ISO 14880-2:2024-11 (E)

Optics and photonics - Microlens arrays - Part 2: Test methods for wavefront aberrations

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms,definitions,symbolsandabbreviatedterms 1
3.1 Terms and definitions 1
3.2 Symbols and abbreviated terms 1

4 Apparatus 2

5 Test principle 3

6 Measurement arrangements 3
6.1 Measurement arrangement for single microlenses 3
6.2 Measurement arrangements for microlens arrays 3
6.3 Geometrical alignment of the sample 4
6.4 Preparation 4

7 Procedure 4

8 Evaluation 4

9 Uncertainty of measurement 4

10 Test report 5

Annex A (informative) Measurement requirements for test methods for microlenses 6

Annex B (informative) Microlens test Methods 1 and 2 using Mach-Zehnder interferometer systems 8

Annex C (informative) Microlens test Methods 3 and 4 using a lateral shearing interferometer system 14

Annex D (informative) Microlens test Method 5 using a Shack-Hartmann sensor system 18

Annex E (informative) Microlens array test Method 1 using a Twyman-Green interferometer system 20

Annex F (informative) Measurement of uniformity of microlens array using test Method 2 22

Bibliography 25