

**Standard of Camera & Imaging Products Association
Resolution Measurement methods for digital cameras**

CIPA DC-003(2003)

1. Overview

Digital still cameras (DSCs) are spreading rapidly and widely in these years. The pixel-related specifications (e.g. the "number of pixels") have been used to express the image quality of the DSCs.

Recently, however, various types have been developed in image sensors, and the number of pixels are getting difficult to express the image quality, by itself. CIPA considered that resolution could be one of the image quality criteria, and decided to standardize the measurement method.

This standard, CIPA DC-003, was developed with consideration on ISO12233, Photography-- Electric still-picture cameras--Resolution measurements, and defines the visual resolution, one of the three methods described in ISO12233, as the standard method.

CIPA DC-003 also defines the rule to note the measurement results in catalogs.

2. Items specified in this standard

Following contents are described.

- 1. Scope
- 2. Normative references
- 3. Terms and definition
- 4. Test Charts
 - 4.1 ISO12233 resolution test chart
 - 4.2 Meanings of the numbers on the ISO chart
 - 4.3 Use of charts other than the ISO chart
- 5. Test conditions
 - 5.1 Test chart illumination
 - 5.2 Framing
 - 5.3 Principles of camera setting
 - 5.4 Exposure setting
 - 5.5 Focusing
 - 5.6 White balance
 - 5.7 Zoom position

- 6.Measurement conditions**
- 6.1 Evaluation using a hard-copy printout**
- 6.2 Evaluation on a monitor**
- 6.3 Measurement by software**
- 7. Method of reporting**
- 7.1 Values of resolution**
- 7.2 Measurement direction**
- 7.3 Measurement method**
- 7.4 Camera setting**
- 8. Examples of reporting**
- 9. About ISO12233**

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