

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

FAD61

655-610

$n_d=1.65494$
 $n_e=1.65750$

$\nu_d=61.04$
 $\nu_e=60.70$

(61.038)
(60.700)

$n_F - n_C = 0.010730$
 $n_{F'} - n_{C'} = 0.010832$

屈折率 Refractive Index		
	λ (nm)	
$n_{1529.6}$	1529.60	1.63766
$n_{1128.64}$	1128.64	1.64186
n_t	1013.98	1.64336
n_s	852.11	1.64612
$n_{A'}$	768.195	1.64806
n_r	706.519	1.64988
n_C	656.273	1.65170
$n_{C'}$	643.847	1.65221
n_{633}	632.8	1.65269
n_D	589.294	1.65484
n_d	587.562	1.65494
n_e	546.074	1.65750
n_F	486.133	1.66243
$n_{F'}$	479.991	1.66305
n_g	435.834	1.66831
n_h	404.656	1.67321
n_i	365.015	1.68155

分散式の定数 Constants of dispersion formula	
A_0	2.6918813
A_1	$-7.2829168 \times 10^{-3}$
A_2	1.6543289×10^{-2}
A_3	1.5269969×10^{-4}
A_4	1.1454706×10^{-5}
A_5	$-2.8608447 \times 10^{-7}$

部分分散 Partial dispersions	
$n_C - n_t$	0.008338
$n_d - n_C$	0.003240
$n_F - n_d$	0.007490
$n_g - n_F$	0.005885
$n_{C'} - n_t$	0.008852
$n_e - n_{C'}$	0.005284
$n_{F'} - n_e$	0.005548
$n_g - n_{F'}$	0.005269

部分分散比 Partial dispersion rates			
P_{C_t}	0.7771	$P'_{C'_t}$	0.8172
P_{d_C}	0.3020	$P'_{d_{C'}}$	0.2517
P_{e_d}	0.2384	P'_{e_d}	0.2362
P_{F_e}	0.4596	$P'_{F'_e}$	0.5122
P_{g_F}	0.5485	$P'_{g_{F'}}$	0.4864
P_{h_g}	0.4560	P'_{h_g}	0.4517
P_{i_h}	0.7775	P'_{i_h}	0.7702

異常分散性 Anomalous dispersions	
ΔP_{C_t}	-0.0540
$\Delta P_{C_{A'}}$	-0.0119
ΔP_{g_d}	0.0137
ΔP_{g_F}	0.0100
ΔP_{i_g}	0.0326

光弾性定数 Photoelastic Constant	
B ($10^{-12}/\text{Pa}$)	0.55

比重 Specific Gravity	
d	4.68

化学的性質 Chemical Properties	
D_W	1
D_A	4
T_{Blue}	3*
D_{NaOH}	1
D_{STPP}	2
D_0	2
D_H	1

熱的性質 Thermal Properties	
T_g (°C)	540
T_s (°C)	582
$T_{10^{14.5}}$ (°C)	512
$T_{10^{13}}$ (°C)	535
$T_{10^{7.6}}$ (°C)	
$\alpha_{-30/+70^\circ\text{C}}$ ($10^{-7}/^\circ\text{C}$)	97
$\alpha_{100/300^\circ\text{C}}$ ($10^{-7}/^\circ\text{C}$)	122
λ [$\text{W}/(\text{m}\cdot\text{K})$]	0.829
C_p [$\text{kJ}/(\text{kg}\cdot\text{K})$]	0.492

機械的性質 Mechanical Properties	
H_K	540 (5)
F_A	160
E (GPa)	99
G (GPa)	37.8
μ	0.300
σ_b (MPa)	97

内部透過率 Internal Transmittance			
λ (nm)	τ 2mm	τ 5mm	τ 10mm
2500	0.956	0.893	0.797
2400	0.971	0.929	0.864
2200	0.988	0.971	0.943
2000	0.995	0.989	0.977
1800	0.998	0.994	0.987
1600	0.998	0.996	0.992
1550	0.999	0.996	0.993
1500	0.999	0.996	0.993
1400	0.999	0.998	0.995
1300	0.999	0.998	0.996
1200	0.999	0.998	0.996
1100	0.999	0.998	0.997
1060	0.999	0.998	0.997
1050	0.999	0.998	0.997
1000	0.999	0.998	0.997
950	0.999	0.998	0.997
900	0.999	0.998	0.997
850	0.999	0.999	0.997
830	0.999	0.998	0.997
800	0.999	0.998	0.996
780	0.999	0.998	0.996
750	0.999	0.998	0.996
700	0.999	0.998	0.995
650	0.999	0.997	0.994
600	0.999	0.997	0.994
550	0.999	0.998	0.995
500	0.999	0.997	0.995
480	0.999	0.997	0.994
460	0.999	0.996	0.993
440	0.998	0.996	0.992
420	0.998	0.995	0.991
400	0.998	0.995	0.990
390	0.998	0.994	0.989
380	0.997	0.992	0.985
370	0.995	0.988	0.976
360	0.992	0.979	0.959
350	0.985	0.964	0.928
340	0.973	0.935	0.874
330	0.954	0.889	0.790
320	0.924	0.820	0.673
310	0.880	0.726	0.528
300	0.822	0.612	0.375
290	0.751	0.489	0.239
280	0.658	0.351	0.123

着色度 Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	345/270
着色度 (内部透過率) Coloration of Internal Transmittance	
$\lambda_{\tau 80}/\lambda_{\tau 5}$	331/271

C C I Color Contribution Index	
CCI (G)	0.13
CCI (R)	0.09

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	-1.2	-1.5	-1.8	-1.8	-2.1	-2.3	-2.4	-2.4	-2.4	-2.5	-3.6	-3.6		
	-20 / 0	-1.4	-1.8	-2.1	-2.1	-2.4	-2.5	-2.6	-2.7	-2.7	-2.8	-3.6	-3.7		
	0 / 20	-1.7	-2.0	-2.3	-2.3	-2.6	-2.7	-2.9	-2.9	-2.9	-3.0	-3.6	-3.6		
	20 / 40	-1.8	-2.1	-2.4	-2.5	-2.8	-2.9	-3.0	-3.1	-3.1	-3.2	-3.7	-3.7		
	40 / 60	-1.9	-2.2	-2.6	-2.6	-2.9	-3.0	-3.2	-3.2	-3.2	-3.3	-3.6	-3.6		
	60 / 80	-2.0	-2.3	-2.7	-2.7	-3.0	-3.1	-3.3	-3.3	-3.3	-3.4	-3.7	-3.8		
	80 / 100	-2.1	-2.4	-2.8	-2.8	-3.1	-3.2	-3.3	-3.4	-3.4	-3.5	-3.7	-3.7		
	100 / 120	-2.1	-2.5	-2.8	-2.8	-3.1	-3.3	-3.4	-3.4	-3.5	-3.6	-3.8	-3.8		
	120 / 140	-2.2	-2.5	-2.9	-2.9	-3.2	-3.3	-3.5	-3.5	-3.5	-3.6	-3.8	-3.9		
dn/dT & $d\nu/dT$ (abs.)	140 / 150	-2.2	-2.6	-2.9	-2.9	-3.2	-3.4	-3.5	-3.5	-3.5	-3.6	-3.8	-3.8		
	-40 / -20	-3.5	-3.8	-4.1	-4.1	-4.4	-4.5	-4.6	-4.6	-4.7	-4.7	-3.6	-3.6		
	-20 / 0	-3.4	-3.7	-4.0	-4.1	-4.3	-4.5	-4.6	-4.6	-4.6	-4.7	-3.6	-3.6		
	0 / 20	-3.4	-3.7	-4.0	-4.0	-4.3	-4.4	-4.5	-4.5	-4.6	-4.7	-3.6	-3.6		
	20 / 40	-3.3	-3.6	-3.9	-3.9	-4.2	-4.4	-4.5	-4.5	-4.5	-4.6	-3.7	-3.7		
	40 / 60	-3.2	-3.5	-3.9	-3.9	-4.2	-4.3	-4.4	-4.5	-4.5	-4.6	-3.7	-3.7		
	60 / 80	-3.2	-3.5	-3.8	-3.8	-4.1	-4.3	-4.4	-4.4	-4.4	-4.5	-3.7	-3.7		
	80 / 100	-3.1	-3.4	-3.8	-3.8	-4.1	-4.2	-4.3	-4.4	-4.4	-4.5	-3.7	-3.8		
	100 / 120	-3.1	-3.4	-3.7	-3.8	-4.1	-4.2	-4.3	-4.3	-4.4	-4.5	-3.8	-3.8		
	120 / 140	-3.0	-3.4	-3.7	-3.7	-4.0	-4.2	-4.3	-4.3	-4.3	-4.4	-3.8	-3.8		
	140 / 150	-3.0	-3.3	-3.7	-3.7	-4.0	-4.1	-4.3	-4.3	-4.3	-4.4	-3.8	-3.8		

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	FAD61					
Code	655-610					
Excel File Name : HOYA20260126.xlsx						