

50mm SCHOTT RG9 IR LONGPASS FILTER 3mm thick

<https://www.galvoptics.co.uk/optical-components/optical-filters/schott-longpass-filters/>

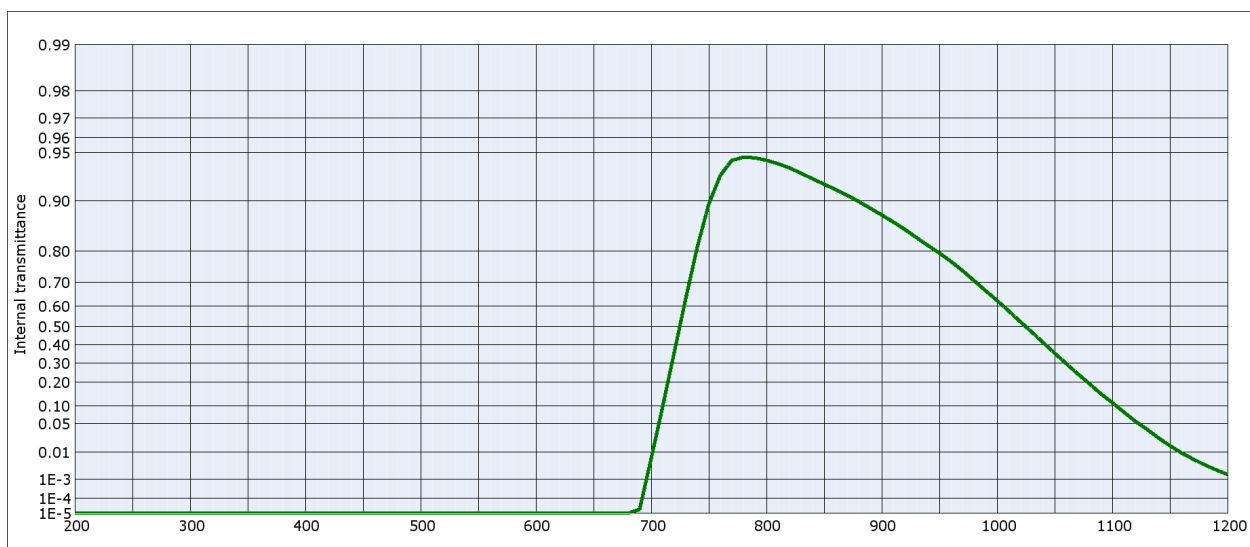
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Data Sheet



RG9		Density		Notes	
		ρ [g/cm ³]	2.58	Ionically / Colloidally colored glass	
				Bandpass filter / longpass filter	
Reflection factor		Bubble content			
P_d	0.918	Bubble class	3		
Reference thickness		Chemical Resistance			
d [mm]	3	FR class	0		
		SR class	1.0		
		AR class	1.0		
Spectral values guaranteed		Transformation temperature			
τ_i (720nm)	\leq 0.45	Tg [°C]	519		
τ_i (800nm)	\geq 0.92	Thermal expansion			
τ_i (1060nm)	\leq 0.4	$\alpha_{30/+70^\circ\text{C}}$ [10 ⁻⁶ /K]	7.9		
		$\alpha_{20/300^\circ\text{C}}$ [10 ⁻⁶ /K]	9.0		
		$\alpha_{20/200^\circ\text{C}}$ [10 ⁻⁶ /K]			
Refractive Index n		Temperature coefficient			
n_d (587.6 nm) = 1.520		T_K [nm/°C]	0.06		
n_s (852.1 nm) = 1.510					
n_t (1014.0 nm) = 1.500					
				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				x				x			
y				y				y			
Y				Y				Y			
λ_d [nm]				λ_d [nm]				λ_d [nm]			
P_e				P_e				P_e			



STATUS: 01.12.2014

Further explanations see 'Optical Filters 2013' catalogue

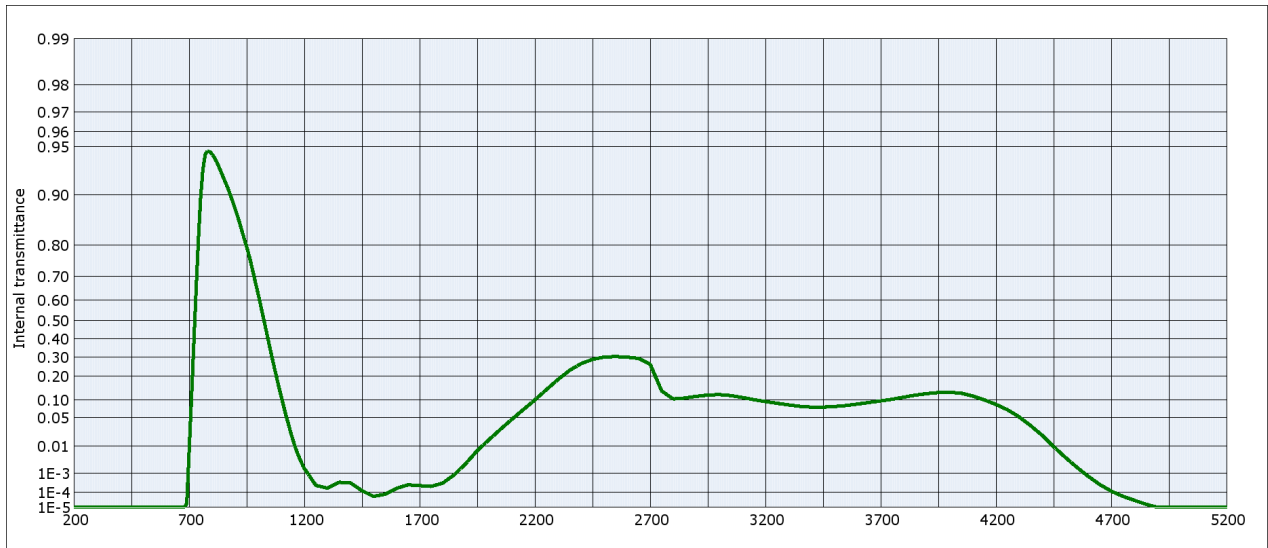
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RG9

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Internal transmittance τ_i at reference thickness $d = 3 \text{ mm}$ 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	$< 10^{-5}$	500	$< 10^{-5}$	800	0.944	1100	0.112	2200	0.101	3700	$9.7 \cdot 10^{-2}$
210	$< 10^{-5}$	510	$< 10^{-5}$	810	0.941	1110	$8.1 \cdot 10^{-2}$	2250	0.140	3750	0.103
220	$< 10^{-5}$	520	$< 10^{-5}$	820	0.938	1120	$5.6 \cdot 10^{-2}$	2300	0.184	3800	0.111
230	$< 10^{-5}$	530	$< 10^{-5}$	830	0.933	1130	$3.9 \cdot 10^{-2}$	2350	0.229	3850	0.118
240	$< 10^{-5}$	540	$< 10^{-5}$	840	0.927	1140	$2.5 \cdot 10^{-2}$	2400	0.264	3900	0.124
250	$< 10^{-5}$	550	$< 10^{-5}$	850	0.921	1150	$1.6 \cdot 10^{-2}$	2450	0.287	3950	0.128
260	$< 10^{-5}$	560	$< 10^{-5}$	860	0.915	1160	$9.6 \cdot 10^{-3}$	2500	0.300	4000	0.129
270	$< 10^{-5}$	570	$< 10^{-5}$	870	0.908	1170	$6.1 \cdot 10^{-3}$	2550	0.302	4050	0.126
280	$< 10^{-5}$	580	$< 10^{-5}$	880	0.899	1180	$3.9 \cdot 10^{-3}$	2600	0.299	4100	0.114
290	$< 10^{-5}$	590	$< 10^{-5}$	890	0.889	1190	$2.5 \cdot 10^{-3}$	2650	0.292	4150	0.101
300	$< 10^{-5}$	600	$< 10^{-5}$	900	0.878	1200	$1.6 \cdot 10^{-3}$	2700	0.261	4200	$8.6 \cdot 10^{-2}$
310	$< 10^{-5}$	610	$< 10^{-5}$	910	0.865	1250	$2.5 \cdot 10^{-4}$	2750	0.134	4250	$7.0 \cdot 10^{-2}$
320	$< 10^{-5}$	620	$< 10^{-5}$	920	0.851	1300	$1.8 \cdot 10^{-4}$	2800	0.104	4300	$5.2 \cdot 10^{-2}$
330	$< 10^{-5}$	630	$< 10^{-5}$	930	0.833	1350	$3.7 \cdot 10^{-4}$	2850	0.107	4350	$3.4 \cdot 10^{-2}$
340	$< 10^{-5}$	640	$< 10^{-5}$	940	0.814	1400	$3.4 \cdot 10^{-4}$	2900	0.114	4400	$2.0 \cdot 10^{-2}$
350	$< 10^{-5}$	650	$< 10^{-5}$	950	0.794	1450	$1.3 \cdot 10^{-4}$	2950	0.119	4450	$9.8 \cdot 10^{-3}$
360	$< 10^{-5}$	660	$< 10^{-5}$	960	0.770	1500	$5.7 \cdot 10^{-5}$	3000	0.120	4500	$4.4 \cdot 10^{-3}$
370	$< 10^{-5}$	670	$< 10^{-5}$	970	0.740	1550	$7.8 \cdot 10^{-5}$	3050	0.116	4550	$1.8 \cdot 10^{-3}$
380	$< 10^{-5}$	680	$< 10^{-5}$	980	0.705	1600	$1.7 \cdot 10^{-4}$	3100	0.109	4600	$7.2 \cdot 10^{-4}$
390	$< 10^{-5}$	690	$1.9 \cdot 10^{-5}$	990	0.666	1650	$2.7 \cdot 10^{-4}$	3150	0.102	4650	$2.8 \cdot 10^{-4}$
400	$< 10^{-5}$	700	$6.4 \cdot 10^{-3}$	1000	0.625	1700	$2.4 \cdot 10^{-4}$	3200	$9.5 \cdot 10^{-2}$	4700	$1.2 \cdot 10^{-4}$
410	$< 10^{-5}$	710	$9.9 \cdot 10^{-2}$	1010	0.577	1750	$2.2 \cdot 10^{-4}$	3250	$8.9 \cdot 10^{-2}$	4750	$5.8 \cdot 10^{-5}$
420	$< 10^{-5}$	720	0.357	1020	0.524	1800	$3.3 \cdot 10^{-4}$	3300	$8.4 \cdot 10^{-2}$	4800	$3.2 \cdot 10^{-5}$
430	$< 10^{-5}$	730	0.633	1030	0.470	1850	$8.6 \cdot 10^{-4}$	3350	$8.0 \cdot 10^{-2}$	4850	$1.7 \cdot 10^{-5}$
440	$< 10^{-5}$	740	0.809	1040	0.413	1900	$2.5 \cdot 10^{-3}$	3400	$7.7 \cdot 10^{-2}$	4900	$< 10^{-5}$
450	$< 10^{-5}$	750	0.895	1050	0.354	1950	$7.4 \cdot 10^{-3}$	3450	$7.8 \cdot 10^{-2}$	4950	$< 10^{-5}$
460	$< 10^{-5}$	760	0.931	1060	0.297	2000	$1.5 \cdot 10^{-2}$	3500	$7.9 \cdot 10^{-2}$	5000	$< 10^{-5}$
470	$< 10^{-5}$	770	0.944	1070	0.242	2050	$2.8 \cdot 10^{-2}$	3550	$8.2 \cdot 10^{-2}$	5050	$< 10^{-5}$
480	$< 10^{-5}$	780	0.947	1080	0.194	2100	$4.6 \cdot 10^{-2}$	3600	$8.7 \cdot 10^{-2}$	5100	$< 10^{-5}$
490	$< 10^{-5}$	790	0.946	1090	0.148	2150	$7.0 \cdot 10^{-2}$	3650	$9.2 \cdot 10^{-2}$	5150	$< 10^{-5}$