

# DIN ISO 15795:2008-04 (E)

## Optics and photonics - Quality evaluation of optical systems - Assessing the image quality degradation due to chromatic aberrations (ISO 15795:2002+Cor. 1:2007)

---

<b>Contents</b>		<b>Page</b>
National foreword .....		3
National Annex NA (informative) Bibliography .....		3
Introduction .....		4
1	Scope .....	5
2	Normative references .....	5
3	Symbols and units .....	5
4	Terms and definitions, principle and mathematical relationships .....	6
4.1	General .....	6
4.2	Wavelengths and spectral distributions .....	6
4.2.1	Quasi-monochromatic measurement .....	6
4.2.2	4.3 Reference wavelength and weighted spectral reference distribution .....	7
4.4	Measurement plane .....	7
4.5	Image heights and local image field coordinates .....	7
4.6	Lateral chromatic aberration .....	8
4.7	Weighted lateral chromatic aberration .....	8
4.8	Form and extent of the edge spread function (ESF) .....	8
4.8.1	General .....	8
4.8.2	Edge widths .....	9
4.8.3	Chromatic edge widths .....	11
4.9	Longitudinal chromatic aberration .....	11
5	Classes of applications .....	12
6	Measurement procedures .....	12
6.1	Brief description of the procedures .....	12
6.1.1	Measurement of lateral chromatic aberrations and edge width in a fixed measurement plane .....	12
6.1.2	Measurement of longitudinal chromatic aberrations .....	13
6.2	Description of measurement equipment .....	13
6.2.1	General requirements .....	13
6.2.2	Infinite object distance, finite image distance .....	13
6.2.3	Finite object distance, finite image distance .....	14
6.3	Particular measurement conditions .....	14
6.3.1	Azimuths, .....	14
6.3.2	Orientation, $\theta$ , of the optical system to be tested .....	15
6.3.3	Selection of image heights .....	15
7	Presentation of the results .....	15
7.1	Presentation in the form of tables .....	15
7.2	Graphical presentation .....	16
8	Test report .....	16
Annex A (informative) Examples of the presentation of results .....		17
Bibliography .....		20
Measurement with finite spectral bandwidth .....		7