

# DIN EN ISO 8980-3:2022-10 (E)

## Ophthalmic optics - Uncut finished spectacle lenses - Part 3: Transmittance specifications and test methods (ISO 8980-3:2022)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Foreword .....		5
1 Scope .....		6
2 Normative references .....		6
3 Terms and definitions .....		6
4 Symbols .....		6
5 Classification .....		7
6 Requirements .....		7
6.1 General .....		7
6.2 General transmittance requirements .....		7
6.2.1 Tint descriptions, categories, and UV transmittance requirements .....		7
6.2.2 Tolerances on luminous transmittance of tinted lenses .....		8
6.3 Spectral transmittance requirements of spectacle lenses intended for driving and road use .....		9
6.3.1 General .....		9
6.3.2 Spectral transmittance .....		9
6.3.3 Daylight use .....		9
6.3.4 Driving in twilight or at night .....		9
6.3.5 Relative visual attenuation coefficient (quotient) for incandescent traffic signal light detection .....		9
6.4 Additional transmittance requirements for special types of spectacle lenses .....		9
6.4.1 Photochromic spectacle lenses .....		9
6.4.2 Polarizing spectacle lenses .....		10
6.4.3 Gradient-tinted spectacle lenses .....		11
6.5 Resistance to ultraviolet radiation .....		11
6.6 Claimed UV absorption/transmittance properties .....		11
6.6.1 General .....		11
6.6.2 Solar UV absorption .....		11
6.6.3 Solar UV transmittance .....		11
7 Test methods .....		12
7.1 General .....		12
7.2 Spectral transmittance .....		12
7.3 Luminous transmittance and relative visual attenuation coefficient (quotient) .....		12
7.4 Ultraviolet transmittance .....		13
7.4.1 Principle .....		13
7.4.2 Apparatus .....		13
7.4.3 Calculation .....		13
7.5 Transmittance properties of photochromic spectacle lenses and photochromic specimens .....		13
7.5.1 Test lenses .....		13
7.5.2 Apparatus .....		13
7.5.3 Determination of transmittance .....		16
7.6 Test methods for polarizing spectacle lenses .....		17

7.6.1	Mean luminous transmittance .....	17
7.6.2	Polarizing efficiency .....	17
7.6.3	Plane of transmission .....	17
7.7	Determination of resistance to ultraviolet radiation .....	18
7.7.1	Principle .....	18
7.7.2	Reference apparatus .....	18
7.7.3	Procedure using reference apparatus .....	19
8	Identification .....	19
Annex A (normative)	Spectral data for calculating relative visual attenuation quotients for incandescent signal lights .....	21
Annex B (normative)	Calculation of solar UV and blue-light transmittance values .....	26
Annex C (normative)	Cut-on filter for UV filtering .....	28
Annex D (informative)	Spectral radiation risks .....	32
Annex E (informative)	Transmittance equations in summation form .....	33
Annex F (informative)	Example of the calculation of luminous transmittance, V .....	37
Bibliography	.....	39