

ICS 27.120

CCS F88



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

**GB/T 12564-2008**

Replacing GB 7270-1987

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**Generic specification for photomultiplier tubes**

光电倍增管总规范

**Issued on: July 2, 2008**

**Implemented on: April 1, 2009**

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**Issued by: General Administration of Quality Supervision, Inspection and  
Quarantine of the People's Republic of China;  
Standardization Administration of China**

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## Foreword

This standard replaces GB/T 12564-1990 "General specification for photomultiplier tubes", GB/T 7270-1987 "Test Method for photomultiplier tubes" and GB/T 13708-1992 "photomultiplier tube blank detail specification." This standard is GB/T 12564-1990, GB/T 7270-1987 and GB/T 13708-1992 consolidation amendments. The standards in GB/T 7270-1987 the basic content, and GB/T 13708-1992 After modifying the present standard of informative appendices. The main difference compared with the standard GB/T 12564-1990 as follows:

- Increase in Chapter 2, "Normative references" a reference to the appropriate national standards;
- "Anode light sensitivity," added "measure anode light sensitivity in two ways," (5.2.3.1);
- "Scintillation detector 137Cs magnitude Resolution" adding "amplitude resolution formula" (5.3.2.1.3);
- With GB/T 10263-2006 "environmental test conditions and reference standard test conditions" to replace the original standard test conditions and the corresponding inner Capacity (5.1.1);
- The environmental test (heat, cold, vibration and transport packaging test, etc.) all by GB/T 10263-2006 "nuclear radiation detector Environmental conditions and testing procedures is "the corresponding provisions of the test (6.4). Appendix A of this standard is the data appendix. The standard proposed by China National Nuclear Corporation. This standard by the National Standardization Technical Committee on nuclear instrumentation. This standard was drafted. nuclear (Beijing) Nuclear Instrument Factory, Nanjing Huadong Electronics Group. The main drafters of this standard. Li Lu Hua, Zhou Huanhua, then Tian

Tian, Secretary dawn, Zhu Zhou Ji, Wu Qihua. This standard replaces the previous standard release is.

--- GB/T 7270-1987;

--- GB/T 12564-1990;

--- GB/T 13708-1992. General specification for photomultiplier tube

## 1 Scope

GB/T 12564-2008 is the Chinese national standard on generic specification for photomultiplier tubes, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 2 July 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 April 2009. Classification: ICS 27.120, CCS F88. 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 standard gives a photomultiplier tube related terms, provides for testing of optical parameters, other features of the inspection and test, and signs. This standard is applicable to a discrete dynode photomultiplier product testing and inspection.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 191 Packaging - Pictorial signs

GB/T 787 electronic tube group size

GB/T 2423.28 electric and electronic products environmental testing methods - Test T. Soldering Test Method

GB/T 2423.29 Environmental testing for electric and electronic products Part 2. Test methods - Test U. Robustness of terminations and integral security Loading intensity

GB/T 3189 electronic tubes attached to the cap size

GB/T 7274-1987 Test Method tube electrode capacitance

GB/T 10263-2006 nuclear radiation detectors Environmental conditions and testing procedures

### 3 Terms and Definitions

The following terms and definitions apply to this standard.

#### 3.1 The amount of radiation and the amount of light

3.1.1 Form of radiation emitted, transmitted or received energy.

3.1.2 Radiation [shoot] power radiationpower Form of radiation emitted, transmitted or received power.

3.1.3 At a solid angle element in a given direction, leaving the point source of radiation (radiation or bin) radiated power divided by the solid angle element quotient.

3.1.4 Exposure to radiation flux bin at a point on the surface of the surface element divided by the area of \u200b\u200bthe quotient.

3.1.5 Radiation can cause visual response of the human eye, in a broad sense also includes ultraviolet and infrared radiation.