

ICS 37.040.10

CCS N 46



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42887-2023

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

数码照相机 拍摄时滞、快门时滞、拍摄速度和开机时间的测量

(English Translation)

Issued on: August 6, 2023

Implemented on: March 1, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document is equivalent to ISO 15781:2019 "Photography Digital Camera Shooting Lag, Shutter Lag, Shooting Speed and Power-on Time "Measurement of Space".

This document has made the following minimal editorial changes.

---In order to coordinate with the existing standards, the standard name is changed to "Digital Camera Shooting Time Lag, Shutter Lag, Shooting Speed and Start-up Time Measurement".

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

Introduction

In the early days of digital photography, it was nearly impossible to capture images of moving objects. Because after pressing the exposure button, taking the image requires a period of comparison it takes a long time, and the ideal moment has disappeared before it can be photographed.

From the time when the exposure button is pressed to when the image starts to be exposed, part of the time is used for focusing and the other part of the time is used for exposure control.

system. This unnecessary but essential time period is called shooting lag. It is often confused with the concept of shutter lag. This document gives Definition of shutter lag. Currently, optimized systems can already reduce these delays.

Photographing the different stages of movement of fast-moving objects is very important in many situations, such as in the fields of sports photography and portrait photography. This kind of high Speed photography requires rapid image processing within a digital camera, which can be measured according to the method described in this document.

When a photographer is preparing to shoot a changing scene, if his digital camera takes a long time to enter the shooting state, then turn on the camera Finally, the opportunity to capture the footage has disappeared. This time is called the boot time, which is another important parameter. It can also be determined according to the specifications of this document.

method to determine.

Digital camera shooting lag, shutter lag, shooting Measurement of speed and boot time

1 Scope

This document defines the terms and definitions of digital camera shooting lag, shutter lag, shooting speed and boot time, and describes the corresponding Testing and recording methods include a method of testing using the internal control signal of a digital camera and a method obtained without disassembling the digital camera.

time value method.

This document applies to the shooting time lag, shutter time lag, shooting speed and startup time of the shooting modules of digital cameras, mobile phones and tablet computers.

measurement of time. This document does not cover the measurement of autofocus accuracy and speed in low light environments.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

ISO 7589 Specification for light sources for fluorescent lamps, incandescent lamps and printers for photometric sensitivity measurement (Photography-Illumi-

3 Terms and definitions

The following terms and definitions apply to this document.

digital camera digital still camera A device that uses an image sensor to generate digital signals to obtain static images.

Note: Digital cameras are generally portable, handheld devices, and their digital signals are usually recorded in removable memory, such as solid-state memory cards or disks.

shooting time lag

tSL

The time interval from the shooting point to the start of exposure when the digital camera or mobile device shooting module is in standby mode.

Note 1: This time includes all tests and adjustments that need to be made on the digital camera before exposure (for example, autofocus and exposure control).

Note 2: When the exposure button is pressed, the digital camera requires a lot of time for

measurement and adjustment, such as determining the exposure and adjusting the focus. These procedures the time required is all part of the shooting time lag.

Note 3: The shooting point usually refers to pressing the shutter button directly to the maximum extent in standby mode without any interruption. See 3.8 for details.

tRL

After completing the focusing procedure (pressing the shutter halfway) at the pre-shooting point (3.7), the time interval from the shooting point (3.8) (pressing the shutter fully) to the start of exposure.

Note 1: In some publications, the terms shutterlag or release lag are used instead of shutter lag.

Note 2: The shooting point usually refers to pressing the shutter button fully while pressing the shutter button halfway.