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Photography — Electronic scanners for photographic images — Dynamic range measurements

*Photographie — Scanners électroniques pour images
photographiques — Mesurages d'intervalles dynamiques*



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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.

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Introduction

The use of scanners to provide digital image files is rapidly growing. A standard is needed in order to measure the ability of scanners to capture tones especially in the dark areas of the original. At the present time most manufacturers calculate the dynamic range from the bit depth of the implemented A/D conversion which is usually higher than the actual capabilities of the scanner. This International Standard can be used for photofinishing, professional, graphic arts and consumer scanners.

This International Standard specifies methods for measuring the ability of scanners to capture tones especially in the dark areas of the original. The scanner measurements described in this International Standard are performed in the digital domain, using digital analysis techniques. A test chart of appropriate size and characteristics is scanned and the resulting data is analysed. The test chart described in this International Standard is designed specifically to evaluate continuous tone film and reflection scanners. It is not designed for evaluating electronic still-picture cameras, video cameras, or bi-tonal document scanners.