

ANSI/IS&T IT10.7000-2015

American National Standard

for Photography –

*Digital Still Cameras –
Guidelines for Reporting
Pixel-Related Specifications*



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**Digital Still Cameras –
Guidelines for Reporting
Pixel-Related Specifications**

Secretariat

The Society for Imaging Science & Technology (IS&T)

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American National Standard

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Contents

	Page
Foreword	ii
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Relationship between pixel-related terms for image sensors and DSCs.....	3
5 Rules for reporting	5
5.1 Number of effective pixels	6
5.2 Total number of image sensor cells.....	6
5.3 Number of Recorded Pixels.....	7
5.4 Number of Output Pixels	7
5.5 Image File Size.....	8
5.6 Image Data Compression Ratio	8
5.7 Sensor Cell Pitch.....	9
5.8 Focal Plane Size.....	9
5.9 35mm-equivalent Focal Length	10
5.10 Sensor optical format.....	10
Table	
1 Sensor optical formats.....	11
Figures	
1 Relationships of pixel-related terms for image sensors.....	4
2 Relationship of pixel-related terms for image sensors and DSCs	5
Annexes	
A Examples of suitable specifications.....	12
B Bibliography.....	13

Foreword (This foreword is not part of American National Standard ANSI/IS&T IT10.7000-2015.)

This IS&T standard is provided to meet the industry need for a standardized method of reporting the pixel-related specifications (e.g., the "number of pixels") for digital still cameras (DSCs). Without an ANSI standard, several different methods will continue to be used by various camera vendors, causing significant user confusion. In July 2001, the Japan Camera Industries Association (JCIA) in Japan adopted a "Guideline for Noting Digital Camera specifications in Catalogs", which provides standardized pixel-related definitions for DSCs. In July 2002, JCIA was dissolved and the Camera and Imaging Products Association (CIPA) was formed. CIPA now has responsibility for the JCIA guideline. IT10 and CIPA have cooperated in the development of this complementary standard for the USA.

The pixel-related specifications defined in this standard are not a ranking of the image quality of the DSC. For example, it is possible that a first DSC with a smaller reported value will provide better image quality than a second DSC having a larger reported value. ISO/TC 42 - Photography has developed a number of standards for measuring image quality related attributes of a DSC. These include ISO 12232:2006 (Ed. 2), *Photography - Digital still cameras - Determination of exposure index, ISO speed ratings, standard output sensitivity, and recommended exposure index*; ISO 12233:2014 (Ed. 2), *Photography - Electronic still picture imaging - Resolution and spatial frequency responses*; ISO 14524:2009 (Ed. 2), *Photography - Electronic still-picture cameras - Methods for measuring opto-electronic conversion functions (OECFs)*; ISO 15739:2013 (Ed. 2), *Photography - Electronic still-picture imaging - Noise measurements*; and ISO 15781:2013 (Ed. 1), *Photography - Digital cameras - Measuring shooting time lag, shutter release time lag, shooting rate, and start-up time*.

It is possible that an ISO standard specifying guidelines for reporting pixel-related specifications for DSCs will be developed in the future. Once such an ISO standard is published, it is anticipated that this standard will be withdrawn.

Annexes A and B of this standard are for information only.

Suggestions for the improvement of this standard will be welcome. They should be forwarded to the IS&T Standards Coordinator, Society for Imaging Science & Technology (IS&T), 7003 Kilworth Lane, Springfield, VA 22151, e-mail: standards@imaging.org.

This standard was processed and approved for submittal to ANSI by IS&T Imaging Technology Committee IT10, Digital Photography. Committee approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this edition of the standard, the IT10 Committee had the following members:

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1 Scope

This standard specifies guidelines for reporting pixel-related specifications (e.g., the number of camera pixels) of a digital still camera, for the purposes of camera labeling, camera packaging, advertising, and the like. It is applicable to monochrome and color digital still cameras using one or more image sensors

2 Normative references

The following standard contains provisions which, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

ISO 12231:1998 *Photography – Electronic still picture imaging – Terminology*

3 Terms and definitions

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

3.1

digital still camera (DSC)

A device that incorporates an image sensor and produces a digital signal representing a still picture.

NOTE: A digital camera is typically a portable, hand-held device. The digital signal is usually recorded on a digital storage media, such as a solid-state memory card or magnetic disk.

3.2

effective pixels

The number of photoelements included in an area equal to the picture area plus the ring pixel area, as defined in this standard.

NOTE: The definition of effective pixels is based on the definition of the “Number of Effective Pixels” in the JCIA *Guideline for Noting Digital Camera Specifications in Catalogs*.