

# Sharp Cut Filter (Colorless)

L-42

Catalog Thickness t = 2.5 mm

Reflection Factor P<sub>d</sub> = 0.916

Diagram-1

Transmittance (T) & Internal Transmittance (τ) units: (%)

λ <sub>nm</sub>	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370	380	390	400	410	420	430	440	
T																							.34	39.3	77.1	85.1
τ																							.37	42.9	84.2	92.9
λ <sub>nm</sub>	450	460	470	480	490	500	510	520	530	540	550	560	570	580	590	600	610	620	630	640	650	660	670	680	690	
T	87.1	87.9	88.6	89.2	89.6	89.9	90.1	90.4	90.7	90.9	91.0	91.2	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	
τ	95.1	96.0	96.7	97.4	97.8	98.1	98.4	98.7	99.0	99.2	99.3	99.6	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	
λ <sub>nm</sub>	700	710	720	730	740	750	800	850	900	950	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	2,100	2,200	2,300	2,400	
T	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.3	91.4	91.4	91.5													
τ	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.8	99.8	99.9													

Refractive Indices

Symbol	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
λ <sub>nm</sub>	365.0	404.7	435.8	480.0	486.1	546.1	587.6	589.3	643.8	656.3	706.5	768.2	1,014.0
n			1.539	1.535	1.534	1.530	1.528	1.528	1.525	1.525	1.523	1.522	1.517

Abbe-Number

$$\nu_d = \frac{n_d - 1}{n_F - n_C} = 57$$

Color Specifications

	x	y	Y	λ <sub>d</sub>	P <sub>e</sub>
A	.452	.412	90.9	581	6
C	.317	.330	90.7	569	6
D <sub>65</sub>	.320	.343	90.8	569	6

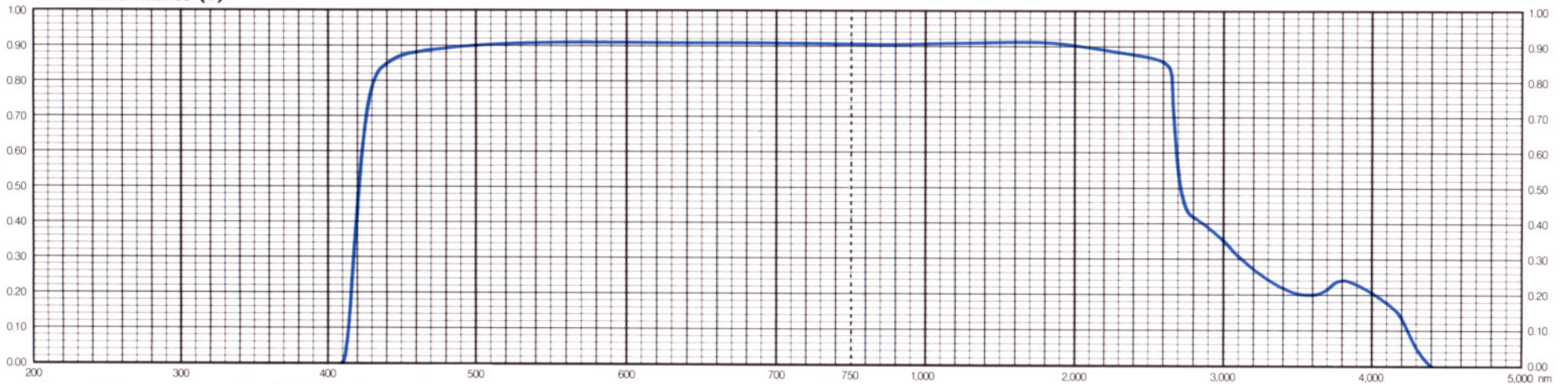
Properties

Chemical		Thermal				Mechanical		Other
D <sub>w</sub>	D <sub>A</sub>	T <sub>g</sub>	T <sub>s</sub>	α <sub>-30/70</sub>	α <sub>100/300</sub>	H <sub>k</sub>	F <sub>A</sub>	S
2	1	550	600	92	105	540	130	2.59

Tolerances of Transmittance (T)

Transition Wavelength	Transition Interval	Average High Transmittance
λT(nm)	Δλ(nm)	T <sub>H</sub> (%)
420 ± 5	< 25	> 85

Transmittance (T)



All data are mean values of various melts.