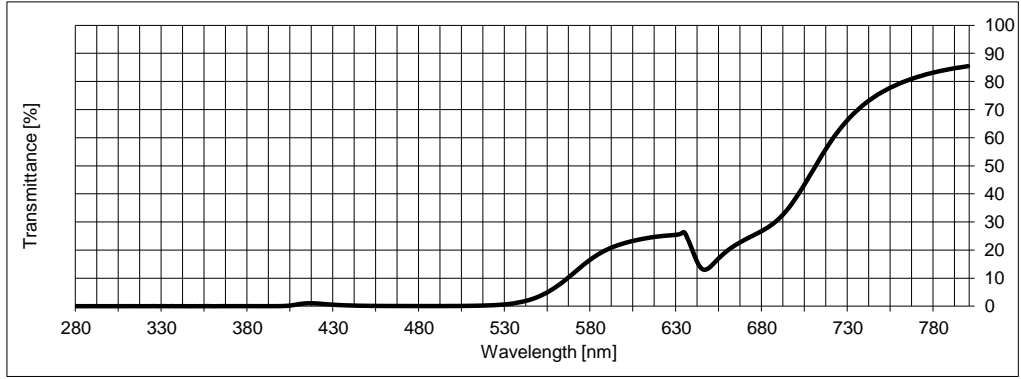


Wavelength [nm]	Transmission [%]
280	0,0
290	0,0
300	0,0
310	0,0
320	0,0
330	0,0
340	0,0
350	0,0
360	0,0
370	0,0
380	0,0
390	0,0
400	0,0
410	0,7
420	1,0
430	0,5
440	0,3
450	0,1
460	0,1
470	0,1
480	0,1
490	0,0
500	0,1
510	0,1
520	0,3
530	0,6
540	1,6
550	3,5
560	7,0
570	11,7
580	16,7
590	20,3
600	22,5
610	23,9
620	24,9
630	25,4
640	18,8
650	14,2
660	19,9
670	23,7
680	26,9
690	31,3
700	38,9
710	48,8
720	58,7
730	66,5
740	72,2
750	76,3
760	79,3
770	81,6
780	83,2
790	84,5
800	85,5



European Standard		DIN EN 1836:2005+A1:2007 (D)		Pass
Luminous transmittance (D65) $\tau_v$ :		9,0%	Filter category: 3	Limit value
UV (280 - 380nm)	$\tau_{SUV}$ : 0,0%	100% UV-Absorption	$\tau_{F(\lambda)max}$ (280 - 315nm): 0,0%	Pass 0,9%
UVA (315 - 380nm)	$\tau_{SUVA}$ : 0,0%		$\tau_{F(\lambda)max}$ (315 - 350nm): 0,0%	Pass 4,5%
UVB (280 - 315nm)	$\tau_{SUB}$ : 0,0%		$\tau_{SUVAm}$ (315 - 380nm): 0,0%	Pass 4,5%
blue light (380 - 500nm)	$\tau_{sb}$ : 0,3%		spectral transmittance (500-650nm) $\tau_{Vmin}$ : 0,1%	Fail 1,8%
<b>Signal transmittance:</b>				
red	signal transmittance $\tau_{sig}$ : 22,8%		Recognition of signal light Q: 2,53	Pass 0,8
yellow	signal transmittance $\tau_{sig}$ : 16,4%		Recognition of signal light Q: 1,82	Pass 0,8
green	signal transmittance $\tau_{sig}$ : 3,8%		Recognition of signal light Q: 0,42	Fail 0,6
blue	signal transmittance $\tau_{sig}$ : 4,1%		Recognition of signal light Q: 0,45	Pass 0,4
<b>transmission properties related to traffic signal recognition: Fail</b>				

American Standard		ANSI Z80.3-2010		Fail
Luminous transmittance (C) $\tau_v$ :		9,2%	primary function: Special Purpose lens or shield	shade: strongly colored
			Limit value	Limit value
			normal use	high exposure
UVA, mean Transmittance (315 - 380nm)	$\tau_{SUVA}$ : 0,0%	Pass	4,6%	Pass 4,6%
UVB, mean Transmittance (280 - 315nm)	$\tau_{SUB}$ : 0,0%	Pass	0,1%	Pass 0,1%
blue light (380 - 500nm)	$\tau_{sb}$ : 0,3%		spectral transmittance (475-650nm) $\tau_{Vmin}$ : 0,0%	Fail 1,8%
<b>Signal transmittance:</b>				
red	signal transmittance $\tau_{sig}$ : 22,3%	Pass	2°-Observer { D65 0,5896 0,3992 Yellow 0,6235 0,3760 Green 0,4833 0,4961	Please refer to sheet "Farbort"
yellow	signal transmittance $\tau_{sig}$ : 16,2%	Pass		
green	signal transmittance $\tau_{sig}$ : 4,1%	Fail		
<b>transmission properties related to traffic signal recognition: Fail</b>				

Australian Standard		AS/NZS 1067:2003 / AMDT 1:2009		Fail
Luminous transmittance (D65) $\tau_v$ :		9,0%	Lens category: 3	Limit value
UV (280 - 380nm)	$\tau_{SUV}$ : 0,0%	100% UV-Absorption	$\tau_{F(\lambda)max}$ (280 - 315nm): 0,0%	Pass 0,5%
UVA (315 - 380nm)	$\tau_{SUVA}$ : 0,0%		$\tau_{F(\lambda)max}$ (315 - 350nm): 0,0%	Pass 4,5%
UVB (280 - 315nm)	$\tau_{SUB}$ : 0,0%		$\tau_{SUVAm}$ (315 - 380nm): 0,0%	Pass 4,5%
blue light (400 - 500nm)	$\tau_{sb}$ : 0,3%		spectral transmittance (450-650nm) $\tau_{Vmin}$ : 0,0%	Fail 1,8%
<b>Signal transmittance:</b>				
red	signal transmittance $\tau_{sign}$ : 22,8%		Recognition of signal light Q: 2,53	Pass 0,8
yellow	signal transmittance $\tau_{sign}$ : 16,4%		Recognition of signal light Q: 1,82	Pass 0,8
green	signal transmittance $\tau_{sign}$ : 3,8%		Recognition of signal light Q: 0,42	Fail 0,6
blue	signal transmittance $\tau_{sign}$ : 4,1%		Recognition of signal light Q: 0,45	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	
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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 = 0,6167	y = 0,3807	Y = 1,31
CIELAB 1976	L* = 41,47	a* = 34,27	b* = 72,32
HUNTER	L = 34,88	a = 10,08	b = 4,31
10° Observer	x = 0,6188	y = 0,3788	Y = 1,35
CIELAB 1976	L* = 40,96	a* = 33,61	b* = 72,38
HUNTER	L = 34,41	a = 10,15	b = 43,55

Standard illuminant C			
2° Observer	x = 0,5889	y = 0,3990	Y = 0,93
CIELAB 1976	L* = 43,99	a* = 32,97	b* = 63,62
HUNTER	L = 9,64	a = 8,53	b = 6,57
10° Observer	x = 0,5937	y = 0,3929	Y = 0,95
CIELAB 1976	L* = 43,14	a* = 34,79	b* = 60,92
HUNTER	L = 29,21	a = 9,40	b = 65,75

Standard illuminant D65			
2° Observer	x = 0,5896	y = 0,3992	Y = 0,95
CIELAB 1976	L* = 36,01	a* = 35,50	b* = 63,22
HUNTER	L = 30,02	a = 9,32	b = 6,39
10° Observer	x = 0,5944	y = 0,3932	Y = 0,98
CIELAB 1976	L* = 43,35	a* = 36,83	b* = 60,59
HUNTER	L = 28,99	a = 10,10	b = 64,03