S-LAH66

Code(d) **773496**
Code(e) **776493**

Refractive Index n_d	**1.772 50** 1.772 499	Abbe Number ν_d	**49.60**	Dispersion $n_F - n_C$	**0.015 576**
Refractive Index n_e	1.776 208	Abbe Number ν_e	49.36	Dispersion $n_{F'} - n_{C'}$	0.015 727

Refractive Indices		
λ (μm)		
n_{2325}	2.325 42	1.730 31
n_{1970}	1.970 09	1.737 86
n_{1530}	1.529 58	1.745 90
n_{1129}	1.128 64	1.753 03
n_t	1.013 98	1.755 41
n_s	0.852 11	1.759 60
$n_{A'}$	0.768 19	1.762 48
n_r	0.706 52	1.765 14
n_C	0.656 27	1.767 80
$n_{C'}$	0.643 85	1.768 54
$n_{He\text{-}Ne}$	0.632 8	1.769 24
n_D	0.589 29	1.772 36
n_d	0.587 56	1.772 50
n_e	0.546 07	1.776 21
n_F	0.486 13	1.783 37
$n_{F'}$	0.479 99	1.784 27
$n_{He\text{-}Cd}$	0.441 57	1.790 83
n_g	0.435 835	1.791 97
n_h	0.404 656	1.799 17
n_i	0.365 015	1.811 58

Constants of Dispersion Formula	
A_1	1.392 805 86E+00
A_2	6.795 770 94E-01
A_3	1.387 020 69E+00
B_1	6.084 751 18E-03
B_2	2.339 253 51E-02
B_3	9.583 540 94E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	51.2
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	121.9	
Rigidity Modulus G (GPa)	47.2	
Poisson's Ratio σ	0.291	
Knoop Hardness Hk[Class]	700	7
Abrasion Aa	61	

Partial Dispersions	
$n_C - n_t$	0.012 391
$n_C - n_{A'}$	0.005 314
$n_d - n_C$	0.004 701
$n_e - n_C$	0.008 410
$n_g - n_d$	0.019 473
$n_g - n_F$	0.008 598
$n_h - n_g$	0.007 202
$n_i - n_g$	0.019 610
$n_{C'} - n_t$	0.013 137
$n_e - n_{C'}$	0.007 664
$n_{F'} - n_e$	0.008 063
$n_i - n_{F'}$	0.027 311

Relative Partial Dispersions	
$\theta_{C,t}$	0.795 5
$\theta_{C,A'}$	0.341 2
$\theta_{d,C}$	0.301 8
$\theta_{e,C}$	0.539 9
$\theta_{g,d}$	1.250 2
$\theta_{g,F}$	0.552 0
$\theta_{h,g}$	0.462 4
$\theta_{i,g}$	1.259 0
$\theta'_{C',t}$	0.835 3
$\theta'_{e,C'}$	0.487 3
$\theta'_{F',e}$	0.512 7
$\theta'_{i,F'}$	1.736 6

Anomalous dispersion	
$\Delta\theta_{C,t}$	0.016 1
$\Delta\theta_{C,A'}$	0.005 2
$\Delta\theta_{g,d}$	-0.011 5
$\Delta\theta_{g,F}$	-0.009 2
$\Delta\theta_{i,g}$	-0.050 7

Coloring			
λ_{80}	370	λ_5	305
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	349	$\lambda_{0.05}$	308

CCI		
B	G	R
0.00	0.44	0.42

Internal Transmittance	
λ (nm)	τ_i (10 mm)
280	
290	
300	
310	0.10
320	0.33
330	0.55
340	0.71
350	0.81
360	0.88
370	0.930
380	0.956
390	0.971
400	0.979
420	0.987
440	0.991
460	0.994
480	0.996
500	0.997
550	0.999
600	0.998
650	0.998
700	0.999
800	0.998
900	0.998
1 000	0.998
1 200	0.997
1 400	0.993
1 600	0.993
1 800	0.983
2 000	0.958
2 200	0.88
2 400	0.64

Thermal Properties		
Strain Point StP (°C)		641
Annealing Point AP (°C)		660
Transformation Temperature Tg (°C)		686
Yield Point At (°C)		706
Softening Point SP (°C)		726
Expansion Coefficients	(-30 ℃ ~ 70 ℃)	61
α_l (10^{-7} K^{-1})	(100 °C ~ 300 °C)	74
Thermal Conductivity λ (W/(m·K))		0.845

Linear coefficient of thermal expansion	
Temperature range (°C)	α_l (10^{-7} K^{-1})
-100 ~ -90	49
-90 ~ -80	50
-80 ~ -70	51
-70 ~ -60	52
-60 ~ -50	53
-50 ~ -40	54
-40 ~ -30	55
-30 ~ -20	56
-20 ~ -10	57
-10 ~ 0	58
0 ~ 10	59
10 ~ 20	60
20 ~ 30	61
30 ~ 40	62
40 ~ 50	63
50 ~ 60	64
60 ~ 70	65
70 ~ 80	66
80 ~ 90	66
90 ~ 100	67
100 ~ 110	68
110 ~ 120	69
120 ~ 130	70
130 ~ 140	70
140 ~ 150	71
150 ~ 160	72
160 ~ 170	72
170 ~ 180	73
180 ~ 190	74
190 ~ 200	74
200 ~ 210	75
210 ~ 220	76
220 ~ 230	76
230 ~ 240	77
240 ~ 250	77
250 ~ 260	78
260 ~ 270	79
270 ~ 280	79
280 ~ 290	80
290 ~ 300	80

Other Properties	
Photoelastic Constant β nm/(cm·105Pa)	1.43
Specific Gravity *d*	4.23
Remarks	

Temperature Coefficients of Refractive Index

Range of Temperature (°C)	$\Delta n_{rel}/\Delta T$ (10^{-6} K^{-1})											
	1550	t	r	C	C'	d	e	F	F'	g	h	i
-80 ~ -60	2.6	2.7	3.0	3.1	3.1	3.3	3.6	3.9	3.9	4.3	4.8	5.5
-60 ~ -40	2.4	2.6	2.9	3.0	3.1	3.3	3.5	3.8	3.9	4.3	4.8	5.5
-40 ~ -20	2.4	2.7	3.0	3.1	3.1	3.3	3.5	3.9	3.9	4.4	4.8	5.6
-20 ~ 0	2.5	2.7	3.0	3.2	3.2	3.5	3.7	4.0	4.1	4.5	5.0	5.9
0 ~ 20	2.6	2.8	3.3	3.4	3.4	3.6	3.8	4.2	4.2	4.7	5.1	6.1
20 ~ 40	2.8	2.9	3.3	3.5	3.5	3.7	4.0	4.4	4.4	4.9	5.4	6.3
40 ~ 60	2.9	3.1	3.5	3.7	3.7	4.0	4.2	4.6	4.6	5.1	5.6	6.5
60 ~ 80	3.1	3.3	3.7	3.8	3.9	4.1	4.3	4.7	4.8	5.3	5.9	6.8
80 ~ 100	3.1	3.4	3.9	4.0	4.1	4.3	4.5	4.9	5.0	5.5	6.0	7.0
100 ~ 120	3.2	3.5	4.0	4.2	4.2	4.4	4.7	5.1	5.2	5.7	6.3	7.3
120 ~ 140	3.3	3.7	4.1	4.3	4.3	4.5	4.8	5.3	5.3	5.9	6.4	7.5
140 ~ 160	3.5	3.7	4.2	4.4	4.4	4.6	4.9	5.4	5.4	6.0	6.6	7.6
160 ~ 180	3.5	3.8	4.2	4.4	4.4	4.7	4.9	5.4	5.5	6.1	6.7	7.9

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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.