

S-8022

Reflection factor	
P _d	0,91

Reference thickness	
d [mm]	2

Values guaranteed	
The color of the glass is within a circle of the CIE Yu' v' UCS (1976), defined by	
$(u' - 0,088)^2 + (v' - 0,543)^2 = (0,037)^2$	
for any black body radiator 1500 K to 3200 K	
Black body radiator	Photopic Transmittance [%]
2100 K	13.5 ± 1.5
1500 K	9.0 ± 1.5

Refractive index n		
λ [nm]	Element	n
587,6	He	1,555
		± 0,005

Density	
ρ [g/cm ³]	2,77

Bubble content	
Bubble class	1

Chemical resistance	
FR class	0
SR class	4.0
AR class	3.0

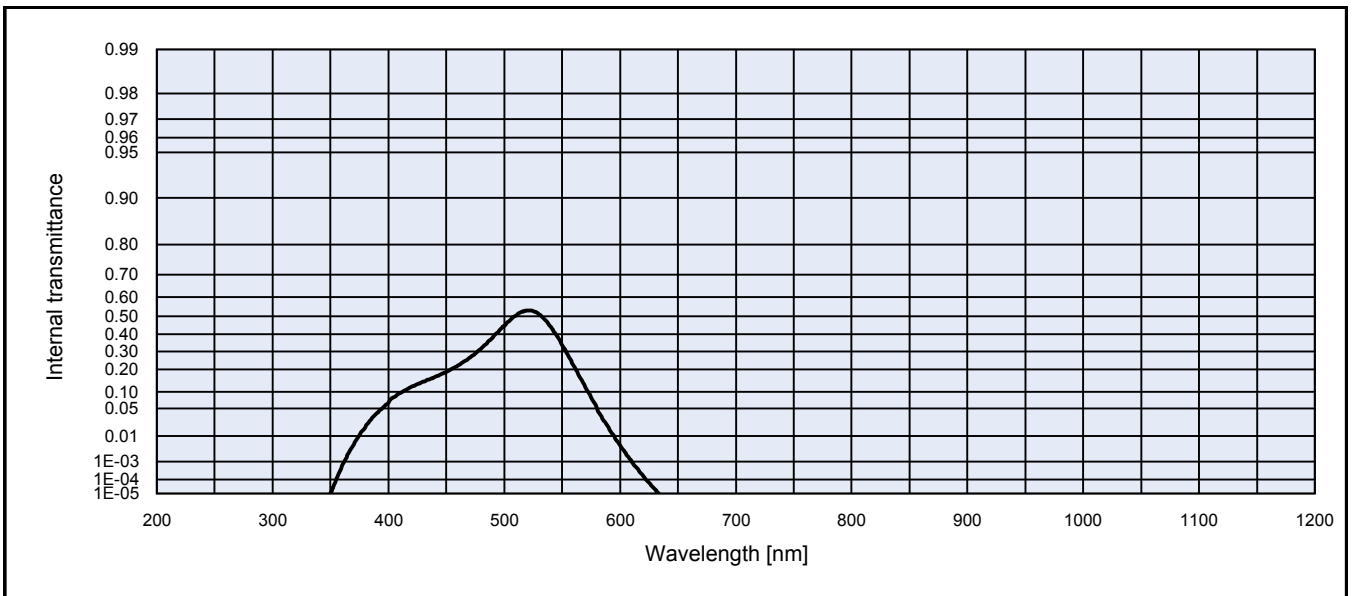
Transformation temperature	
T _g [°C]	453

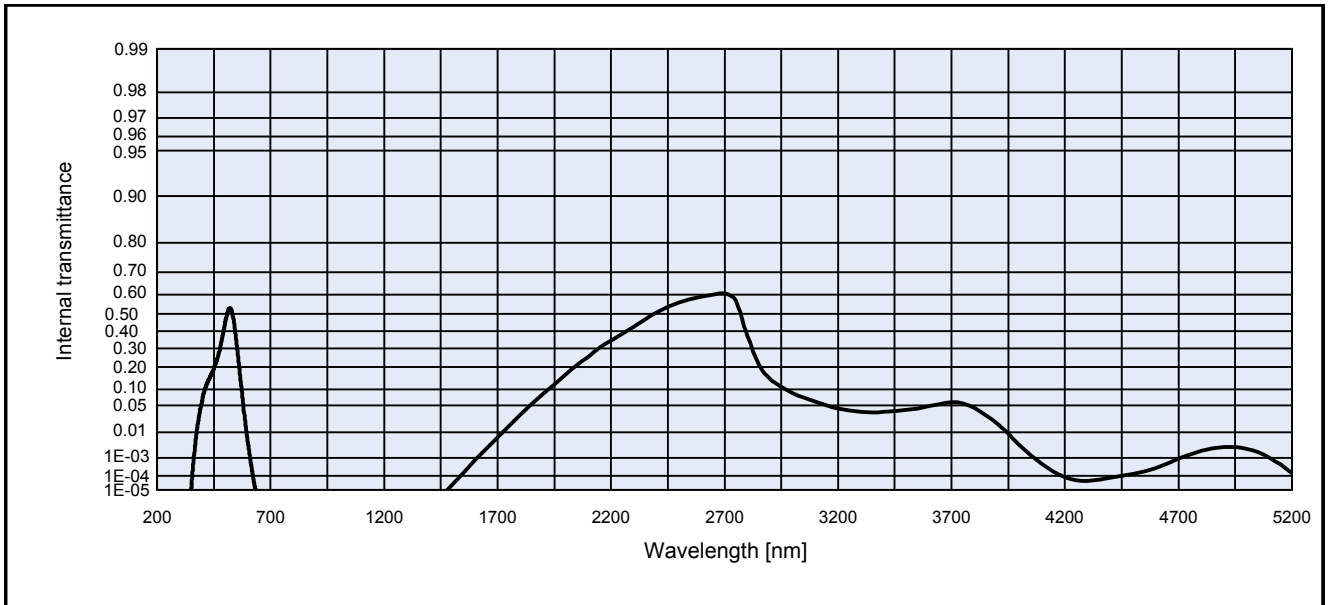
Thermal expansion	
α _{30/+70°C} [10 ⁻⁶ /K]	7,8
α _{20/300°C} [10 ⁻⁶ /K]	8,9
α _{20/200°C} [10 ⁻⁶ /K]	

Temperature coefficient	
T _k [nm/°C]	

Notes	
Ionically colored glass	
Band pass filter / short pass filter	
NVIS-Green A - 2 mm Band Pass Filter according to MIL-STD-3009	
passed thermal shock test as per MIL-STD-202F method 107F, Condition A	
[!]	
protective coatings recommended	
Long-term changes in the polished surface are possible	
All data without tolerances are to be understood to be reference values.	
Guaranteed values are only those values listed in the section	
-Spectral values guaranteed-	

Colorimetric evaluation												
Illuminant A (Planck T = 2856 K)				Illuminant Planck T = 3200 K				Illuminant D65 (T _c = 6504 K)				
d [mm]	1	2	3	d [mm]	1	2	3	d [mm]	1	2	3	
x	0,253	0,203	0,178	x	0,241	0,196	0,173	x	0,196	0,169	0,154	
y	0,498	0,549	0,593	y	0,478	0,530	0,577	y	0,374	0,432	0,492	
Y	30	16	9	Y	31	16	10	Y	37	21	12	
λ _d [nm]	503	505	508	λ _d [nm]	502	504	507	λ _d [nm]	496	500	505	
P _e	0,44	0,55	0,61	P _e	0,44	0,54	0,60	P _e	0,40	0,47	0,51	

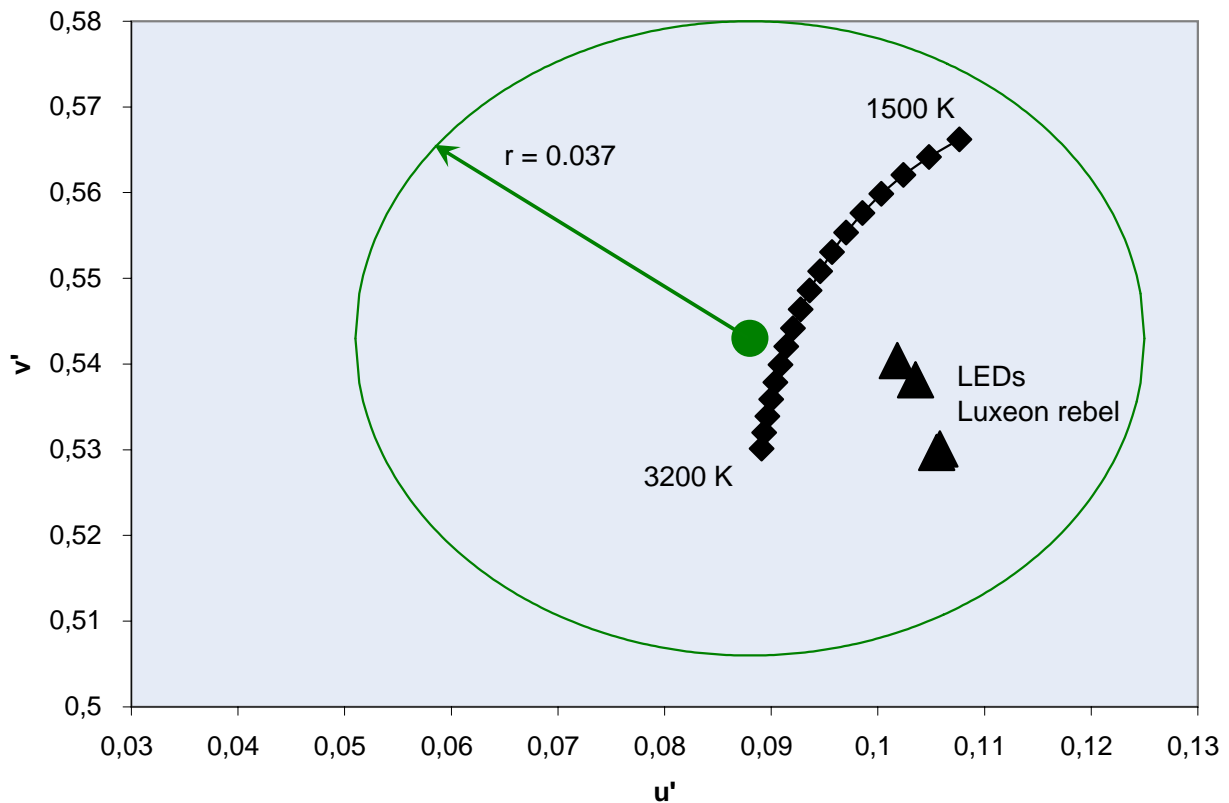




Internal transmittance τ_i at reference thickness $d = 2$ mm
The internal transmittance values, tabulated and graphically represented, are reference values only

λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i	λ [nm]	τ_i
200	< 1,0E-05	500	4,5E-01	800	< 1,0E-05	1100	< 1,0E-05	2200	3,5E-01	3700	5,8E-02
210	< 1,0E-05	510	5,0E-01	810	< 1,0E-05	1110	< 1,0E-05	2250	3,9E-01	3750	5,5E-02
220	< 1,0E-05	520	5,3E-01	820	< 1,0E-05	1120	< 1,0E-05	2300	4,3E-01	3800	4,4E-02
230	< 1,0E-05	530	5,1E-01	830	< 1,0E-05	1130	< 1,0E-05	2350	4,7E-01	3850	3,1E-02
240	< 1,0E-05	540	4,4E-01	840	< 1,0E-05	1140	< 1,0E-05	2400	5,1E-01	3900	1,9E-02
250	< 1,0E-05	550	3,4E-01	850	< 1,0E-05	1150	< 1,0E-05	2450	5,4E-01	3950	9,3E-03
260	< 1,0E-05	560	2,2E-01	860	< 1,0E-05	1160	< 1,0E-05	2500	5,6E-01	4000	3,7E-03
270	< 1,0E-05	570	1,2E-01	870	< 1,0E-05	1170	< 1,0E-05	2550	5,8E-01	4050	1,3E-03
280	< 1,0E-05	580	5,3E-02	880	< 1,0E-05	1180	< 1,0E-05	2600	5,9E-01	4100	4,6E-04
290	< 1,0E-05	590	1,7E-02	890	< 1,0E-05	1190	< 1,0E-05	2650	6,0E-01	4150	1,8E-04
300	< 1,0E-05	600	4,7E-03	900	< 1,0E-05	1200	< 1,0E-05	2700	6,1E-01	4200	8,4E-05
310	< 1,0E-05	610	9,9E-04	910	< 1,0E-05	1250	< 1,0E-05	2750	5,7E-01	4250	5,4E-05
320	< 1,0E-05	620	1,6E-04	920	< 1,0E-05	1300	< 1,0E-05	2800	3,7E-01	4300	4,8E-05
330	< 1,0E-05	630	2,1E-05	930	< 1,0E-05	1350	< 1,0E-05	2850	2,1E-01	4350	5,8E-05
340	< 1,0E-05	640	< 1,0E-05	940	< 1,0E-05	1400	< 1,0E-05	2900	1,4E-01	4400	7,8E-05
350	< 1,0E-05	650	< 1,0E-05	950	< 1,0E-05	1450	< 1,0E-05	2950	1,1E-01	4450	1,0E-04
360	5,7E-04	660	< 1,0E-05	960	< 1,0E-05	1500	2,4E-05	3000	8,6E-02	4500	1,4E-04
370	5,2E-03	670	< 1,0E-05	970	< 1,0E-05	1550	1,6E-04	3050	7,1E-02	4550	2,0E-04
380	1,8E-02	680	< 1,0E-05	980	< 1,0E-05	1600	7,4E-04	3100	5,9E-02	4600	3,0E-04
390	4,0E-02	690	< 1,0E-05	990	< 1,0E-05	1650	2,5E-03	3150	5,0E-02	4650	5,2E-04
400	6,5E-02	700	< 1,0E-05	1000	< 1,0E-05	1700	6,9E-03	3200	4,4E-02	4700	9,0E-04
410	9,6E-02	710	< 1,0E-05	1010	< 1,0E-05	1750	1,6E-02	3250	3,9E-02	4750	1,4E-03
420	1,2E-01	720	< 1,0E-05	1020	< 1,0E-05	1800	3,1E-02	3300	3,7E-02	4800	2,0E-03
430	1,4E-01	730	< 1,0E-05	1030	< 1,0E-05	1850	5,3E-02	3350	3,6E-02	4850	2,6E-03
440	1,6E-01	740	< 1,0E-05	1040	< 1,0E-05	1900	8,3E-02	3400	3,6E-02	4900	3,0E-03
450	1,9E-01	750	< 1,0E-05	1050	< 1,0E-05	1950	1,2E-01	3450	3,7E-02	4950	3,0E-03
460	2,2E-01	760	< 1,0E-05	1060	< 1,0E-05	2000	1,6E-01	3500	4,0E-02	5000	2,5E-03
470	2,6E-01	770	< 1,0E-05	1070	< 1,0E-05	2050	2,1E-01	3550	4,4E-02	5050	1,8E-03
480	3,2E-01	780	< 1,0E-05	1080	< 1,0E-05	2100	2,5E-01	3600	4,9E-02	5100	1,0E-03
490	3,8E-01	790	< 1,0E-05	1090	< 1,0E-05	2150	3,0E-01	3650	5,4E-02	5150	4,6E-04

Chromaticity dependence on Incandescent Color Temperature



Chromaticity and NVIS Radiance at thickness $d = 2 \text{ mm}$

Planck [K]	u'	v'	x	y	Y	NR_A
1500	0,108	0,566	0,270	0,631	9,5	6,1E-11
1600	0,105	0,564	0,262	0,627	10,4	5,8E-11
1700	0,102	0,562	0,254	0,621	11,2	5,6E-11
1800	0,100	0,560	0,248	0,615	11,9	5,4E-11
1900	0,099	0,558	0,242	0,608	12,6	5,2E-11
2000	0,097	0,555	0,236	0,601	13,3	5,1E-11
2100	0,096	0,553	0,231	0,594	13,9	5,0E-11
2200	0,095	0,551	0,227	0,587	14,5	4,9E-11
2300	0,094	0,549	0,223	0,580	15,0	4,8E-11
2400	0,093	0,546	0,219	0,573	15,5	4,7E-11
2500	0,092	0,544	0,215	0,566	15,9	4,7E-11
2600	0,091	0,542	0,212	0,559	16,3	4,6E-11
2700	0,091	0,540	0,209	0,553	16,7	4,6E-11
2800	0,090	0,538	0,207	0,547	17,1	4,5E-11
2900	0,090	0,536	0,204	0,540	17,4	4,5E-11
3000	0,090	0,534	0,202	0,535	17,8	4,4E-11
3100	0,089	0,532	0,200	0,529	18,1	4,4E-11
3200	0,089	0,530	0,198	0,523	18,4	4,4E-11

LED	u'	v'	x	y	Y	NR_A
LUXEON rebel A2-RM-G	0,102	0,540	0,231	0,545	21,1	4,2E-11
LUXEON rebel T2-SO-L	0,106	0,530	0,229	0,511	20,9	4,2E-11
LUXEON rebel B5-R0-G	0,106	0,530	0,228	0,510	20,7	4,3E-11
LUXEON rebel Q1-RM-K	0,104	0,538	0,232	0,537	20,7	4,3E-11

NVIS Green A
 Chromaticity coordinates
 (as defined by MIL-STD-3009)
 $u' = 0.088$
 $v' = 0.543$
 with radius of tolerance $r = 0.037$

other sources of illumination A service for calculating chromaticity or NVIS radiance can be provided