

DIN EN ISO 24013:2023-11 (E)

Optics and photonics - Lasers and laser-related equipment - Measurement of phase retardation of optical components for polarized laser radiation (ISO 24013:2023)

Contents		Page
European foreword.....		3
Foreword.....		4
Introduction.....		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Symbols and abbreviated terms	6
5	Measurement principle	7
6	Preparation of test sample and measuring arrangement	8
6.1	General.....	8
6.2	Laser beam preparation.....	8
6.3	Sample adjustment and system calibration.....	8
6.3.1	Reflective samples.....	8
6.3.2	Possible alignment procedure.....	9
6.3.3	Transmissive samples.....	9
6.4	Detection system.....	9
6.4.1	General.....	9
6.4.2	Polarization analyser.....	9
6.4.3	Power detector.....	9
7	Test procedure	10
7.1	Test procedure for zero or π phase retardation.....	10
7.1.1	General.....	10
7.1.2	Simple test procedure for zero absorptance difference.....	10
7.1.3	Test procedure for non zero absorptance difference.....	10
7.2	Test procedure for $\pi/2$ phase retardation.....	10
7.2.1	General.....	10
7.2.2	Simple test procedure for zero absorptance difference.....	10
7.2.3	Test procedure for non zero absorptance difference.....	10
8	Evaluation	11
8.1	General.....	11
8.2	Evaluation for zero phase retardation.....	11
8.2.1	Evaluation for zero absorptance difference.....	11
8.2.2	Evaluation for non-zero absorptance difference.....	11
8.3	Evaluation for $\pi/2$ phase retardation.....	11
8.3.1	Evaluation for zero absorptance difference.....	11
8.3.2	Evaluation for non-zero absorptance difference.....	11
9	Test report	11
Annex A (informative) Theoretical background		13
Bibliography		21