JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS R 1611 : 2010

(JFCA/JSA)

Measurement methods of thermal diffusivity, specific heat capacity, and thermal conductivity for fine ceramics by flash method

ICS 81.060.30

Reference number : **JIS R 1611 : 2010 (E)**

Date of Establishment: 1991-11-01
Date of Revision: 2010-09-21
Date of Public Notice in Official Gazette: 2010-09-21
Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Ceramics

JIS R 1611:2010, First English edition published in 2012-06

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

Printed in Japan

KK/AT

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Fine Ceramics Association (JFCA)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS R 1611** : 1997 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public.

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Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 18755** published in 2005 with some modifications of the technical contents made to reflect the recent advancement in the measurement technology.

The portions given sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JE. Annexes JA to JD contain matters that are not given in the corresponding International Standard.

1 Scope

This Standard specifies the test method for the determination of thermal diffusivity from room temperature to 1 700 K, specific heat capacity from room temperature to 1 000 K, and thermal conductivity from room temperature to 1 000 K by the flash method for homogeneous ceramics with porosity 10 % or less.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 18755:2005 *Fine ceramics (advanced ceramics, advanced technical ceramics)—Determination of thermal diffusivity of monolithic ceramics by laser flash method* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0601 *Geometrical Product Specifications (GPS)—Surface texture: Profile method—Terms, definitions and surface texture parameters*

JIS B 7502 *Micrometer callipers*

NOTE : Corresponding International Standard: ISO 3611 *Micrometer callipers for external measurement* (NEQ)

JIS C 1602 *Thermocouples*

JIS R 1600 *Glossary of terms relating to fine ceramics*

JIS R 1634 *Test methods for density and apparent porosity of fine ceramics*