INTERNATIONAL STANDARD

ISO 14880-3

First edition 2006-06-01

Optics and photonics — Microlens arrays —

Part 3:

Test methods for optical properties other than wavefront aberrations

Optique et photonique — Réseaux de microlentilles —

Partie 3: Méthode d'essai pour les propriétés optiques autres que les aberrations du front d'onde



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2006

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 either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Page

Contents

Foreword......iv Introductionv 1 Scope 1 2 Normative references 1 3 Terms and definitions....... 1 4 5 Microscope test method1 5.1 5.2 5.3 Preparation4 6 Procedure4 6.1 General.......4 6.2 6.3 Measurement of chromatic aberration4 6.4 Measurement of the uniformity of the focal spot positions 5 Results and uncertainties 5 7 8 Coupling efficiency, imaging quality 6 9 Annex B (normative) Confocal measurement of effective back or front focal length of lens array....... 10 Annex D (normative) Measurement of the uniformity of the focal spot positions of a microlens

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14880-3 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 9, *Electro-optical systems*.

ISO 14880 consists of the following parts, under the general title Optics and photonics — Microlens arrays:

- Part 1: Vocabulary
- Part 2: Test methods for wavefront aberrations
- Part 3: Test methods for optical properties other than wavefront aberrations
- Part 4: Test methods for geometrical properties