

## GG475

Reflection factor	
$P_d$	0.92

Reference thickness	
d [mm]	3

Spectral values guaranteed	
$\lambda_c$ ( $\tau_i = 0.50$ ) [nm]	= 475 $\pm$ 6
$\lambda_s$ ( $\tau_{is} = 1 \cdot 10^{-5}$ ) [nm]	= 410
$\lambda_p$ ( $\tau_{ip} = 0.92$ ) [nm]	= 550

Refractive index n		
$\lambda$ [nm]	Element	n
546	Hg	1.53
587.6	He	1.52
852.1	Cs	1.52
1014	Hg	1.51

Density	
$\rho$ [g/cm <sup>3</sup> ]	2.56

Bubble content	
Bubble class	3

Chemical resistance	
FR class	0
SR class	1.0
AR class	1.0

Transformation temperature	
$T_g$ [°C]	531

Thermal expansion	
$\alpha_{-30/+70^\circ\text{C}}$ [10 <sup>-6</sup> /K]	8.2
$\alpha_{20/300^\circ\text{C}}$ [10 <sup>-6</sup> /K]	9.4
$\alpha_{20/200^\circ\text{C}}$ [10 <sup>-6</sup> /K]	

Temperature coefficient	
$T_k$ [nm/°C]	0.09

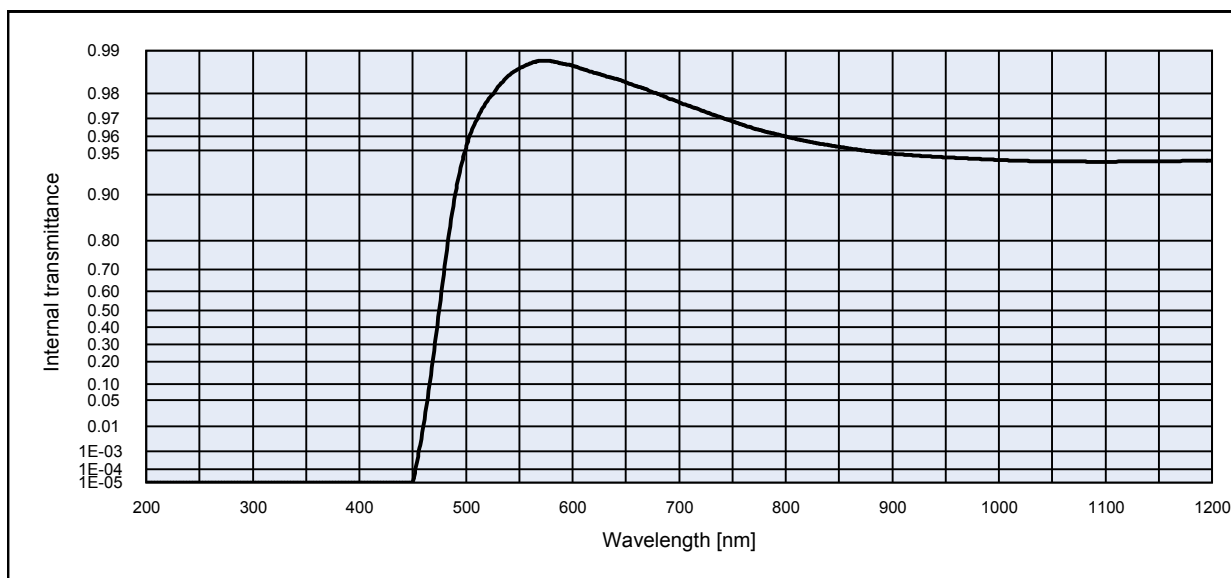
Notes	
Colloidally colored glass	
Long pass filter	
<b>All data without tolerances are to be understood to be reference values. Guaranteed values are only those values listed in the section "Spectral values guaranteed".</b>	

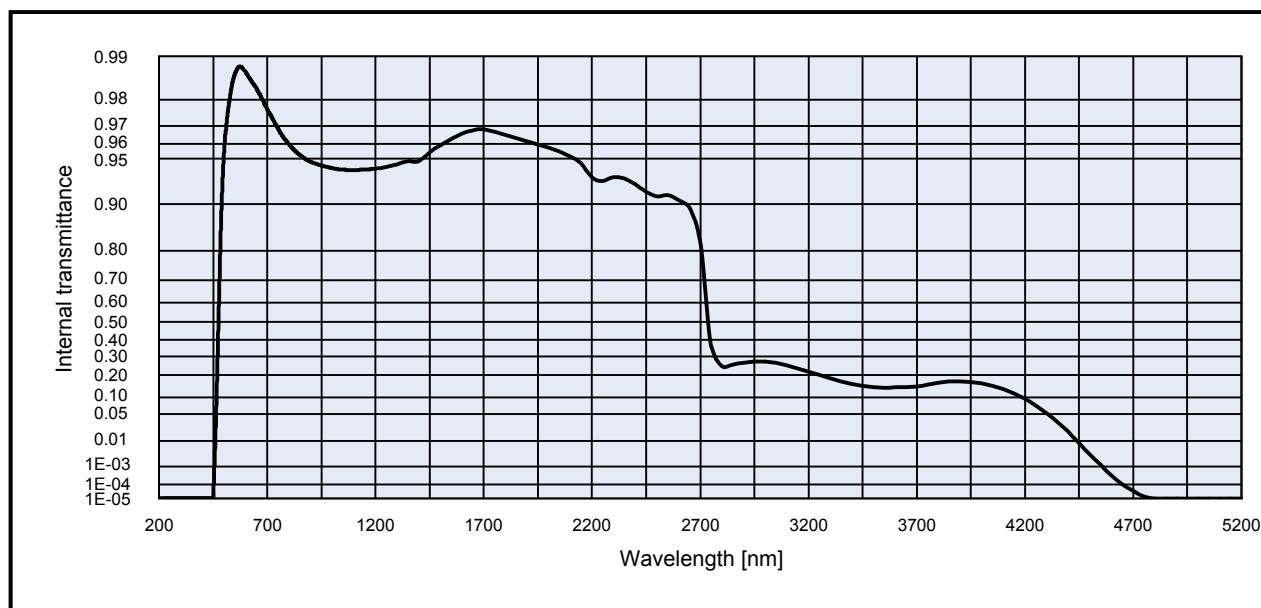
### Colorimetric evaluation

Illuminant	A ( Planck T = 2856 K )		
	1	2	3
x	0.483	0.489	0.492
y	0.453	0.460	0.463
Y	91	90	89
$\lambda_d$ [nm]	580	580	580
$P_e$	0.56	0.65	0.69

Illuminant	Planck T = 3200 K		
	1	2	3
x	0.465	0.473	0.476
y	0.458	0.466	0.470
Y	91	90	89
$\lambda_d$ [nm]	578	578	578
$P_e$	0.57	0.66	0.70

Illuminant	D65 ( T <sub>c</sub> = 6504 K )		
	1	2	3
x	0.381	0.394	0.401
y	0.463	0.485	0.494
Y	89	88	88
$\lambda_d$ [nm]	568	569	569
$P_e$	0.57	0.66	0.71





Internal transmittance  $\tau_i$  at reference thickness  $d$  [mm] = 3

The internal transmittance values, tabulated and graphically represented, are reference values only

$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$	$\lambda$ [nm]	$\tau_i$
200	< 1.0E-05	500	9.5E-01	800	9.6E-01	1100	9.4E-01	2200	9.3E-01	3700	1.5E-01
210	< 1.0E-05	510	9.7E-01	810	9.6E-01	1110	9.4E-01	2250	9.3E-01	3750	1.5E-01
220	< 1.0E-05	520	9.8E-01	820	9.6E-01	1120	9.4E-01	2300	9.3E-01	3800	1.6E-01
230	< 1.0E-05	530	9.8E-01	830	9.6E-01	1130	9.4E-01	2350	9.3E-01	3850	1.7E-01
240	< 1.0E-05	540	9.9E-01	840	9.5E-01	1140	9.4E-01	2400	9.3E-01	3900	1.7E-01
250	< 1.0E-05	550	9.9E-01	850	9.5E-01	1150	9.4E-01	2450	9.2E-01	3950	1.7E-01
260	< 1.0E-05	560	9.9E-01	860	9.5E-01	1160	9.4E-01	2500	9.1E-01	4000	1.6E-01
270	< 1.0E-05	570	9.9E-01	870	9.5E-01	1170	9.4E-01	2550	9.1E-01	4050	1.5E-01
280	< 1.0E-05	580	9.9E-01	880	9.5E-01	1180	9.4E-01	2600	9.1E-01	4100	1.3E-01
290	< 1.0E-05	590	9.9E-01	890	9.5E-01	1190	9.4E-01	2650	8.9E-01	4150	1.1E-01
300	< 1.0E-05	600	9.9E-01	900	9.5E-01	1200	9.4E-01	2700	8.2E-01	4200	9.5E-02
310	< 1.0E-05	610	9.9E-01	910	9.5E-01	1250	9.4E-01	2750	3.7E-01	4250	7.1E-02
320	< 1.0E-05	620	9.9E-01	920	9.5E-01	1300	9.5E-01	2800	2.5E-01	4300	5.1E-02
330	< 1.0E-05	630	9.8E-01	930	9.5E-01	1350	9.5E-01	2850	2.6E-01	4350	3.3E-02
340	< 1.0E-05	640	9.8E-01	940	9.4E-01	1400	9.5E-01	2900	2.7E-01	4400	1.9E-02
350	< 1.0E-05	650	9.8E-01	950	9.4E-01	1450	9.5E-01	2950	2.7E-01	4450	8.8E-03
360	< 1.0E-05	660	9.8E-01	960	9.4E-01	1500	9.6E-01	3000	2.7E-01	4500	3.3E-03
370	< 1.0E-05	670	9.8E-01	970	9.4E-01	1550	9.6E-01	3050	2.7E-01	4550	1.2E-03
380	< 1.0E-05	680	9.8E-01	980	9.4E-01	1600	9.7E-01	3100	2.5E-01	4600	3.4E-04
390	< 1.0E-05	690	9.8E-01	990	9.4E-01	1650	9.7E-01	3150	2.3E-01	4650	1.0E-04
400	< 1.0E-05	700	9.8E-01	1000	9.4E-01	1700	9.7E-01	3200	2.2E-01	4700	3.7E-05
410	< 1.0E-05	710	9.8E-01	1010	9.4E-01	1750	9.7E-01	3250	2.0E-01	4750	1.4E-05
420	< 1.0E-05	720	9.7E-01	1020	9.4E-01	1800	9.7E-01	3300	1.8E-01	4800	< 1.0E-05
430	< 1.0E-05	730	9.7E-01	1030	9.4E-01	1850	9.6E-01	3350	1.7E-01	4850	< 1.0E-05
440	< 1.0E-05	740	9.7E-01	1040	9.4E-01	1900	9.6E-01	3400	1.6E-01	4900	< 1.0E-05
450	< 1.0E-05	750	9.7E-01	1050	9.4E-01	1950	9.6E-01	3450	1.5E-01	4950	< 1.0E-05
460	1.0E-02	760	9.7E-01	1060	9.4E-01	2000	9.6E-01	3500	1.4E-01	5000	< 1.0E-05
470	2.6E-01	770	9.6E-01	1070	9.4E-01	2050	9.6E-01	3550	1.4E-01	5050	< 1.0E-05
480	7.1E-01	780	9.6E-01	1080	9.4E-01	2100	9.5E-01	3600	1.4E-01	5100	< 1.0E-05
490	9.0E-01	790	9.6E-01	1090	9.4E-01	2150	9.5E-01	3650	1.4E-01	5150	< 1.0E-05