

DIN ISO 9358:2021-08 (E)

Optics and optical instruments - Veiling glare of image-forming systems - Definitions and methods of measurement (ISO 9358:1994)

Contents		Page
National foreword		4
Foreword		5
Introduction		6
1	Scope	8
2	Definitions	8
3	Classification of test specimen	9
4	Measurement methods	9
4.1	Veiling glare index	9
4.1.1	General technique	9
4.1.2	Extended source and black area	10
4.1.3	Detector system	14
4.2	Glare spread function	15
4.2.1	General technique	15
4.2.2	Source	16
4.2.3	Detector system	20
5	Test conditions	20
5.1	Measurement of VGI and VGIB	20
5.1.1	Extended source	20
5.1.2	Detector unit	20
5.1.3	Test conjugates	21
5.1.4	Field positions	21
5.1.5	Aperture settings	21
5.1.6	Tests on lens plus camera body (or similar complete systems)	21
5.2	Measurement of GSF and GSFR	22
5.2.1	Source	22
5.2.2	Collimator and other auxiliary optics	22
5.2.3	Detector unit	22
6	Specification of measurement conditions	22
7	Points requiring special attention during veiling glare measurements	23
7.1	Detector dark current	23
7.2	Stray radiation	23
7.3	Dirt and dust on optical surfaces	23
7.4	Auxiliary optical systems	23
7.5	Normalisation	24
8	Presentation of results	24
8.1	VGI and VGIB	24
8.2	GSF and GSFR	24
8.2.1	Detector scan presentation	24
8.2.2	Source scan presentation	24
8.3	Estimated uncertainty of measurement	24

Figures Figure 1 -- Veiling glare measurement in the case of an unlimited object field	11
Figure 2 -- Veiling glare measurement with unlimited object field and infinite object distance	12
Figure 3 -- Veiling glare measurement with unlimited object field using an auxiliary lens	12
Figure 4 -- Schematic diagram of square box type radiation source	13
Figure 5 -- Equipment for measurement of veiling glare at finite object distance	14
Figure 6 -- Equipment for measuring glare spread function	15
Figure 7 -- GSF plot and method of normalisation	16
Figure 8 -- GSFR plot and method of normalisation	17
Figure 9 -- Source systems	18
Figure 10 -- Equipment for measurement of GSF or GSFR of a lens with finite object distance	18
Figure 11 -- Equipment for measuring GSF of an image intensifier tube	19
Tables Table 1	9
Table 2	10