

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

LAF50

602-502 $n_d=1.60199$ $\nu_d=50.21$ (50.212) $n_F-n_C=0.011989$
 $n_e=1.60485$ $\nu_e=49.99$ (49.988) $n_{F'}-n_{C'}=0.012100$

屈折率 Refractive Index		
	λ (nm)	
$n_{1529.6}$	1529.60	1.58062
$n_{1128.64}$	1128.64	1.58663
n_t	1013.98	1.58858
n_s	852.11	1.59195
$n_{A'}$	768.195	1.59423
n_r	706.519	1.59630
n_C	656.273	1.59836
$n_{C'}$	643.847	1.59894
n_{633}	632.8	1.59948
n_D	589.294	1.60189
n_d	587.562	1.60199
n_e	546.074	1.60485
n_F	486.133	1.61035
$n_{F'}$	479.991	1.61104
n_g	435.834	1.61696
n_h	404.656	1.62250
n_i	365.015	1.63209

分散式の定数 Constants of dispersion formula	
A_0	2.5196146
A_1	$-1.2142630 \times 10^{-2}$
A_2	1.6605860×10^{-2}
A_3	3.3419204×10^{-4}
A_4	2.6313462×10^{-7}
A_5	6.7812304×10^{-7}

部分分散 Partial dispersions	
n_C-n_t	0.009779
n_d-n_C	0.003630
n_F-n_d	0.008359
n_g-n_F	0.006605
$n_{C'}-n_t$	0.010357
$n_e-n_{C'}$	0.005906
$n_{F'}-n_e$	0.006194
$n_g-n_{F'}$	0.005916

部分分散比 Partial dispersion rates			
$P_{C,t}$	0.8157	$P'_{C',t}$	0.8560
$P_{d,C}$	0.3028	$P'_{d,C'}$	0.2522
$P_{e,d}$	0.2381	$P'_{e,d}$	0.2359
$P_{F,e}$	0.4592	$P'_{F',e}$	0.5119
$P_{g,F}$	0.5509	$P'_{g,F'}$	0.4889
$P_{h,g}$	0.4623	$P'_{h,g}$	0.4581
$P_{i,h}$	0.8000	$P'_{i,h}$	0.7926

異常分散性 Anomalous dispersions	
$\Delta P_{C,t}$	0.0352
$\Delta P_{C,A'}$	0.0073
$\Delta P_{g,d}$	-0.0093
$\Delta P_{g,F}$	-0.0071
$\Delta P_{i,g}$	-0.0344

光弾性定数 Photoelastic Constant	
B ($10^{-12}/\text{Pa}$)	3.31

比重 Specific Gravity	
d	2.93

化学的性質 Chemical Properties	
D_W	1
D_A	3
T_{Blue}	5
D_{NaOH}	1
D_{STPP}	1
D_0	2
D_H	1

熱的性質 Thermal Properties	
T_g (°C)	582
T_s (°C)	633
$T_{10^{14.5}}$ (°C)	553
$T_{10^{13}}$ (°C)	580
$T_{10^{7.6}}$ (°C)	694
$\alpha_{-30/+70^\circ\text{C}}$ ($10^{-7}/^\circ\text{C}$)	58
$\alpha_{100/300^\circ\text{C}}$ ($10^{-7}/^\circ\text{C}$)	77
λ [$\text{W}/(\text{m}\cdot\text{K})$]	0.796
C_p [$\text{kJ}/(\text{kg}\cdot\text{K})$]	0.681

機械的性質 Mechanical Properties	
H_K	560 (6)
F_A	90
E (GPa)	83
G (GPa)	33.2
μ	0.250
σ_b (MPa)	91

内部透過率 Internal Transmittance			
λ (nm)	τ 2mm	τ 5mm	τ 10mm
2500	0.888	0.744	0.553
2400	0.919	0.809	0.655
2200	0.963	0.910	0.828
2000	0.991	0.977	0.954
1800	0.996	0.990	0.980
1600	0.998	0.994	0.989
1550	0.998	0.995	0.990
1500	0.997	0.994	0.987
1400	0.996	0.989	0.978
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	0.999
550	0.999	0.999	0.999
500	0.999	0.999	0.998
480	0.999	0.999	0.997
460	0.999	0.998	0.996
440	0.999	0.997	0.994
420	0.999	0.997	0.993
400	0.998	0.996	0.991
390	0.998	0.995	0.989
380	0.997	0.992	0.985
370	0.995	0.989	0.977
360	0.992	0.980	0.961
350	0.986	0.965	0.931
340	0.973	0.934	0.871
330	0.943	0.864	0.747
320	0.866	0.699	0.488
310	0.663	0.358	0.128
300	0.199	0.018	
290	0.006		
280			

着色度 Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	345/305
着色度 (内部透過率) Coloration of Internal Transmittance	
$\lambda_{\tau 80}/\lambda_{\tau 5}$	333/306

C C I Color Contribution Index	
CCI (G)	0.21
CCI (R)	0.22

屈折率の温度係数 dn/dT ($\times 10^{-6}/^\circ\text{C}$) Temperature Coefficient of Refractive Index												アッペ数の温度係数 $d\nu/dT$ ($\times 10^{-3}/^\circ\text{C}$) Temperature Coefficient of Abbe-number	
	(°C)	dn/dT										$d\nu/dT$	
		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 & $d\nu/dT$ (rel.)	-40 / -20	5.3	5.0	4.7	4.6	4.3	4.2	4.0	4.0	4.0	3.9	-2.5	-2.5
	-20 / 0	5.4	5.0	4.7	4.6	4.3	4.1	4.0	4.0	3.9	3.8	-2.5	-2.6
	0 / 20	5.4	5.1	4.7	4.6	4.3	4.1	4.0	3.9	3.9	3.8	-2.7	-2.7
	20 / 40	5.5	5.1	4.7	4.7	4.3	4.1	4.0	4.0	3.9	3.8	-2.8	-2.9
	40 / 60	5.6	5.2	4.8	4.8	4.4	4.2	4.0	4.0	4.0	3.8	-2.9	-2.9
	60 / 80	5.7	5.3	4.9	4.8	4.4	4.2	4.1	4.0	4.0	3.9	-3.1	-3.1
	80 / 100	5.9	5.4	5.0	4.9	4.5	4.3	4.1	4.1	4.0	3.9	-3.2	-3.2
	100 / 120	6.0	5.5	5.0	5.0	4.6	4.3	4.1	4.1	4.1	3.9	-3.4	-3.4
	120 / 140	6.1	5.6	5.1	5.1	4.6	4.4	4.2	4.1	4.1	4.0	-3.5	-3.6
	140 / 150	6.2	5.7	5.2	5.1	4.6	4.4	4.2	4.2	4.1	4.0	-3.6	-3.6
dn/dT & $d\nu/dT$ (abs.)	-40 / -20	3.1	2.8	2.5	2.4	2.1	2.0	1.9	1.8	1.8	1.7	-2.4	-2.4
	-20 / 0	3.4	3.1	2.8	2.7	2.4	2.3	2.1	2.1	2.1	2.0	-2.6	-2.6
	0 / 20	3.8	3.4	3.1	3.0	2.7	2.5	2.4	2.3	2.3	2.2	-2.7	-2.7
	20 / 40	4.1	3.7	3.3	3.3	2.9	2.7	2.6	2.6	2.5	2.4	-2.8	-2.9
	40 / 60	4.4	4.0	3.6	3.5	3.1	3.0	2.8	2.8	2.7	2.6	-3.0	-3.0
	60 / 80	4.6	4.2	3.8	3.7	3.3	3.1	3.0	2.9	2.9	2.8	-3.1	-3.1
	80 / 100	4.9	4.4	4.0	3.9	3.5	3.3	3.1	3.1	3.1	2.9	-3.3	-3.3
	100 / 120	5.1	4.6	4.2	4.1	3.7	3.5	3.3	3.2	3.2	3.1	-3.4	-3.4
	120 / 140	5.3	4.8	4.3	4.3	3.8	3.6	3.4	3.4	3.3	3.2	-3.5	-3.5
	140 / 150	5.4	4.9	4.4	4.4	3.9	3.7	3.5	3.4	3.4	3.2	-3.6	-3.6

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

備考 Remarks						
硝種対照表 Glass Cross Reference Index						
	HOYA	SCHOTT	OHARA	HIKARI	SUMITA	CDGM
Glass_Type	LAF50					
Code	602-502					
Excel File Name : HOYA20251120.xlsx						