

# Neutral Density Filter

**ND-25**

Catalog Thickness t = 2.5 mm

Reflection Factor  $P_d = 0.922$

Diagram-6

Transmittance (T) & Internal Transmittance ( $\tau$ ) units: (%)

$\lambda_{nm}$	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															.02	.51	3.3	6.6	5.2	14.1	20.3	20.7	20.5	21.8	21.9
$\tau$															.02	.55	3.6	7.2	5.6	15.3	22.0	22.5	22.2	23.6	23.8
$\lambda_{nm}$	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	23.2	25.7	26.3	26.2	25.8	25.6	25.6	25.8	26.2	26.7	27.0	27.1	26.9	26.0	25.2	24.9	25.0	25.2	25.2	25.1	24.8	24.6	24.8	25.7	26.8
$\tau$	25.2	27.9	28.5	28.4	28.0	27.8	27.8	28.0	28.4	29.0	29.3	29.4	29.2	28.2	27.3	27.0	27.1	27.3	27.3	27.2	26.9	26.7	26.9	27.9	29.1
$\lambda_{nm}$	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	27.7	27.9	27.7	27.3	26.2	25.3	21.0	17.6	15.1	13.1	11.7	10.3	10.8	13.6	18.7	25.2	29.4	31.7	33.4	35.7	38.3	40.3	41.0	43.2	43.7
$\tau$	30.0	30.3	30.0	29.6	28.4	27.4	22.8	19.1	16.4	14.2	12.7	11.2	11.7	14.8	20.3	27.3	31.9	34.4	36.2	38.7	41.5	43.7	44.5	46.9	47.4

Refractive Indices

Symbol	i	h	g	F'	F	e	d	D	C'	C	r	A'	t
$\lambda_{nm}$	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		1.521	1.517	1.513	1.513	1.509	1.507	1.507	1.504	1.504	1.503		

Abbe-Number

$$\nu_d = \frac{n_d - 1}{n_F - n_C} = 59$$

Color Specifications

	x	y	Y	$\lambda_d$	$P_e$
A	.447	.415	26.0	569	5
C	.313	.330	26.1	560	5
D <sub>65</sub>	.315	.342	26.1	559	4

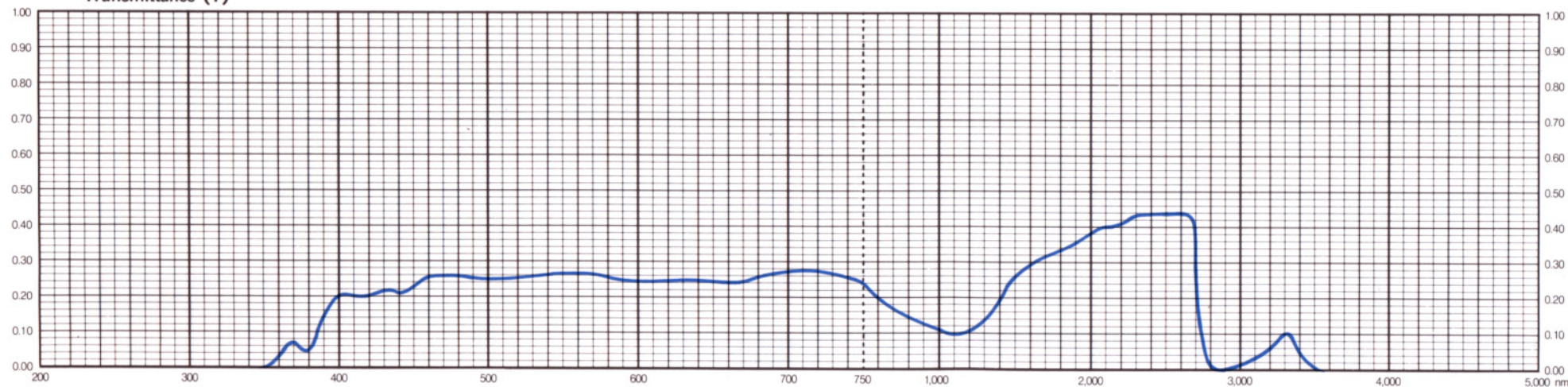
Properties

Chemical		Thermal				Mechanical		Other
D <sub>w</sub>	D <sub>A</sub>	T <sub>g</sub>	T <sub>s</sub>	$\frac{\alpha}{-30/70}$	$\frac{\alpha}{100/300}$	H <sub>K</sub>	F <sub>A</sub>	S
1	2	535	600	62	66	550	100	2.42

Tolerances of Transmittance (T)

Average Transmittance at 400 nm-700 nm	Average Optical Density
T <sub>av</sub> (%)	D <sub>av</sub>
25 ± 2.5	0.60

Transmittance (T)



All data are mean values of various melts.