

# Multiband Calibration Filter (Holmium)

HY-1

Catalog Thickness t = 2.5 mm

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

Diagram-10

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							7·10 <sup>-3</sup>	.78	6.9	22.0	46.8	63.0	74.0	80.6	83.4	85.1	35.7	84.0	89.5	89.5	90.8	90.3	71.5	88.7	82.5	
τ							8·10 <sup>-3</sup>	.85	7.5	24.0	51.1	68.8	80.8	88.0	91.0	92.9	39.0	91.7	97.7	97.7	99.1	98.6	78.1	96.8	90.1	
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	43.2	23.0	83.5	88.0	84.3	91.2	91.1	91.1	86.3	74.9	87.3	91.2	91.5	91.5	91.5	91.5	91.5	91.0	85.3	80.0	83.0	85.7	91.0	91.5	91.5	
τ	47.2	25.1	91.2	96.1	92.0	99.6	99.5	99.5	94.2	81.8	95.3	99.6	99.9	99.9	99.9	99.9	99.9	99.9	99.3	93.1	87.3	90.6	93.6	99.3	99.9	99.9
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	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	89.9	89.4	91.5	91.5	91.5	91.5	91.5	91.1	70.0	80.4	89.6	90.8	91.0	90.5	
τ	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	98.1	97.6	99.9	99.9	99.9	99.9	99.9	99.4	76.4	87.8	97.8	99.1	99.3	98.8	

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	1.551	1.544	1.540	1.536	1.535	1.531	1.529	1.529	1.526	1.526	1.524	1.523	1.519

Abbe-Number

$$V_d = \frac{n_d - 1}{n_F - n_C} = 58$$

Color Specifications

	x	y	Y	λ <sub>d</sub>	P <sub>e</sub>
A	.431	.411	59.7	499	4
C	.283	.331	63.3	498	9
D <sub>65</sub>	.286	.348	63.9	500	9

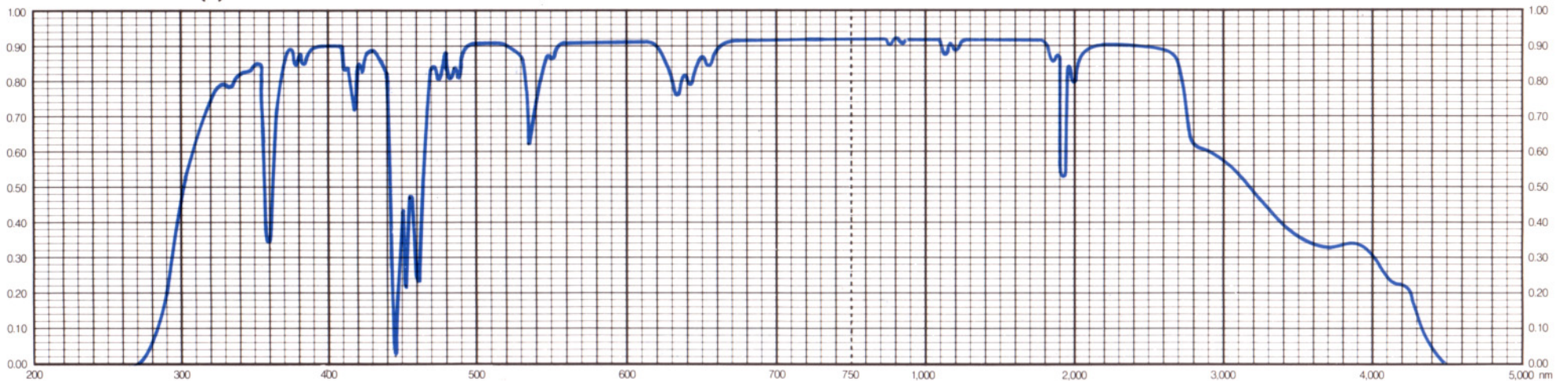
Properties

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
4	1	590	640	102	116	520	130	3.19

Tolerances of Transmittance (T)

Transmittance at 435 nm	Transmittance at 445 nm
T <sub>435</sub> (%)	T <sub>445</sub> (%)
> 80	< 5

Transmittance (T)



All data are mean values of various melts.