

ISO 14880-4:2024-11 (E)

Optics and photonics - Microlens arrays - Part 4: Test methods for geometrical properties

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Coordinate system	3
5	Test methods	3
5.1	Pitch and surface modulation depth measurement	3
5.1.1	Use of stylus instrument	3
5.1.2	Use of confocal microscope	5
5.2	Physical thickness	8
5.2.1	Principle	8
5.2.2	Set-up and preparation	8
5.3	Radius of curvature	8
5.3.1	Principle	8
5.3.2	Measurement arrangement and test equipment	9
5.4	Surface preparation of microlens array for measurement	11
6	Procedure	11
6.1	Measurement of pitch and surface modulation depth (lens sag)	11
6.1.1	Preliminary measurements	11
6.2	Making measurements and interpreting the results	11
6.3	Measurement of physical thickness	12
6.4	Measurement of radius of curvature	12
7	Results and uncertainties	12
8	Test report	13
Annex A (informative)	Measurement with a Fizeau interferometer system	14
Annex B (informative)	Uniformity of array spacing	17
Bibliography		20