DIN EN ISO 11146-2:2021-11 (E)

Lasers and laser-related equipment - Test methods for laser beam widths, divergence angles and beam propagation ratios - Part 2: General astigmatic beams (ISO 11146-2:2021)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms and definitions ... **6**

4 Coordinate system ... **11**

5 Test principles ... **11**
5.1 General ... 11
5.2 Spatial second order moments of the Wigner distribution ... 11
5.3 Second order moments of the Wigner distribution ... 11
5.4 Derived quantities ... 11

6 Measurement arrangement and test equipment ... **11**
6.1 General ... 11
6.2 Preparation ... 11
6.3 Control of environment ... 12
6.4 Detector system ... 12
6.5 Beam-forming optics and optical attenuators ... 13

7 Measurement of the second order moments ... **13**
7.1 General ... 13
7.2 Measurement of the second order moments of power density distributions ... 13
7.3 Measurement of all second order moments of the Wigner distribution ... 15

8 Determination of effective beam propagation ratio ... **17**

9 Determination of intrinsic astigmatism ... **17**

10 Determination of the twist parameter ... **18**

11 Test report ... **18**

Bibliography ... **21**