
Photography — Camera shutters — Timing

Photographie — Obturateurs d'appareils photographique — Durée d'exposition



Contents

1 Scope	1
2 Normative reference	1
3 Terms and definitions	1
4 Symbols	4
5 Required characteristics and their tolerances.....	5
5.1 Exposure time	5
5.1.1 Exposure time marking	5
5.1.2 Tolerances	5
5.2 Delay time	6
5.2.1 Front shutters.....	6
5.2.2 Focal-plane shutters.....	7
6 Test methods.....	8
6.1 General.....	8
6.2 Apparatus	8
6.2.1 Light source	8
6.2.2 Detector	8
6.2.3 Time-interval meter.....	8
6.3 Front-shutter test.....	8
6.3.1 Test assembly	8
6.3.2 Procedure	8
6.4 Focal-plane-shutter test	9
6.4.1 Test assembly	9

© ISO 1999

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.

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

6.4.2 Procedure	10
7 Explanatory notes.....	11
7.1 Tolerance.....	11
7.2 Test method	11
Annex A (normative) Graphic test methods.....	13

This document is a preview generated by EVS

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 3.

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.

International Standard ISO 516 was prepared by Technical Committee ISO/TC 42, *Photography*.

This third edition cancels and replaces the second edition (ISO 516:1986), of which it constitutes a technical revision.

Annex A forms a normative part of this International Standard.

Introduction

This International Standard is intended to provide a uniform basis for determining the timing and marking of exposure times of all types of shutters used in still cameras, and to give suitable definitions of the terms used.

This document is a preview generated by EVS

This document is a preview generated by EVS

Photography — Camera shutters — Timing

1 Scope

This International Standard defines the characteristics of all types of shutters which are mounted in still cameras and affect the control of exposure, motion-stopping ability and synchronization with a photoflash light source.

It also specifies the exposure-time markings for the shutters and their tolerances.

The tolerances specified are the target values for the shutter performance that can be expected to give good results. They are not intended for application as a general inspection standard in controlling the performance of shutters, since tolerances may vary with the feature and price class of camera tested.

Test methods are described for routine manufacturing testing and quality control.

2 Normative reference

The following normative document contains provisions, which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, such publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 10330:1992, *Photography — Synchronizers, ignition circuits and connectors for cameras and photoflash units — Electrical characteristics and test methods*.

3 Terms and definitions

For the purposes of this International Standard the following terms and definitions apply:

NOTE The meanings of symbols used in this clause are given in clause 4.

3.1

front shutter

any shutter in the vicinity of the lens

NOTE 1 The front shutter may be in front of, behind or between the lens elements and may consist of rotating discs, rotating slats, sliding blades, oscillating blades, etc. Programmed shutters are also included.

NOTE 2 The common characteristic for the front shutter is that the entire picture area is exposed almost simultaneously.

NOTE 3 When the shutter and diaphragm are located too far apart, both exposure and shutter speed may vary at different points in the picture area.

3.2

focal-plane shutter

any shutter in the vicinity of the focal plane

NOTE 1 The focal-plane shutter may consist of fixed or variable slit curtains, rotating discs, sliding blades, etc.