

ICS 27.120

CCS F88



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

GB/T 13179-2008

Replacing GB/T 13179-1991

Si (Li) X-ray detector system

硅（锂）X射线探测器系统

Issued on: July 2, 2008

Implemented on: April 1, 2009

**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

The reference to the standard IEC 60759. 1983 "semiconductor X-ray spectrometer standard test procedures." This standard replaces GB/T 13179-1991 "Si (Li) X-ray detector system." The main difference compared with the standard GB/T 13179-1991 as follows:

--- Added "Si (Li) X-ray detector system" and "peak ratio" and 19 as well as the term "Cc" and other 12 symbols (see this standard Chapter 3);

--- Product features of the code represents an increase of two sensitive diameter (see 4.1 of this standard);

--- In Table 1, "Si (Li) X-ray detector system product specification sheet", increasing the diameter of a column sensitive entry (see this standard 4.2);

--- Table 1 decreased energy resolution of each file 5eV (see 4.2 of this standard);

--- Enrich the content of the test method (see Chapter 6 of this standard). Appendix A of this standard is an informative annex. 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. The main drafters of this standard. Yan Guoli. This standard replaced the standard of previous editions. GB/T 13179-1991. Si (Li) X-ray detector system

1 Scope

GB/T 13179-2008 is the Chinese national standard on si (li) x-ray detector system, 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 specifies the product classifications, technical requirements, test methods and inspection rules of Si (Li) X-ray detector system and so on. This standard applies to liquid nitrogen storage container with the indoor Si (Li) X-ray detector system, but not for scanning electron microscopy, portable Or non-liquid nitrogen cooled Si (Li) X-ray detector system.

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 4960.6 nuclear science and technology terminology nuclear instrumentation

GB/T 10257-2001 nuclear instruments and nuclear radiation detectors Quality inspection rule

3 Definitions and symbols

3.1 Terms and Definitions GB/T 4960.6 and established the following terms and definitions apply to this standard.

3.1.1 Excess free charge carriers is usually done with nuclear radiation generated in the semiconductor radiation detectors to probe the incident. NOTE. The standard term "probe" refers to silicon unless otherwise noted Li Si (Li) X-ray detector.

3.1.2 Easy to make detectors measured radiation penetrates past part.

3.1.3 Liquid nitrogen for cooling semiconductor detector (LN2) vacuum vessel.

3.1.4 Semiconductor detectors half width (FWHM) of the spectrum of the contribution (including leakage current noise detector), usually energy units FIG.

3.1.5 On unimodal distribution constituted the peak at half the distance between two points on the horizontal axis of the curve.

Note. If the curve is composed of several peaks, each peak has a full width at half.

3.1.6 On unimodal distribution constituted one-tenth of the peak at the distance between two points on the horizontal curve.

3.1.7 Valley ratio given between the two peaks is the larger peak height between two peaks and valleys than the minimum height.

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