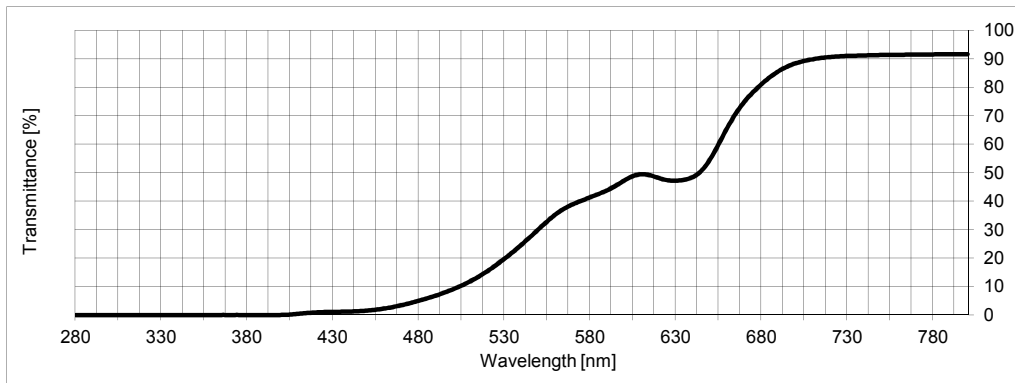


Wavelength [nm]	Transmission [%]
280	0,0
290	0,0
300	0,0
310	0,0
320	0,0
330	0,0
340	0,0
350	0,0
360	0,0
370	0,0
380	0,0
390	0,0
400	0,0
410	0,4
420	0,9
430	1,1
440	1,2
450	1,6
460	2,3
470	3,4
480	5,0
490	6,8
500	9,0
510	11,8
520	15,4
530	19,8
540	24,8
550	30,2
560	35,4
570	38,9
580	41,3
590	43,8
600	47,3
610	49,4
620	48,1
630	47,2
640	48,5
650	54,7
660	65,9
670	75,0
680	81,1
690	85,7
700	88,5
710	89,8
720	90,6
730	91,0
740	91,2
750	91,3
760	91,4
770	91,5
780	91,5
790	91,6
800	91,6

**European Standard****DIN EN 1836:2005+A1:2007 (D)****Pass**

Luminous transmittance (D65) τ_V:		31,0%	Filter category: 2		Limit value
UV (280 - 380nm)	τ_{SUV} :	0,0%	100% UV-Absorption	$\tau_{F(\lambda)max}$ (280 - 315nm):	0,0% Pass 3,1%
UVA (315 - 380nm)	τ_{SUA} :	0,0%		$\tau_{F(\lambda)max}$ (315 - 350nm):	0,0% Pass 31,0%
UVB (280 - 315nm)	τ_{SUB} :	0,0%		τ_{SUAmax} (315 - 380nm):	0,0% Pass 31,0%
blue light (380 - 500nm)	τ_{sb} :	2,3%		spectral transmittance (500-650nm) τ_{Vmin} :	9,0% Pass 6,2%
Signal transmittance:					
red	signal transmittance τ_{sig} :	50,2%		Recognition of signal light Q:	1,62 Pass 0,8
yellow	signal transmittance τ_{sig} :	42,8%		Recognition of signal light Q:	1,38 Pass 0,8
green	signal transmittance τ_{sig} :	23,6%		Recognition of signal light Q:	0,76 Pass 0,6
blue	signal transmittance τ_{sig} :	20,9%		Recognition of signal light Q:	0,68 Pass 0,4
transmission properties related to traffic signal recognition: Pass					

American Standard**ANSI Z80.3-2010****Fail**

Luminous transmittance (C) τ_V:		31,3%	primary function:	General Purpose lens or shield	shade:	medium to dark
					Limit value	Limit value
					normal use	high exposure
UVA, mean Transmittance (315 - 380nm)	τ_{SUA} :	0,0%			Pass 31,3%	Pass 15,6%
UVB, mean Transmittance (280 - 315nm)	τ_{SUB} :	0,0%			Pass 3,9%	Pass 0,3%
blue light (380 - 500nm)	τ_{sb} :	2,3%			spectral transmittance (475-650nm) τ_{Vmin} :	4,2% Fail 6,3%
Signal transmittance:						
Color Limits						
2°-Observer						
red	signal transmittance τ_{sig} :	53,3% Pass		D65	0,4971	0,4567 Fail Please refer to sheet
yellow	signal transmittance τ_{sig} :	42,7% Pass		Yellow	0,5987	0,4004 Pass
green	signal transmittance τ_{sig} :	23,8% Pass		Green	0,3314	0,5781 Fail "Farbort"
transmission properties related to traffic signal recognition: Fail						

Australian Standard**AS/NZS 1067:2003****Fail**

Luminous transmittance (D65) τ_V:		31,0%	Lens category: 2		Limit value
UV (280 - 380nm)	τ_{SUV} :	0,0%	100% UV-Absorption	$\tau_{F(\lambda)max}$ (280 - 315nm):	0,0% Pass 1,6%
UVA (315 - 380nm)	τ_{SUA} :	0,0%		$\tau_{F(\lambda)max}$ (315 - 350nm):	0,0% Pass 31,0%
UVB (280 - 315nm)	τ_{SUB} :	0,0%		τ_{SUAmax} (315 - 380nm):	0,0% Pass 31,0%
blue light (400 - 500nm)	τ_{sb} :	2,3%		spectral transmittance (450-650nm) τ_{Vmin} :	1,6% Fail 6,2%
Signal transmittance:					
red	signal transmittance τ_{sign} :	50,2%		Recognition of signal light Q:	1,62 Pass 0,8
yellow	signal transmittance τ_{sign} :	42,8%		Recognition of signal light Q:	1,38 Pass 0,8
green	signal transmittance τ_{sign} :	23,6%		Recognition of signal light Q:	0,76 Pass 0,6
blue	signal transmittance τ_{sign} :	20,9%		Recognition of signal light Q:	0,68 Fail 0,7

Demand on lenses for use by drivers at night according DIN EN ISO 14889:2009-07:

Fail**Testreport Sunglasses**

v = Pass

x = Fail

Quantity	
-----------------	--

Frame

color correctness	
surface / col.	
soldering	
adjustment	
nickel test	
form / dimension	

Lenses

color	
size / form	
opt. quality	
UV-index / vertex power	
polarisation	
decentration	
random test	
Sign	

released	
blocked	
separated	

Colorimetric Observer according DIN 5033**Standard illuminant A**

2° Observer	x = 0,5606	y = 0,4238	Y = 3,90
CIELAB 1976	L* = 66,66	a* = 22,78	b* = 75,51
HUNTER	L = 60,15	a = 7,48	b = 6,80
10° Observer	x = 0,5664	y = 0,4202	Y = 4,01
CIELAB 1976	L* = 65,92	a* = 23,45	b* = 77,77
HUNTER	L = 59,35	a = 7,94	b = 69,57

Standard illuminant C

2° Observer	x = 0,4991	y = 0,4530	Y = 3,16
CIELAB 1976	L* = 65,87	a* = 13,46	b* = 75,02
HUNTER	L = 17,79	a = 3,85	b = 11,33
10° Observer	x = 0,5090	y = 0,4470	Y = 3,27
CIELAB 1976	L* = 65,20	a* = 17,89	b* = 74,46
HUNTER	L = 54,14	a = 5,37	b = 114,87

Standard illuminant D65

2° Observer	x = 0,4971	y = 0,4567	Y = 3,28
CIELAB 1976	L* = 62,52	a* = 15,69	b* = 74,03
HUNTER	L = 55,69	a = 4,54	b = 11,04
10° Observer	x = 0,5073	y = 0,4504	Y = 3,39
CIELAB 1976	L* = 65,46	a* = 19,58	b* = 73,79
HUNTER	L = 54,00	a = 5,95	b = 112,15