

L-LAH91

Code(d) **765491**

Code(e) **768488**

Refractive Index n_d	1.76450 1.764500	Abbe Number ν_d	49.09	Dispersion n_F-n_C	0.015572
Refractive Index n_e	1.768208	Abbe Number ν_e	48.85	Dispersion $n_F-n_{C'}$	0.015726

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.72404
n_{1970}	1.97009	1.73103
n_{1530}	1.52958	1.73852
n_{1129}	1.12864	1.74527
n_t	1.01398	1.74758
n_s	0.85211	1.75168
$n_{A'}$	0.76819	1.75453
n_r	0.70652	1.75716
n_C	0.65627	1.75981
$n_{C'}$	0.64385	1.76055
$n_{\text{He-Ne}}$	0.6328	1.76125
n_D	0.58929	1.76436
n_d	0.58756	1.76450
n_e	0.54607	1.76821
n_F	0.48613	1.77538
$n_{F'}$	0.47999	1.77628
$n_{\text{He-Cd}}$	0.44157	1.78284
n_g	0.435835	1.78399
n_h	0.404656	1.79120
n_i	0.365015	1.80360

Constants of Dispersion Formula	
A_1	1.26144128E+00
A_2	7.82115273E-01
A_3	1.15823645E+00
B_1	5.72512582E-03
B_2	2.19829752E-02
B_3	8.80482200E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	52.2
Phosphate Resistance PR	2.0

Mechanical Properties	
Young's Modulus E (GPa)	114.4
Rigidity Modulus G (GPa)	43.9
Poisson's Ratio σ	0.301
Knoop Hardness Hk(Class)	680 7
Abrasion Aa	68

Partial Dispersions	
n_C-n_t	0.012232
$n_C-n_{A'}$	0.005282
n_d-n_C	0.004692
n_e-n_C	0.008400
n_g-n_d	0.019488
n_g-n_F	0.008608
n_h-n_g	0.007208
n_i-n_g	0.019614
n_C-n_t	0.012975
$n_e-n_{C'}$	0.007657
$n_{F'}-n_e$	0.008069
$n_i-n_{F'}$	0.027325

Relative Partial Dispersions	
$\theta_{C,t}$	0.7855
$\theta_{C,A'}$	0.3392
$\theta_{d,C}$	0.3013
$\theta_{e,C}$	0.5394
$\theta_{g,d}$	1.2515
$\theta_{g,F}$	0.5528
$\theta_{h,g}$	0.4629
$\theta_{i,g}$	1.2596
$\theta'_{C,t}$	0.8251
$\theta'_{e,C'}$	0.4869
$\theta'_{F',e}$	0.5131
$\theta'_{i,F'}$	1.7376

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0085
$\Delta\theta_{C,A'}$	0.0038
$\Delta\theta_{g,d}$	-0.0113
$\Delta\theta_{g,F}$	-0.0092
$\Delta\theta_{i,g}$	-0.0544

Thermal Properties	
Strain Point StP (°C)	578
Annealing Point AP (°C)	599
Transformation Temperature Tg (°C)	620 *
Yield Point At (°C)	650 *
Softening Point SP (°C)	676
Expansion Coefficients (-30~+70°C)	59 *
α (10 ⁻⁷ K ⁻¹) (+100~+300°C)	73 *
Thermal Conductivity λ W/(m·K)	0.841

Coloring			
λ_{80}	365	λ_5	275
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	333	$\lambda_{0.05}$	274

CCI		
B	G	R
0.00	0.30	0.31

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	0.15
290	0.32
300	0.46
310	0.59
320	0.69
330	0.78
340	0.85
350	0.902
360	0.937
370	0.954
380	0.973
390	0.981
400	0.986
420	0.991
440	0.993
460	0.996
480	0.997
500	0.998
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	0.997
1600	0.996
1800	0.988
2000	0.963
2200	0.905
2400	0.67

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n / \Delta T$ relative (10 ⁻⁶ K ⁻¹)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	6.5	7.2	7.2	7.4	7.7	8.3	8.8
-20~ 0	6.5	7.1	7.2	7.4	7.7	8.3	8.9
0~20	6.4	7.1	7.2	7.4	7.7	8.3	8.9
20~40	6.3	7.1	7.1	7.4	7.7	8.3	8.9
40~60	6.5	7.2	7.3	7.5	7.8	8.5	9.1
60~80	6.7	7.5	7.5	7.8	8.1	8.8	9.4

Other Properties	
Photoelastic Constant β nm/(cm·10 ⁵ Pa)	1.71
Specific Gravity d	4.29
Remarks	

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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.