
Identification cards — Test methods —
Part 9:
Optical memory cards — Holographic
recording method

Cartes d'identification — Méthodes d'essai —

*Partie 9: Cartes à mémoire optique — Méthode d'enregistrement
holographique*

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Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Default items applicable to the test methods	2
4.1 Test environment.....	2
4.2 Pre-conditioning	2
4.3 Selection of test methods.....	2
4.4 Default tolerance	2
4.5 Total measurement uncertainty	2
5 Test methods	3
5.1 Location of accessible optical area and reference track	3
5.1.1 Procedure	3
5.1.2 Test report.....	3
5.2 Skew.....	3
5.2.1 Apparatus for skew measurement.....	4
5.2.2 Procedure for skew measurement.....	4
5.2.3 Test report.....	5
5.3 Hologram size	5
5.3.1 Apparatus for hologram size measurement.....	5
5.3.2 Procedure for hologram size measurement.....	5
5.3.3 Test report.....	5
5.4 Arrangement of multiple holograms	5
5.4.1 Apparatus for measuring the arrangement of multiple holograms	6
5.4.2 Procedure for measuring the arrangement of multiple holograms	6
5.4.3 Test report.....	6
5.5 Optical properties of the media	6
5.5.1 Apparatus for measuring the optical properties of the media.....	7
5.5.2 Procedure for measuring the optical properties of the media.....	7
5.5.3 Test report.....	8
Bibliography.....	9

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.

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ISO/IEC 10373 consists of the following parts under the general title *Identification cards — Test methods*:

- *Part 1: General characteristics*
- *Part 2: Cards with magnetic stripes*
- *Part 3: Integrated circuit cards with contacts and related interface devices*
- *Part 5: Optical memory cards*
- *Part 6: Proximity cards*
- *Part 7: Vicinity cards*
- *Part 8: USB-ICC*
- *Part 9: Optical memory cards — Holographic recording method*

Introduction

ISO/IEC 10373 defines test methods in support of ISO/IEC 11695, which specifies optical holographic memory cards and the use of such cards for the storage and interchange of digital data.

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Identification cards — Test methods —

Part 9:

Optical memory cards — Holographic recording method

1 Scope

This part of ISO/IEC 10373 defines test methods for characteristics of identification cards according to the definition given in ISO/IEC 7810. It is specific to optical memory cards that use the holographic recording method technology. Each test method is cross-referenced to one or more base standards, i.e. ISO/IEC 7810 or one or more of the supplementary International Standards that define the information storage technologies employed in identification card applications.

NOTE 1 Criteria for acceptability do not form part of ISO/IEC 10373, but will be found in the International Standards mentioned above.

NOTE 2 Test methods defined in this part of ISO/IEC 10373 are intended to be performed separately. A given card is not required to pass through all the tests sequentially.

2 Normative references

[ISO/IEC 10373-9:2011](https://standards.iteh.ai/catalog/standards/sist/210d2fac-b2f7-4948-800d-10373-2011)

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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 11695-2, *Identification cards — Optical memory cards — Holographic recording method — Part 2: Dimensions and location of accessible optical area*

ISO/IEC 11695-3, *Identification cards — Optical memory cards — Holographic recording method — Part 3: Optical properties and characteristics*

3 Terms and definitions

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

3.1

test method

method for testing characteristics of identification cards for the purpose of confirming their compliance with International Standards

3.2

testably functional

surviving the action of some potentially destructive influence to the extent that:

- any magnetic stripe present on the card shows a relationship between signal amplitudes before and after exposure that is in accordance with the base standard;

- any integrated circuit(s) present in the card continues to show an Answer to Reset response¹⁾ which conforms to the base standard;
- any contacts associated with any integrated circuit(s) present in the card continue to show electrical resistance and impedance which conform to the base standard;
- any optical memory present in the card continues to show optical characteristics which conform to the base standard

3.3 normal use
use as an identification card (see ISO/IEC 7810:2003, 4.1), involving equipment processes appropriate to the card technology and storage as a personal document between equipment processes

4 Default items applicable to the test methods

4.1 Test environment

Unless otherwise specified, testing shall take place in an environment of temperature $23\text{ °C} \pm 3\text{ °C}$ ($73\text{ °F} \pm 5\text{ °F}$) and of relative humidity 40 % to 60 %.

4.2 Pre-conditioning

Where pre-conditioning is required by the test method, the identification cards to be tested shall be conditioned to the test environment for a period of 24 h before testing.

4.3 Selection of test methods

Unless otherwise specified, the tests in this part of ISO/IEC 10373 shall be applied exclusively to optical memory cards using the holographic recording method, as defined in ISO/IEC 11693 and ISO/IEC 11695 (all parts).

4.4 Default tolerance

Unless otherwise specified, a default tolerance of $\pm 5\%$ shall be applied to the quantity values given to specify the characteristics of the test equipment (e.g. linear dimensions) and the test method procedures (e.g. test equipment adjustments).

4.5 Total measurement uncertainty

The total measurement uncertainty for each quantity determined by these test methods shall be stated in the test report.

¹⁾ This part of ISO/IEC 10373 does not define any test to establish the complete functioning of integrated circuit cards. The test methods require only that the minimum functionality (testably functional) be verified. This may, in appropriate circumstances, be supplemented by further, application-specific functionality criteria which are not available in the general case.

5 Test methods

5.1 Location of accessible optical area and reference track

The purpose of this test is to measure the location of the accessible optical area and the reference track in the card. Refer to ISO/IEC 11695-2.

5.1.1 Procedure

Construct two perpendicular axes of reference x and y intersecting at O . Mark three reference points on the axes: points P_2 and P_3 , measured 11,25 mm and 71,25 mm from O are marked on the x axis and point P_1 , 27,00 mm from O , on the y axis. Place the card to be tested, accessible optical area side up, on a flat hard surface. The card shall be held down by a load of $2,2 \pm 0,2$ N.

Apply force F_1 (1 N to 2 N) and F_2 (2 N to 4 N) so that the reference edge of the card touches points P_2 and P_3 and the right edge touches P_1 (see Figure 1).

Measure dimensions X_a , X_b , Y , C and D with equipment having an accuracy of 0,05 mm.

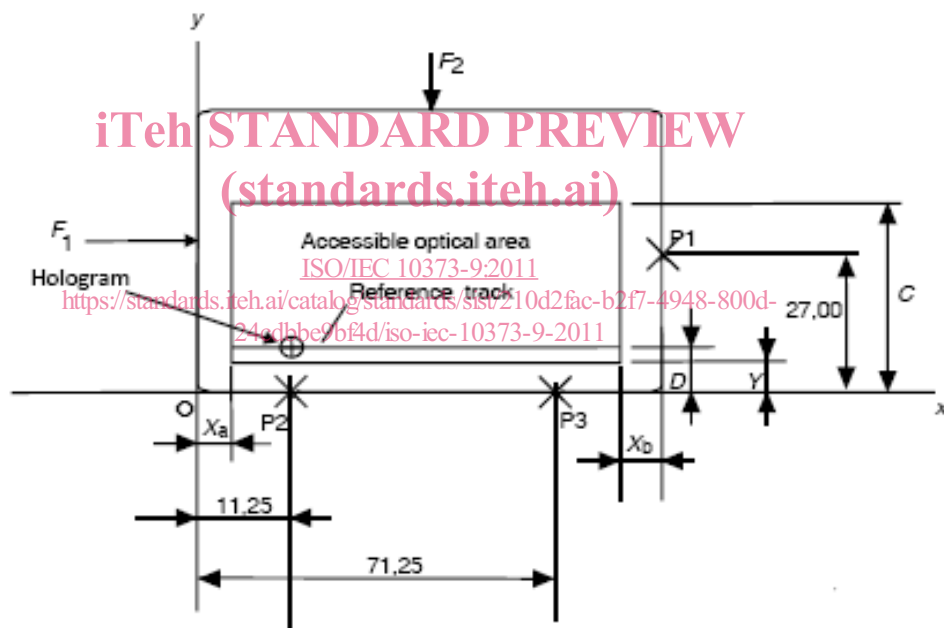


Figure 1 — Location of accessible optical area and reference track

5.1.2 Test report

The test report shall give the values of the dimensions measured.

5.2 Skew

The purpose of this test is to measure the skew of the reference track to the bottom edge of the optical memory card. Refer to ISO/IEC 11695-2.