INTERNATIONAL STANDARD

ISO/IEC 7810

Third edition
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Identification cards — Physical characteristics

Cartes d'identification — Caractéristiques physiques

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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 7810 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 7810:1995), which has been technically revised.

Introduction

This edition is a 5 year technical revision of the previous edition and was prepared by JTC 1/SC 17/WG 1 *Physical characteristics and test methods for ID-cards*. It cancels and replaces ISO/IEC 7810:1995. The user is encouraged to review the entire standard for revisions and updates. The major changes made during this revision are listed below.

1. The addition of criteria and test method for heat resistance. This criteria should be met by existing PVC or PVCA materials, however, it allows the user to designate materials that can withstand higher temperatures.

2. Any special requirements for various recording technologies have been moved to the base standard for that particular recording technology.

3. The peel strength and opacity requirements were changed to conform with revised test methods in ISO/IEC 10373-1:1998.

4. Tolerances for ID-2 and ID-3 size cards have been added.

5. Size and tolerances for an ID-000 size card have been added along with an informative annex showing the relationship to an ID-1 size card.

6. The specified areas for opacity, previously shown in the test methods ISO/IEC 10373-1, have changed and are shown in this International Standard.

Notes in this International Standard are only used for giving additional information intended to assist in the understanding or use of the standard and do not contain provisions or requirements to which it is necessary to conform in order to be able to claim compliance with this International Standard.

This International Standard defines the minimum physical requirements for the basic plastic identification card and is used by the following identification card standards for recording technologies. Other standards not listed here may also refer to ISO/IEC 7810.

ISO/IEC 7501 series, *Identification cards — Machine readable travel documents*
ISO/IEC 7811 series, *Identification cards — Recording technique*
ISO/IEC 7812 series, *Identification cards — Identification of issuers*
ISO/IEC 7813, *Identification cards — Financial transaction cards*
ISO/IEC 7816 series, *Identification cards — Integrated circuit(s) cards with contacts*
ISO/IEC 10536 series, *Identification cards — Contactless integrated circuit(s) cards — Close-coupled cards*
ISO/IEC 14443 series, *Identification cards — Contactless integrated circuit(s) cards — Proximity cards*
ISO/IEC 15693 series, *Identification cards — Contactless integrated circuit(s) cards — Vicinity cards*
ISO/IEC 11693, *Identification cards — Optical memory cards — General characteristics*
ISO/IEC 11694 series, *Identification cards — Optical memory cards — Linear recording method*

Identification cards — Physical characteristics

1 Scope

This International Standard is one of a series of standards describing the characteristics for identification cards as defined in the definitions clause and the use of such cards for international interchange.

This International Standard specifies the physical characteristics of identification cards including card materials, construction, characteristics, and dimensions for four sizes of cards.

ISO/IEC 10373-1 specifies the test procedures used to check cards against the parameters specified in this International Standard.

This International Standard specifies the requirements for cards used for identification. It takes into consideration both human and machine aspects and states minimum requirements.

It is the purpose of this series of standards to provide criteria to which cards shall perform. No consideration is given within these standards to the amount of use, if any, experienced by the card prior to test. Failure to conform to specified criteria should be negotiated between the involved parties.

NOTE 1 Numeric values in the SI and/or Imperial measurement system in this International Standard may have been rounded off and therefore are consistent with, but not exactly equal to, each other. Either system may be used, but the two should not be intermixed or reconverted. The original design was made using the Imperial measurement system.

NOTE 2 A different standard for thin flexible cards exists. Thin flexible cards are not within the scope of this International Standard.

2 Conformance

An identification card is in conformance with this International Standard if it meets all mandatory requirements specified herein. Unless otherwise specified default values apply.

3 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 10373-1:1998, *Identification cards — Test methods — Part 1: General characteristics tests*

NOTE The ID-000 size card size was first defined by ENV 1375-1, Identification card systems — Intersector integrated circuit(s) card additional formats — Part 1: ID-000 card size and physical characteristics.

4 Terms and definitions

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

4.1
identification card
card identifying its holder and issuer which may carry data required as input for the intended use of the card and for transactions based thereon

4.2
signature panel
special area on the card intended to have a signature applied

4.3
warpage
deviation from flatness

4.4
normal use
use as an identification card (see 4.1) involving equipment processes appropriate to the card technology, and storage as a personal document between equipment processes

4.5
ID-1
nominally 85,60 mm (3.370 in) wide by 53,98 mm (2.125 in) high by 0,76 mm (0.030 in) thick

4.6
ID-2
nominally 105 mm (4.134 in) wide by 74 mm (2.913 in) high by 0,76 mm (0.030 in) thick

4.7
ID-3
nominally 125 mm (4.921 in) wide by 88 mm (3.465 in) high by 0,76 mm (0.030 in) thick

4.8
raised area
area whose surface is raised above that of the surrounding card surface by addition of some feature such as a hologram, signature panel, magnetic stripe, photograph, integrated circuit contacts, embossed characters

4.9
unused card
card possessing all the components required for its intended purpose, which has not been subjected to any personalization or testing operation, and which has been stored in a clean environment with no more than 48 hour exposure to daylight at temperatures between 5 °C to 30 °C and humidity between 10 % to 90 % without experiencing thermal shock

4.10
returned card
card according to 4.9 after it has been issued to the card holder and returned for the purpose of testing

4.11
ID-000
nominally 25 mm (0.984 in) wide by 15 mm (0.591 in) high by 0,76 mm (0.030 in) thick

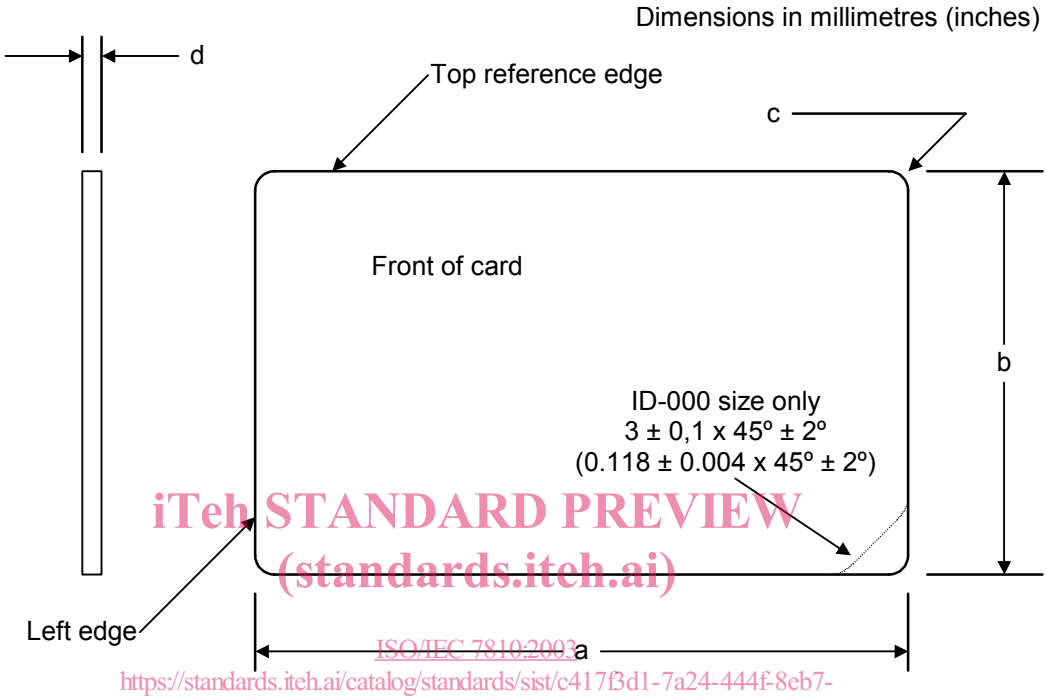
5 Dimensions of card

5.1 Card size

The following dimensions and tolerances apply to cards under the default test environment of 23 °C ± 3 °C (73 °F ± 5 °F) and 40 % to 60 % relative humidity.

5.1.1 Card dimensions and tolerances

All points on the edges of the card in the finished state, except for the rounded corners, shall fall between two concentric, similarly aligned rectangles as defined in Figure 1 for maximum height and width, and minimum height and width. The corners shall be rounded with a radius as specified in Figure 1. One corner of the ID-000 size card shall have a bevel as shown in Figure 1. Care should be taken to avoid misalignment between the rounded corners and the straight edges of the card. The thickness of a card as defined here applies only to those parts of the card outside of any raised area.



	a		b		c		d	
	maximum	minimum	maximum	minimum	maximum	minimum	maximum	minimum
ID-000 Unused card	25,10 (0.988)	24,90 (0.980)	15,10 (0.594)	14,90 (0.587)	1,1 (0.043)	0,9 (0.035)	0,84 (0.033)	0,68 (0.027)
ID-1 Unused card	85,72 (3.375)	85,47 (3.365)	54,03 (2.127)	53,92 (2.123)	3,48 (0.137)	2,88 (0.113)	0,84 (0.033)	0,68 (0.027)
ID-1 Returned card	85,90 (3.382)	85,47 (3.365)	54,18 (2.133)	53,92 (2.123)	3,48 (0.137)	2,88 (0.113)	0,84 (0.033)	0,68 (0.027)
ID-2 Unused card	105,2 (4.142)	104,8 (4.126)	74,2 (2.921)	73,8 (2.906)	5 (0.197)	3 (0.118)	0,84 (0.033)	0,68 (0.027)
ID-2 Returned card	105,3 (4.146)	104,8 (4.126)	74,3 (2.925)	73,7 (2.902)	5 (0.197)	3 (0.118)	0,84 (0.033)	0,68 (0.027)
ID-3 Unused card	125,2 (4.929)	124,8 (4.913)	88,2 (3.472)	87,8 (3.457)	5 (0.197)	3 (0.118)	0,84 (0.033)	0,68 (0.027)
ID-3 Returned card	125,3 (4.933)	124,8 (4.913)	88,3 (3.476)	87,7 (3.453)	5 (0.197)	3 (0.118)	0,84 (0.033)	0,68 (0.027)

Figure 1 — Card size dimensions

NOTE 1 The definition of the front of the card is technology dependent. For example, cards supporting either ICC contacts or embossing always have these technologies on the front of the card, and the magnetic stripe always appears on the back of the card. It should be noted that not all card technologies which use the ISO/IEC 7810 standard need to define the front of the card.

NOTE 2 Tolerances may not be applicable for non-plastic materials.