

---

---

**Photography — Digital cameras —  
Specification guideline**

*Photographie — Caméras numériques — Ligne directrice de  
spécification*



This document is a preview generated by EMS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Definition set of the product specifications of DSCs</b> .....	<b>2</b>
4.1 Basic requirements .....	2
4.2 Definitions of specifications .....	3
4.2.1 General.....	3
4.2.2 Optical system.....	4
4.2.3 Camera control system.....	8
4.2.4 Key components.....	14
4.2.5 Recording system.....	21
4.2.6 Image quality .....	23
4.2.7 Response time.....	30
4.2.8 Miscellaneous features.....	33
<b>Annex A (normative) Measurement methods of features not related to image quality</b> .....	<b>39</b>
<b>Annex B (normative) Related standards</b> .....	<b>46</b>
<b>Annex C (informative) Commentary</b> .....	<b>58</b>
<b>Bibliography</b> .....	<b>61</b>

## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 42, *Photography*.

## Introduction

The digital still camera (DSC) marketplace continuously produces and promotes new and competitive cameras. Requiring that manufacturers produce DSCs with standard numerical specifications impedes the technical progress, interferes with fair market competition, hinders the sound development of the industry, reduces camera innovation, and limits the customer's choice. On the other hand, standardized definitions of a fundamental set of camera specifications can help consumers to choose, purchase, and use these cameras because they provide the information needed to understand and compare the numerical specifications offered by the manufacturers and, thus, contribute to the fair competition in the market.

The various fundamental features of DSCs have close relationships with other features, such as camera size or cost. Nonetheless, these features, their relationships, and their numerical values vary with time and technological evolution. Manufacturers design and build their cameras to numerical specifications that balance performance with their estimation of the competitiveness of the product in and the feedback from the marketplace.

This International Standard identifies a set of fundamental features that describe DSCs, along with their accepted definitions, measurements, and presentation methods, but it does not define nor specify numerical values for the features, functions for calculating these values, nor limiting values required for these features.

This International Standard is based on Reference [1] prepared by Camera and Imaging Products Association (CIPA).



# Photography — Digital cameras — Specification guideline

## 1 Scope

This International Standard identifies a set of features that describes digital still cameras (DSCs), and it specifies their definitions, measurement methods, and presentation methods. This International Standard applies to DSCs designed and produced for and promoted to general consumers and need not be applied to those DSCs designed and produced to meet individual and special specifications agreed upon by particular business or industrial users and the manufacturer.

The presentation methods specified in this International Standard are intended for use as notations on camera bodies, on product packaging, on promotional materials for advertising and at the point of purchase, in electronic or printed catalogues and other materials, and in the relevant software.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 516, *Photography — Camera shutters — Timing*

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

ISO 2720, *Photography — General purpose photographic exposure meters (photoelectric type) — Guide to product specification*

ISO 12232, *Photography — Digital still cameras — Determination of exposure index, ISO speed ratings, standard output sensitivity, and recommended exposure index*

ISO 12233, *Photography — Electronic still picture imaging — Resolution and spatial frequency responses*

ISO 14524, *Photography — Electronic still-picture cameras — Methods for measuring opto-electronic conversion functions (OECFs)*

ISO 15739, *Photography — Electronic still-picture imaging — Noise measurements*

ISO 15781, *Photography — Digital still cameras — Measuring shooting time lag, shutter release time lag, shooting rate, and start-up time*

ISO 17850, *Photography — Digital cameras — Geometric distortion (GD) measurements*

ISO 17957, *Photography — Digital cameras — Shading measurements*

ISO 19084, <sup>1)</sup>*Photography — Digital cameras — Chromatic displacement measurements*

IEC 61747-6:2003, *Liquid crystal and solid-state display devices — Part 6: Measuring methods for liquid crystal modules — Transmissive type*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

---

1) To be published.