

DIN EN ISO 9241-392:2017-05 (E)

Ergonomics of human-system interaction - Part 392: Ergonomic recommendations for the reduction of visual fatigue from stereoscopic images (ISO 9241-392:2015)

Contents

Page

European foreword	3
Foreword	4
Introduction	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Guiding concepts	9
4.1 Framework	9
4.2 Review of factors	10
4.2.1 General	10
4.2.2 Interocular geometric differences	10
4.2.3 Interocular photometric differences	11
4.2.4 Interocular photometric interaction	12
4.2.5 Accommodation-convergence mismatch	12
4.2.6 Other factors to be considered for stereoscopic presentation	13
4.2.7 Summary	14
5 Ergonomic recommendations	16
5.1 General	16
5.2 Viewing conditions	16
5.2.1 General	16
5.2.2 Design viewing distance	16
5.2.3 Interpupillary distance	16
5.3 Interocular geometrical differences	17
5.3.1 Interocular vertical misalignment	17
5.3.2 Interocular rotational misalignment	17
5.3.3 Interocular magnification difference	17
5.4 Interocular photometric differences	17
5.4.1 Interocular luminance difference	17
5.4.2 Interocular contrast difference	18
5.4.3 Interocular chromaticity difference	18
5.5 Interocular photometric interaction	18
5.5.1 Crosstalk	18
5.6 Accommodation — convergence mismatch	18
5.7 Other factors to be considered for stereoscopic presentation	19
6 How to use the ergonomic recommendations	19
6.1 General	19
6.2 Report	19
Annex A (informative) Overview of the ISO 9241- series	20
Annex B (informative) Viewing conditions	21
Annex C (informative) Numerical values to be considered for assessment of visual fatigue and discomfort	22
Annex D (informative) Other factors to be considered for stereoscopic presentations	32
Annex E (informative) Sample procedure for assessing applicability and conformance	34
Bibliography	36