INTERNATIONAL STANDARD

ISO/IEC 11693

Third edition
2005-11-15

Identification cards — Optical memory cards — General characteristics

Cartes d'identification — Cartes à mémoire optique — Caractéristiques générales

Reference number
ISO/IEC 11693:2005(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword ... iv

Introduction ... v

1 Scope ... 1

2 Normative references ... 1

3 Terms and definitions ... 1

4 Construction ... 4
4.1 Card construction ... 4
4.2 Cross-section at accessible optical area ... 4

5 Dimensions ... 5
5.1 Card height and width ... 5
5.2 Card thickness ... 5
5.3 Card corners ... 5
5.4 Card edges ... 5

6 Physical characteristics ... 5
6.1 Additions ... 5
6.2 Bending stiffness ... 5
6.3 Card warpage ... 5
6.4 X-rays ... 5
6.5 Contamination ... 5
6.6 Flammability ... 5
6.7 Toxicity ... 5
6.8 Ultraviolet light ... 6
6.9 Light transmittance ... 6
6.10 Bending properties ... 6
6.11 Resistance to chemicals ... 6
6.12 Atmospheric requirements ... 6
6.13 Durability ... 6
6.14 Dimensional stability and warpage with temperature and humidity ... 6
6.15 Default test environment and conditioning ... 6
6.16 Additional characteristics ... 6

7 Dimensions and location of the accessible optical area ... 6

8 Optical properties and characteristics ... 7

9 Logical data structures ... 7

Bibliography ... 8

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 11693 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

This third edition cancels and replaces the second edition (ISO/IEC 11693:2000), which has been technically revised.

Introduction

This International Standard is one of a series of standards describing the parameters for optical memory cards and the use of such cards for the storage and interchange of digital data.

The standards recognize the existence of different methods for recording and reading information on optical memory cards, the characteristics of which are specific to the recording method employed. In general, these different recording methods will not be compatible with each other. Therefore, the standards are structured to accommodate the inclusion of existing and future recording methods in a consistent manner.

ISO/IEC 11693 is generic to all optical memory cards. Characteristics which apply to a specific recording method shall be found in separate standards documents which define the extent of compliance with, addition to, and/or deviation from this relevant base document.

Identification cards — Optical memory cards — General characteristics

1 Scope

This International Standard provides information necessary to store data on cards, to read data from cards, and for the physical, optical, and data interchangeability of optical memory cards in information processing systems.

It defines the general characteristics of optical memory cards including card materials, construction, characteristics, dimensions, and test environments which have been determined to be common to all types of optical memory cards regardless of recording method employed.

The intent of this International Standard is to provide necessary information for card manufacturers, card issuers and card users interested in interchanging digital information encoded on optical memory cards.

This International Standard can serve as a guide to companies who plan to develop equipment and systems using optical memory cards. The data content and use of the cards depend upon the applications developed by each industry group.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 7810, *Identification cards — Physical characteristics*

ISO/IEC 7816-1, *Identification cards — Integrated circuit(s) cards with contacts — Part 1: Physical characteristics*

ISO/IEC 10373-1, *Identification cards — Test methods — General characteristics tests*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
accessible optical area
portion of the optical memory card which is available to be accessed by the read and/or write beam of the optical system used

3.2
background reflectivity
reflectivity of an unwritten, unformatted region of the accessible optical area at a specified wavelength measured through a transparent layer midway between adjacent track guides