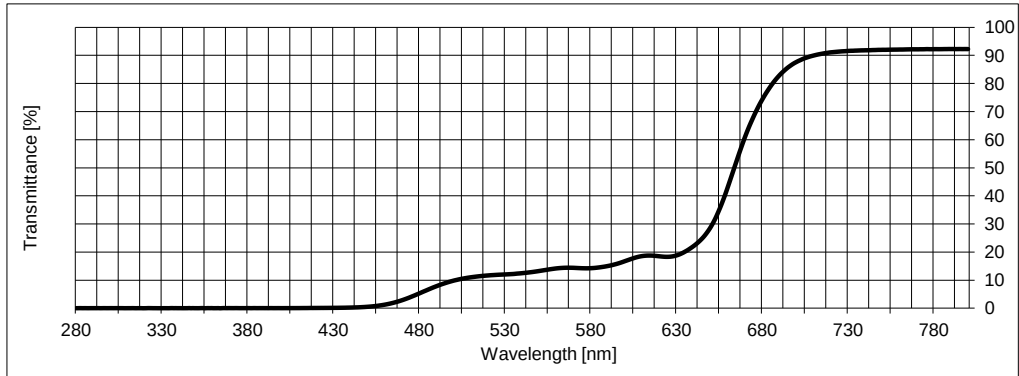


Wavelength [nm]	Transmission [%]
280	0,0
290	0,0
300	0,0
310	0,0
320	0,0
330	0,0
340	0,0
350	0,0
360	0,0
370	0,0
380	0,0
390	0,0
400	0,0
410	0,0
420	0,1
430	0,1
440	0,2
450	0,5
460	1,2
470	2,8
480	5,2
490	7,8
500	9,8
510	11,0
520	11,6
530	12,0
540	12,5
550	13,2
560	14,2
570	14,4
580	14,2
590	15,0
600	16,7
610	18,5
620	18,5
630	18,8
640	22,1
650	28,9
660	43,3
670	61,0
680	74,3
690	82,9
700	87,7
710	90,0
720	91,1
730	91,6
740	91,8
750	92,0
760	92,1
770	92,2
780	92,2
790	92,3
800	92,3



European Standard				DIN EN ISO 12312-1:2014-04		Pass	
Luminous transmittance (D65) τ_v :		13,9%	Filter category:		3	Limit value	
UV	(280 - 380nm)	τ_{SUV} :	0,0%	100% UV-Protection			
UVA	(315 - 380nm)	τ_{SUA} :	0,0%	100% UVA-Protection	$\tau_{SUV\text{Amax}}$ (315 - 380nm):	0,0%	pass 13,9%
UVB	(280 - 315nm)	τ_{SUB} :	0,0%	100% UVB-Protection	$\tau_{SUV\text{Bmax}}$ (280 - 315nm):	0,0%	pass 0,7%
blue light	(380 - 500nm)	τ_{sb} :	1,6%	spectral transmittance (475-650nm) $\tau_{V\text{ min}}$:	4,0%	Pass	2,8%
Signal transmittance:							
red	signal transmittance τ_{sig} :	22,1%		Recognition of signal light Q:	1,59	Pass	0,8
yellow	signal transmittance τ_{sig} :	17,4%		Recognition of signal light Q:	1,25	Pass	0,6
green	signal transmittance τ_{sig} :	12,2%		Recognition of signal light Q:	0,87	Pass	0,6
blue	signal transmittance τ_{sig} :	14,2%		Recognition of signal light Q:	1,02	Pass	0,6
transmission properties related to traffic signal recognition:						Pass	

American Standard				ANSI Z80.3-2010		Fail
Luminous transmittance (C) τ_v :		14,0%	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	14,0%	Pass	7,0%
UVB, mean Transmittance (280 - 315nm)	τ_{SUB} :	0,0%	Pass	1,7%	Pass	0,1%
blue light (380 - 500nm)	τ_{sb} :	1,6%	spectral transmittance (475-650nm) $\tau_{V min}$:		4,0%	Pass
Signal transmittance:			Color Limits			
red	signal transmittance τ_{sig} :	27,6%	2°-Observer	D65 0,4625 0,4625	Fail	Please refer
yellow	signal transmittance τ_{sig} :	17,3%		Yellow 0,6100 0,3890	Pass	to sheet
green	signal transmittance τ_{sig} :	12,1%		Green 0,2695 0,5849	Pass	"Farbort"
transmission properties related to traffic signal recognition: Fail						

Australian Standard				AS/NZS 1067:2003 / AMDT 1:2009			Fail	
Luminous transmittance (D65) τ_v :		13,9%		Lens category:		3	Limit value	
UV	(280 - 380nm)	τ_{SUV} :	0,0%	100% UV-Absorption	$\tau_{F(A)max}$ (280 - 315nm):	0,0%	Pass	0,7%
UVA	(315 - 380nm)	τ_{SUA} :	0,0%		$\tau_{F(A)max}$ (315 - 350nm):	0,0%	Pass	7,0%
UVB	(280 - 315nm)	τ_{SUB} :	0,0%		τ_{SUAmax} (315 - 380nm):	0,0%	Pass	7,0%
blue light	(400 - 500nm)	τ_{sb} :	1,6%	spectral transmittance (450-650nm) $\tau_{V min}$:	0,5%	Fail		2,8%
Signal transmittance:								
red	signal transmittance τ_{sign} :	22,1%		Recognition of signal light Q:	1,59	Pass		0,8
yellow	signal transmittance τ_{sign} :	17,4%		Recognition of signal light Q:	1,25	Pass		0,8
green	signal transmittance τ_{sign} :	12,2%		Recognition of signal light Q:	0,87	Pass		0,6
blue	signal transmittance τ_{sign} :	14,2%		Recognition of signal light Q:	1,02	Pass		0,7

Demand on lenses for use by drivers at night (5.2.3.4):	Fail
---	------

Colormetric Observer according DIN 5033

Standard illuminant A			
2° Observer	x = 0,5500	y = 0,4223	Y = 1,69
CIELAB 1976	L* = 46,48	a* = 15,75	b* = 46,38
HUNTER	L = 39,53	a = 4,47	b = 4,07
10° Observer	x = 0,5525	y = 0,4240	Y = 1,74
CIELAB 1976	L* = 46,05	a* = 14,55	b* = 49,14
HUNTER	L = 39,12	a = 4,24	b = 42,46

Standard illuminant C			
2° Observer	x = 0,4661	y = 0,4569	Y = 1,41
CIELAB 1976	L* = 44,99	a* = 3,46	b* = 49,54
HUNTER	L = 11,88	a = 0,84	b = 7,13
10° Observer	x = 0,4729	y = 0,4594	Y = 1,48
CIELAB 1976	L* = 44,34	a* = 4,84	b* = 50,79
HUNTER	L = 36,48	a = 1,23	b = 73,84

Standard illuminant D65			
2° Observer	x = 0,4625	y = 0,4625	Y = 1,47
CIELAB 1976	L* = 44,12	a* = 4,45	b* = 48,71
HUNTER	L = 37,31	a = 1,10	b = 6,94
10° Observer	x = 0,4699	y = 0,4645	Y = 1,55
CIELAB 1976	L* = 44,51	a* = 5,56	b* = 50,19
HUNTER	L = 36,47	a = 1,43	b = 72,09

Testreport Sunglasses

v = Pass

x = Fail

released	v
blocked	
separated	

Eschenbach Optik GmbH
Schopenhauerstr. 10 • 90409 Nürnberg