ISO/TR 18476:2017-06 (E)

Ophthalmic optics and instruments - Free form technology - Spectacle lenses and measurement

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Technical introduction 1
4.1 Preliminaries 1
4.2 What is free form? 1
4.3 Does free form equal better vision? 2
4.4 Classification 2

5 Manufacturing 3
5.1 General 3
5.2 Conventional surfacing 4
5.3 Free form surfacing 5
5.4 Comparison of conventional and free form manufacturing 6

6 Potentialbenefitsoffreeformlenscalculation 7
6.1 Oblique astigmatism 7
6.2 Limitations of conventional lenses 9
6.3 Potential benefit of free form lens design 10
6.4 Optimization for prescription 11
6.5 Customization for the as-worn position 12
6.5.1 Explaining the as-worn position 12
6.5.2 As-worn position and verification power 13
6.6 Customization for the frame size 14
6.7 Personalization of the lens design 15

7 Measurement and quality control 16
7.1 Lens performance 16
7.2 Conformity with standards 16
7.3 Design integrity and process control 17
7.3.1 General 17
7.3.2 Surface shape measurement 17
7.3.3 Through power measurement 17
7.4 Measuring the as-worn position 18
7.5 Inspection gates of the manufacturing process 21

Annex A (informative)Typicaldispensingflowchart 22

Annex B (informative) Measurement technology 23

Annex C (informative) Glossary of terms and their descriptions 28

Bibliography 30