

L-LAH85V

Code(d) **854404**

Code(e) **859401**

Refractive Index n_d	1.85400 1.854000	Abbe Number ν_d	40.38	Dispersion n_F-n_C	0.021151
Refractive Index n_e	1.859025	Abbe Number ν_e	40.13	Dispersion n_F-n_C'	0.021407

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.80740
n_{1970}	1.97009	1.81425
n_{1530}	1.52958	1.82188
n_{1129}	1.12864	1.82934
n_t	1.01398	1.83207
n_s	0.85211	1.83714
$n_{A'}$	0.76819	1.84079
n_r	0.70652	1.84423
n_C	0.65627	1.84772
$n_{C'}$	0.64385	1.84871
$n_{\text{He-Ne}}$	0.6328	1.84964
n_D	0.58929	1.85381
n_d	0.58756	1.85400
n_e	0.54607	1.85903
n_F	0.48613	1.86887
$n_{F'}$	0.47999	1.87012
$n_{\text{He-Cd}}$	0.44157	1.87929
n_g	0.435835	1.88090
n_h	0.404656	1.89116
n_i	0.365015	1.90923

Constants of Dispersion Formula	
A_1	1.97460503E+00
A_2	3.61903592E-01
A_3	1.38433241E+00
B_1	1.01854258E-02
B_2	3.84829118E-02
B_3	1.03713627E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	4
Acid Resistance(Surface) Group SR	3.2
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E (10^9N/m^2)	1115
Rigidity Modulus G (10^9N/m^2)	427
Poisson's Ratio σ	0.306
Knoop Hardness Hk[Class]	650 7
Abrasion Aa	65
Photoelastic Constant β nm/(cm· 10^5Pa)	1.83

Partial Dispersions	
n_C-n_t	0.015652
$n_C-n_{A'}$	0.006929
n_d-n_C	0.006279
n_e-n_C	0.011304
n_g-n_d	0.026903
n_g-n_F	0.012031
n_h-n_g	0.010254
n_i-n_g	0.028327
n_C-n_t	0.016640
$n_e-n_{C'}$	0.010316
n_F-n_e	0.011091
$n_i-n_{F'}$	0.039114

Relative Partial Dispersions	
$\theta_{C,t}$	0.7400
$\theta_{C,A'}$	0.3276
$\theta_{d,C}$	0.2969
$\theta_{e,C}$	0.5344
$\theta_{g,d}$	1.2719
$\theta_{g,F}$	0.5688
$\theta_{h,g}$	0.4848
$\theta_{i,g}$	1.3393
$\theta'_{C,t}$	0.7773
$\theta'_{e,C'}$	0.4819
$\theta'_{F,e}$	0.5181
$\theta'_{i,F'}$	1.8272

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0039
$\Delta\theta_{C,A'}$	0.0028
$\Delta\theta_{g,d}$	-0.0089
$\Delta\theta_{g,F}$	-0.0073
$\Delta\theta_{i,g}$	-0.0476

Thermal Properties	
Strain Point StP (°C)	
Annealing Point AP (°C)	
Transformation Temperature Tg (°C)	613
Yield Point At (°C)	653
Softening Point SP (°C)	
Expansion Coefficients (-30~+70°C)	63
α ($10^{-7}/^\circ\text{C}$) (+100~+300°C)	77
Thermal Conductivity λ W/(m·K)	0.819

Coloring			
λ_{80}		λ_5	340
λ_{70}	380		

Internal transmission			
$\lambda_{0.80}$	373	$\lambda_{0.05}$	340

CCI		
B	G	R
0.00	1.17	1.20

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	
310	
320	
330	
340	0.05
350	0.30
360	0.58
370	0.77
380	0.86
390	0.915
400	0.944
420	0.971
440	0.981
460	0.987
480	0.992
500	0.995
550	0.999
600	0.999
650	0.999
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.999
1600	0.998
1800	0.992
2000	0.973
2200	0.933
2400	0.77

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n/\Delta T$ relative ($10^{-6}/^\circ\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	5.9	6.7	6.8	7.1	7.4	8.2	9.0
-20~ 0	5.8	6.7	6.8	7.1	7.4	8.3	9.2
0~20	5.8	6.8	6.9	7.1	7.5	8.4	9.3
20~40	5.9	6.9	6.9	7.2	7.6	8.5	9.5
40~60	6.0	7.0	7.0	7.4	7.8	8.7	9.7
60~80	6.1	7.1	7.2	7.5	7.9	8.9	9.9

Other Properties	
Bubble Quality Group B	
Specific Gravity d	5.25
Remarks	

OHARA 17-04

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※The name of the glass type is the model number assigned based on the main components of the composition: large, medium, small refractive index and serial number.