

INTERNATIONAL ISO  
This is a preview of "ISO 16284:2006". [Click here to purchase the full version from the ANSI store.](#)

Second edition  
2006-03-01

---

---

## Ophthalmic optics — Information interchange for ophthalmic optical equipment

*Optique ophtalmique — Échange d'informations pour l'équipement  
d'optique ophtalmique*



Reference number  
ISO 16284:2006(E)

© ISO 2006

This is a preview of "ISO 16284:2006". [Click here to purchase the full version from the ANSI store.](#)

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2006

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

This is a preview of "ISO 16284:2006". [Click here to purchase the full version from the ANSI store.](#)

## Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope .....	1
2 Normative reference .....	1
3 Terms and definitions.....	1
3.1 General terms .....	1
3.2 Special characters .....	2
3.3 Data types .....	2
3.4 Messages .....	3
3.5 Records.....	4
3.6 Sessions .....	4
3.7 Timeout .....	5
4 Overview .....	5
5 Requirements .....	6
5.1 Records.....	6
5.2 Reference point records .....	8
5.3 Generator records.....	9
5.4 Tracing records.....	11
5.5 Tracing formats.....	14
5.6 Packets .....	18
5.7 Deprecated requirements .....	21
6 Sessions .....	22
6.1 General.....	22
6.2 Initialization sessions.....	22
6.3 Upload sessions .....	30
6.4 Download sessions .....	33
6.5 File-based information transfer.....	34
7 Other requirements.....	35
7.1 RS-232 Communications parameters .....	35
7.2 Operator messages .....	35
7.3 Host requirement .....	35
Annex A (normative) Record labels .....	36
Annex B (informative) Packed binary format example.....	64
Annex C (informative) CRC calculation.....	70

## 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.

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

The main task of technical committees is to prepare International Standards. 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.

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

ISO 16284 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments* and by Technical Committee CEN/TC 170, *Ophthalmic optics* in collaboration.

This second edition cancels and replaces the first edition (ISO 16284:2001), which has been technically revised. Since the publication of the first edition in the year 2001, there have been a number of industry developments. Specifically, surface coater, front surface generator, lens measuring, inspection and lap feeder devices have all been developed. In order to communicate with these devices and to support new features on existing device types, the maintenance committee has proposed a number of new labels and device types. This revised International Standard also proposes a way of dealing with file-based data transfers between devices and hosts. In addition, a number of clarifications has been made to further explain certain requirements of the standard and deprecating several requirements because they have proved difficult to manage in practice.

This is a preview of "ISO 16284:2006". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

This International Standard is the result of a desire shared by manufacturers of optical laboratory equipment and producers of software used in optical laboratories to simplify the interconnection of their products.

The International Standard defined herein provides:

- a method by which machines and computer systems conduct their exchanges of data;
- a method by which computer systems can initialize such parameters on machines as the manufacturers thereof allow;
- a method by which machines can initialize computer systems with information that the systems can use for various purposes;
- a method by which a machine can inform a computer system as to what information it wants to receive, thus allowing machines to define new interfaces dynamically;
- a standard set of records and device types that are used to communicate agreed upon sets of information.

The last feature listed above requires that this International Standard be amended on a regular basis, as the need for new data elements is inevitable.