

This is a preview of "ISO 9335:2012". Click here to purchase the full version from the ANSI store.

Second edition
2012-10-01

Optics and photonics — Optical transfer function — Principles and procedures of measurement

Optique et photonique — Fonction de transfert optique — Principes et procédures de mesure



Reference number
ISO 9335:2012(E)

© ISO 2012

This is a preview of "ISO 9335:2012". Click here to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

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

This is a preview of "ISO 9335:2012". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Measuring equipment and environment	1
4.1 General aspects	1
4.2 Environment	2
4.3 Measuring equipment	2
4.4 System components	3
5 Measurement procedures	10
5.1 General	10
5.2 Setting the measuring conditions	10
5.3 Additional considerations of measurement	11
5.4 Particular measuring conditions	13
6 Corrections to measured data	14
6.1 Normalization	14
6.2 Correction of the frequency scale	14
6.3 Correction of the measured modulation	14
6.4 Auxiliary imaging systems	15
7 Presentation of OTF data	15
7.1 General	15
7.2 Statement of identification and measuring conditions	15
7.3 Graphical presentation of OTF data	16
7.4 Numerical presentation	17
8 Accuracy checks	17
Annex A (informative) Examples of the presentation of OTF data	19
Bibliography	24

This is a preview of "ISO 9335:2012". Click here to purchase the full version from the ANSI store.

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 9335 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 1, *Fundamental standards*.

This second edition cancels and replaces the first edition (ISO 9335:1995), of which it constitutes a minor revision. It also incorporates the Technical Corrigendum ISO 9335:1995/Cor.1:2005.

This is a preview of "ISO 9335:2012". Click here to purchase the full version from the ANSI store.

Introduction

The optical transfer function is an important aid to objective evaluation of the image-forming capability of optical, electro-optical and photographic systems.

In order that optical transfer function measurements achieved using different measuring principles or obtained from measuring instruments in different laboratories can be compared, it is necessary to ensure equivalence of measurement parameters such as focus setting and spatial frequency range. For this reason, an agreed terminology has been defined in order for the measurement parameters used in this International Standard to be understood by all users. This International Standard gives guidance for the construction and operation of equipment for optical transfer function measurement.

The specifications in this International Standard form the basic requirements of measurement instrumentation and procedures for guaranteeing a defined accuracy of measurement of the optical transfer function.