

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

Transformed

ISO RECOMMENDATION R 516

EXPOSURE-TIME MARKINGS FOR SHUTTERS
USED IN STILL CAMERAS

1st EDITION

November 1966

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BRIEF HISTORY

The ISO Recommendation R 516, *Exposure-time Markings for Shutters Used in Still Cameras*, was drawn up by Technical Committee ISO/TC 42, *Photography*, the Secretariat of which was held by the American Standards Association, Inc. (ASA).

Work on this question by the Technical Committee began in 1955 and led, in 1959, to the adoption of a Draft ISO Recommendation.

In August 1961, this Draft ISO Recommendation (No. 423) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Belgium	Italy	Switzerland
Brazil	Japan	United Kingdom
Canada	Netherlands	U.S.A.
Chile	New Zealand	U.S.S.R.
France	Romania	
Germany	Sweden	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in November 1966, to accept it as an ISO RECOMMENDATION.

EXPOSURE-TIME MARKINGS FOR SHUTTERS USED IN STILL CAMERAS

FOREWORD

This ISO Recommendation is intended to provide a uniform basis for determining and marking the exposure times on all types of shutters used in still cameras and to provide suitable definitions of the terms used. It is recognized that all shutters now in use may not fall within the scope of these specifications. It is desirable, however, that they serve as a guide in subsequent design whenever conditions permit, in order that ultimately all shutters may be compared on a common basis.

1. SCOPE

- 1.1 This ISO Recommendation describes the exposure-time markings for all types of shutters used in still cameras. It recommends that markings be selected from a specified series of nominal numbers which were derived by rounding precise values of a geometrical progression with a factor 2.
- 1.2 For the purpose of this ISO Recommendation, lens shutters should be measured at the maximum effective aperture.

2. DEFINITIONS

- 2.1 *Effective exposure time, t_e* , at a particular exposure-time setting. Theoretical time which would be required for the quantity of light actually transmitted by the shutter, at a particular setting, to pass through an "ideal" shutter of the same aperture. In the case of a lens shutter, such an ideal shutter would be one with infinitely short opening and closing times, and, in the case of a focal-plane shutter, one operating exactly in the camera focal plane.
- 2.2 *Exposure-time marking*. Reciprocal number of the effective exposure time in seconds.

3. STANDARD SERIES OF EXPOSURE-TIME MARKINGS

The standard series of the exposure-time markings on shutters should be as follows: 1, 2, 4, 8, 15, 30, 60, 125, 250, 500, 1000...

The highest marking, however, need not necessarily be selected from this series, but should be followed by numbers selected from the series, beginning with the next lower number, whenever practicable, and progressing as far as required in the particular application.