ガラスレンズ用プレス品硝種
Glass Lens Pressed Blanks

ガラス研磨レンズ用硝種
Glass Polished Lens

推奨硝種
Recommended Glass Type

TAFD30L

883-393

n_d = 1.88300　ν_d = 39.34 (39.341)　$n_F - n_C$ = 0.022445
n_e = 1.88833　ν_e = 39.09 (39.089)　$n_{F'} - n_{C'}$ = 0.022726

屈折率 Refractive Index

	λ (nm)	
$n_{1529.6}$	1529.60	1.84966
$n_{1128.64}$	1128.64	1.85715
n_t	1013.98	1.85995
n_s	852.11	1.86523
$n_{A'}$	768.195	1.86905
n_r	706.519	1.87267
n_C	656.273	1.87635
$n_{C'}$	643.847	1.87740
n_{633}	632.8	1.87838
n_D	589.294	1.88280
n_d	587.562	1.88300
n_e	546.074	1.88833
n_F	486.133	1.89880
$n_{F'}$	479.991	1.90012
n_g	435.834	1.91163
n_h	404.656	1.92260
n_i	365.015	1.94204

分散式の定数 Constants of dispersion formula

A_0	3.4371867
A_1	$-1.3505039 \times 10^{-2}$
A_2	3.6188280×10^{-2}
A_3	9.7365067×10^{-4}
A_4	$-2.8833579 \times 10^{-6}$
A_5	3.4310196×10^{-6}

部分分散 Partial dispersions

$n_C - n_t$	0.016402
$n_d - n_C$	0.006646
$n_F - n_d$	0.015799
$n_g - n_F$	0.012832
$n_{C'} - n_t$	0.017447
$n_e - n_{C'}$	0.010931
$n_{F'} - n_e$	0.011795
$n_g - n_{F'}$	0.011506

部分分散比 Partial dispersion rates

P_{C_t}	0.7308	$P'_{C'\_t}$	0.7677
P_{d_C}	0.2961	$P'_{d\_C'}$	0.2465
P_{e_d}	0.2375	P'_{e_d}	0.2345
P_{F_e}	0.4664	$P'_{F'\_e}$	0.5190
P_{g_F}	0.5717	$P'_{g\_F'}$	0.5063
P_{h_g}	0.4889	P'_{h_g}	0.4828
P_{i_h}	0.8659	P'_{i_h}	0.8552

異常分散性 Anomalous dispersions

ΔP_{C_t}	0.0011
$\Delta P_{C\_A'}$	0.0008
ΔP_{g_d}	-0.0066
ΔP_{g_F}	-0.0058
ΔP_{i_g}	-0.0381

光弾性定数 Photoelastic Constant

B (10^{-12}/Pa)	0.89

比重 Specific Gravity

d	4.87

化学的性質 Chemical Properties

D_W	1
D_A	1
T_{Blue}	1
D_{NaOH}	1
D_{STPP}	1
D_0	1
D_H	1

熱的性質 Thermal Properties

T_g (℃)	715
T_s (℃)	751
$T_{10^{14.5}}$ (℃)	684
$T_{10^{13}}$ (℃)	708
$T_{10^{7.6}}$ (℃)	789
$\alpha_{-30/+70℃}$ (10^{-7}/℃)	68
$\alpha_{100/300℃}$ (10^{-7}/℃)	87
λ [W/(m·K)]	0.820
C_P [kJ/(kg·K)]	0.462

機械的性質 Mechanical Properties

H_K	655(7)
F_A	55
E (GPa)	122
G (GPa)	46.8
μ	0.300
σ_b (MPa)	114

内部透過率 Internal Transmittance

λ (nm)	τ 2mm	τ 5mm	τ 10mm
2500	0.938	0.853	0.727
2400	0.964	0.912	0.832
2200	0.990	0.974	0.949
2000	0.996	0.989	0.978
1800	0.999	0.996	0.993
1600	0.999	0.998	0.997
1550	0.999	0.999	0.997
1500	0.999	0.999	0.997
1400	0.999	0.999	0.998
1300	0.999	0.999	0.998
1200	0.999	0.999	0.999
1100	0.999	0.999	0.999
1060	0.999	0.999	0.999
1050	0.999	0.999	0.999
1000	0.999	0.999	0.999
950	0.999	0.999	0.999
900	0.999	0.999	0.999
850	0.999	0.999	0.999
830	0.999	0.999	0.999
800	0.999	0.999	0.999
780	0.999	0.999	0.999
750	0.999	0.999	0.999
700	0.999	0.999	0.999
650	0.999	0.999	0.999
600	0.999	0.999	0.998
550	0.999	0.999	0.997
500	0.998	0.995	0.991
480	0.997	0.993	0.987
460	0.996	0.990	0.979
440	0.994	0.985	0.971
420	0.991	0.978	0.957
400	0.985	0.963	0.928
390	0.979	0.948	0.898
380	0.968	0.922	0.850
370	0.949	0.877	0.769
360	0.910	0.790	0.624
350	0.828	0.623	0.388
340	0.643	0.332	0.110
330	0.310	0.054	0.003
320	0.043		
310	0.001		
300			
290			
280			

着色度 Coloration Code

λ80(λ70)/λ5	(380)/335

着色度（内部透過率） Coloration of Internal Transmittance

λτ80/λτ5	373/337

CCI Color Contribution Index

CCI(G)	1.52
CCI(R)	1.63

屈折率の温度係数 dn/dT (×10^{-6}/℃) / アッベ数の温度係数 dν/dT (×10^{-3}/℃)
Temperature Coefficient of Refractive Index / Temperature Coefficient of Abbe-number

	(℃)	dn/dT										dν/dT	
		n_h	n_g	$n_{F'}$	n_F	n_e	n_d	n_{633}	$n_{C'}$	n_C	n_r	ν_e	ν_d
		404.66	435.84	479.99	486.13	546.07	587.56	632.80	643.85	656.27	706.52	546.07	587.56
dn/dT & dν/dT (rel.)	-40 / -20	6.9	5.9	5.0	4.9	4.2	3.8	3.5	3.5	3.4	3.2	-2.4	-2.4
	-20 / 0	7.0	5.9	5.0	4.9	4.1	3.8	3.5	3.4	3.4	3.2	-2.5	-2.5
	0 / 20	7.1	6.0	5.0	4.9	4.1	3.8	3.5	3.4	3.3	3.1	-2.6	-2.6
	20 / 40	7.3	6.1	5.1	5.0	4.2	3.8	3.5	3.4	3.3	3.1	-2.7	-2.7
	40 / 60	7.5	6.3	5.1	5.0	4.2	3.8	3.5	3.4	3.4	3.1	-2.8	-2.8
	60 / 80	7.6	6.4	5.2	5.1	4.2	3.8	3.5	3.4	3.4	3.1	-2.9	-2.9
	80 / 100	7.8	6.5	5.3	5.2	4.3	3.8	3.5	3.4	3.4	3.1	-3.0	-3.0
	100 / 120	7.9	6.6	5.3	5.2	4.3	3.8	3.5	3.4	3.3	3.1	-3.1	-3.1
	120 / 140	8.0	6.6	5.4	5.3	4.3	3.8	3.4	3.4	3.3	3.0	-3.2	-3.2
	140 / 150	8.1	6.7	5.4	5.3	4.3	3.8	3.4	3.3	3.3	3.0	-3.3	-3.2
dn/dT & dν/dT (abs.)	-40 / -20	4.3	3.3	2.4	2.3	1.6	1.3	1.0	1.0	0.9	0.7	-2.4	-2.4
	-20 / 0	4.8	3.7	2.8	2.7	1.9	1.6	1.3	1.3	1.2	1.0	-2.5	-2.5
	0 / 20	5.2	4.1	3.1	3.0	2.2	1.9	1.6	1.5	1.5	1.3	-2.6	-2.6
	20 / 40	5.6	4.4	3.4	3.3	2.5	2.1	1.8	1.8	1.7	1.5	-2.7	-2.7
	40 / 60	6.0	4.8	3.7	3.6	2.7	2.3	2.0	2.0	1.9	1.7	-2.8	-2.8
	60 / 80	6.3	5.0	3.9	3.8	2.9	2.5	2.2	2.1	2.1	1.8	-2.9	-2.9
	80 / 100	6.6	5.3	4.1	4.0	3.1	2.7	2.3	2.3	2.2	2.0	-3.0	-3.0
	100 / 120	6.9	5.5	4.3	4.2	3.2	2.8	2.5	2.4	2.3	2.1	-3.1	-3.1
	120 / 140	7.1	5.7	4.4	4.3	3.3	2.9	2.5	2.5	2.4	2.1	-3.2	-3.2
	140 / 150	7.2	5.8	4.5	4.4	3.4	2.9	2.6	2.5	2.4	2.1	-3.3	-3.3

線膨張係数 α (×10^{-7}/℃)
Coefficient of Thermal Expansion

(℃)	α
-40 / -30	65
-30 / -20	65
-20 / -10	66
-10 / 0	67
0 / 10	67
10 / 20	68
20 / 30	69
30 / 40	69
40 / 50	70
50 / 60	71
60 / 70	71
70 / 80	72
80 / 90	73
90 / 100	74
100 / 110	74
120 / 130	76
130 / 140	77
140 / 150	78

冷却速度による屈折率の変化 Difference of refractive indices by cooling rate

βC	
βd	
βF	
βg	

備考 Remarks

硝種対照表 Glass Cross Reference Index

	HOYA	SCHOTT	OHARA	HIKARI	SUMITA	CDGM
Glass_Type	TAFD30L					
Code	883-393					

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