

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS B 7094 : 1997

Photographic lenses— Measurement of the focal length

ICS 37.040.10

Descriptors : photographic lenses, camera lenses, focal length measurement, focal length

Reference number : JIS B 7094 : 1997 (E)

B 7094 : 1997

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently, JIS B 7094 : 1978 is replaced with this Standard.

Date of Establishment: 1978-03-01

Date of Revision: 1997-10-20

Date of Public Notice in Official Gazette: 1997-10-20

Investigated by: Japanese Industrial Standards Committee
Divisional Council on Precision Machinery

JIS B 7094:1997, First English edition published in 1998-03

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.

© JSA 1998

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

Photographic lenses— Measurement of the focal length

Introduction This Japanese Industrial Standard which is made on the basis of **ISO 517, Photography—Apertures and related properties pertaining to photographic lenses—Designations and measurements** published in 1996 as the 2nd edition without changing the technical contents with relation to the items provided in this Standard specifies additionally the items not specified in the corresponding International Standard, [i.e. Measurement method 2 (method by using a distant object) and Measurement method 3 (nodal slide method)].

Besides, the provisions in **ISO 517** are divided into three Japanese Industrial Standards of **JIS B 7094**, **JIS B 7095** and **JIS B 7106**.

1 Scope This Japanese Industrial Standard specifies the measurement method of the focal length of photographic lenses (hereafter referred to as “lenses”).

However, this Standard does not apply to the lenses, the media in the object space and/or image space of which are the lenses other than air and anamorphic lenses.

Remarks : The following is the corresponding International Standard to this Standard:

ISO 517 : 1996 *Photography—Apertures and related properties pertaining to photographic lenses—Designations and measurements*

2 Normative reference The following standard contains the provision which, through reference in this text, constitutes provision of this Standard. The latest edition thereof shall be applied.

JIS Z 8120 *Glossary of optical terms*

3 Definitions For the purpose of this Standard, the definitions given in **JIS Z 8120** and the following definitions apply:

- a) **focal length** When a target point at infinity lies in the direction making a small angle θ with the optical axis of the lens, and its image point is produced by the lens at the distance of y' (mm) from the optical axis, the focal length of the lens is defined by the formula (1) (see Fig. 1).

$$f = -\lim_{\theta \rightarrow 0} \frac{y'}{\tan \theta} \dots\dots\dots (1)$$

where, f : focal length (mm)