

INTERNATIONAL STANDARD

**ISO
7187**

Second edition
1995-12-15

Photography — Materials for direct-positive colour-print cameras — Determination of ISO speed

*Photographie — Surfaces sensibles pour appareils photographiques
donnant directement une épreuve positive en couleur — Détermination de
la sensibilité ISO*



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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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7187 was prepared by Technical Committee ISO/TC 42, *Photography*.

This second edition cancels and replaces the first edition (ISO 7187:1983), which has been technically revised to include several new definitions (clause 3) and a distinction between speed, ISO speed and ISO speed of a product (clause 6).

Annex A of this International Standard is for information only.

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International Organization for Standardization
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Introduction

The increased use of in-camera processed colour-print materials, often referred to as “instant print”, and the introduction of equipment to permit their use in general cameras makes it desirable to establish a standard method for determining the speed of this type of product. This International Standard applies to any directly viewed reflection colour-print material made by camera exposure of the original scene onto a photo-sensitive material and subsequent diffusion transfer of a dye image within the same material or to a second receiver material. It also applies to any material similarly exposed, but later processed outside of the camera by a process other than diffusion transfer of the dyed image. It does not apply to copying or duplicating.

For diffusion-transfer materials, the speed and colour of prints depend on the ambient temperature during diffusion. Usually, speed problems as well as serious colour mismatches will occur in prints made at temperatures beyond the range recommended by the manufacturer. The conditions of direct viewing of reflection prints are specified in ISO 3664.

The sensitometric method specified in this International Standard gives ISO speeds that are in close agreement with film speeds obtained by making practical camera exposures. These speeds follow the $f/16$ daylight rule; that is, the ISO speed is the reciprocal of the exposure time, in seconds, which gives the best quality print when the camera lens aperture is set at $f/16$ in direct sunlight for an average front-lighted scene with a solar altitude between 35° and 50° .

When these ISO speeds are used in conjunction with exposure meters conforming to ISO 2720, resultant pictures will be of optimum exposure. For an average scene, the optimum exposure will be approximately midway between the least exposure and the greatest exposure producing satisfactory prints at normal viewing illuminance levels. The exposure latitude for satisfactory prints is approximately one half stop for under-exposure and one half stop for overexposure.

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