
1.2 Normative references	4
1.3 Terms and definitions	5
1.4 Signs	8
1.5 Requirements and tests	8
1.6 Data sheet	8
1.7 Recommended guidelines for the use of halogen lamps	9
2 Auxiliary lamps for road vehicles	9
2.1 Scope	9
2.2 Definition	9
2.3 Signs	10
2.4 Technical requirements and test procedures	10
2.5 Data sheet. Road motor vehicle lamps	11
3 Torch	21
3.1 Scope	21
3.2 Definition	21
3.3 Sign	21
3.4 Technical requirements	21
3.5 Data sheet. torch lamp	22
4 Mining caplight lamps	27
4.1 Scope	27
4.2 Definition	27
4.3 Requirements	29
4.4 Test sample quantity	31
4.5 Test methods	32
4.6 Consistency requirements	33
4.7 Eligibility conditions	34
4.8 Data sheet. Mining caplight lamp	35
Appendix A (Normative) Auxiliary lamp	43
Appendix B (Informative) Statistical basis for test	44

1.1 Scope

This standard specifies the requirements for small halogen and non-halogen lamps, which have a rated voltage not greater than 30 V and a rated power not greater than 25 W. It includes.

- Lamps for use on road motor vehicles that are not covered by the regulations and are therefore not included in IEC 60809 (Chapter 2);
- Torch (Chapter 3);
- Mining caplights (Chapter 4).

For requirements on aircraft lamps, see GB/T 21095.

This standard specifies the requirements for size, optoelectronic performances, as well as life and mechanical strength.

Note: These requirements are for product lamps. Individual lamps may not fall entirely within these requirements, which requires consistency conditions, which are specified in the corresponding chapter.

For some requirements specified in this standard, refer to the "Relevant Lamp Data Sheet". For some lamps, data sheets are included in this standard. For other lamps falling within the scope of this standard, relevant data are provided by the lamp manufacturer or responsible seller.

This standard may also be used for the development of future light sources, for example, light sources emitting light from light-emitting diodes (LEDs).

1.2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

1.6 Data sheet

- The second set of numbers consists of four digits. The first digit indicates the corresponding chapter of this standard. The second and third digits indicate the data sheet identification number. The fourth digit, except zero, indicates the lamp type.

The number zero is used as a part of an identification number of data sheet;

- The third set of numbers represents the edition number of the data sheet. When the data sheet has more than one page, each page may have a different edition number; but the

data sheet number remains the same.

1.7 Recommended guidelines for the use of halogen lamps

If tungsten halogen lamps covered by this standard are provided, it is recommended that the following points be included in any instructions for use.

- The temperature of the glass lamp of the tungsten halogen lamp is high, when it is working. Care shall be taken to avoid touching the glass shell under any circumstances;
- If the glass shell of a quartz glass lamp has been touched, it shall be wiped clean with a soft, lint-free cloth soaked in ethanol before use;
- Lamp shells with scratches or other damages cannot be used.

Note: In some cases, the lamp manufacturer provides information on the pressure gas within the lamp and recommends protective measures.

2.1 Scope

This chapter deals with miniature lamps, which are used on road motor vehicles that are not covered by regulations and are therefore not included in IEC 60809. It specifies basic requirements (dimensions, photoelectric properties) as well as requirements for life and torsional strength performance.

2.2 Definition

For the purposes of this Chapter, in addition to the definitions in Chapter 1, the following definitions apply.

2.2.1 Designation

EUR. A type that has been standardized in European countries. JIS. A type standardized by Japanese Industrial Standards.

SAE. A type standardized by the Society of Automotive Engineers (USA).

2.3 Signs

The following shall be clearly and durably printed on the lamp.

- The trade name or trademark of the manufacturer or responsible seller;
- Trade designation or lamp designation and/or nominal voltage. Additionally, other content can be printed, such as nominal wattage.

Compliance is checked by rubbing the lamp with a smooth cloth, which was soaked in water for 15 seconds. After this test, the sign shall be clear.

2.4 Technical requirements and test procedures

Lamps shall comply with the general requirements given in 1.5.

2.4.1 Initial reading

After aging, the power and luminous flux of the lamp under the test voltage shall comply with the requirements, which are specified in the corresponding data sheet. An appropriate integrating photometer shall be used, when measuring the luminous flux.

2.4.2 Life

During the life test, the lamp shall operate under DC or AC voltage, which has a frequency between 40 Hz and 60 Hz. The reference axis and filament axis are in a horizontal position; the room temperature does not exceed 30 °C.

There must be no fluctuations in the supply voltage. However, instantaneous fluctuations not exceeding $\pm 1\%$ of the test voltage (≤ 1 min) are allowed.

The life test shall end at 150% of the life value specified in the corresponding lamp data sheet. The lamp that terminates the test at this time shall be deemed to have a life of 150% of the specified value.

The average life of the test sample shall not be less than.

3.4.1 Initial reading

After aging, the current and luminous flux of the lamp under the test voltage shall comply with the requirements, which are specified in the corresponding data sheet. An appropriate integrating photometer shall be used to measure the luminous flux.

3.4.2 Life

During the life test, the lamp shall be placed horizontally, operating under DC or AC test voltage at a frequency between 40 Hz and 60 Hz; the room temperature shall not exceed 30 °C.

There shall be no fluctuations in the power supply voltage. However, instantaneous fluctuations not exceeding $\pm 1\%$ of the test voltage (≤ 1 min) are allowed.

The average life of the test sample shall not be less than the rated life value, which is specified in the corresponding lamp data sheet.

3.4.3 Lumen maintenance

If required, lumen maintenance shall comply with the value, which is specified in the corresponding lamp data sheet.