

© ISO 2024

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Formatted: Font: 11 pt, Bold

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: HeaderCentered

Formatted: Right: 1.5 cm, Bottom: 1 cm, Gutter: 0 cm, Header distance from edge: 1.27 cm, Footer distance from edge: 0.5 cm

Commented [eXtyle1]: The reference "ISO 2024" is to a withdrawn standard

Formatted: Default Paragraph Font

Formatted: Default Paragraph Font

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO/FDIS 8237

<https://standards.iteh.ai/catalog/standards/iso/5374bf8a-8636-4069-b998-485cbb076c48/iso-fdis-8237>

Formatted: FooterPageRomanNumber

Contents

Foreword v

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Symbols and units 3

5 Optical properties 4

5.1 General 4

5.2 Transmittance 4

5.3 Refractive index 4

5.4 Temperature dependence of the refractive index 4

5.5 Relative partial dispersion 5

6 Tolerances 5

6.1 General 5

6.2 Refractive index variation 5

6.3 Optical homogeneity (homogeneity of refractive index n_D) 6

6.4 Striae 6

6.5 Bubbles and inclusions 7

7 Data sheet contents 7

Bibliography 8

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Symbols and units 3

5 Optical properties 4

5.1 General 4

5.2 Transmittance 4

5.3 Refractive index 4

5.4 Temperature dependence of the refractive index 4

5.5 Relative partial dispersion 5

6 Tolerances 5

6.1 General 5

6.2 Refractive index variation 5

6.3 Optical homogeneity (homogeneity of refractive index n_D) 5

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: HeaderCentered, Left

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: FooterCentered, Left, Line spacing: single

Formatted: Font: 11 pt

Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Line spacing: single

ISO/FDIS 8237:2024(En)

6.4 Striae 6
6.5 Bubbles and inclusions 6
7 Data sheet contents 7
Bibliography 8

- Formatted: Font: 11 pt, Bold
- Formatted: Font: 11 pt, Bold
- Formatted: Font: Bold
- Formatted: HeaderCentered

iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO/FDIS 8237

<https://standards.iteh.ai/catalog/standards/iso/5374bf8a-8636-4069-b998-485cbb076c48/iso-fdis-8237>

Formatted: FooterPageRomanNumber

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 3, *Optical materials and components*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: HeaderCentered, Left

Formatted: Adjust space between Latin and Asian text, Adjust space between Asian text and numbers

Formatted: English (United Kingdom)

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: Font: 10 pt

Formatted: FooterCentered, Left, Line spacing: single

Formatted: Font: 11 pt

Formatted: FooterPageRomanNumber, Left, Space After: 0 pt, Line spacing: single

Formatted: Font: 11 pt, Bold

Formatted: Font: 11 pt, Bold

Formatted: Font: Bold

Formatted: HeaderCentered

Introduction

This document applies to the specification of the chalcogenide glass used in the infrared spectrum. The chalcogenide glass described in this document is transparent in the infrared region.

The chalcogenide glass has a wide range of transparency from the visible to the infrared wavelength region. This depends on the chalcogenide chemical composition. The optical properties of chalcogenide glass can provide flexibility and further capability for IR optical system.

Nowadays, the chalcogenide glass is used as a substitute material for traditional infrared materials like germanium, silicon or zinc selenide. The market for chalcogenide glasses is rapidly expanding. However, this new material is sometimes distributed without specifying its properties and qualities, which can confuse users. In consideration of the rapid increasing of market for infrared application, the definition and standardization of the chalcogenide glass for infrared optics are necessary.

iTeh Standards (<https://standards.iteh.ai>) Document Preview

ISO/FDIS 8237

<https://standards.iteh.ai/catalog/standards/iso/5374bf8a-8636-4069-b998-485cbb076c48/iso-fdis-8237>

Formatted: FooterPageRomanNumber