S-BAH28

Code(d) **723380**
Code(e) **728377**

Refractive Index n_d	**1.723 42** 1.723 420	Abbe Number ν_d	**37.95**	Dispersion $n_F - n_C$	**0.019 060**
Refractive Index n_e	1.727 935	Abbe Number ν_e	37.68	Dispersion $n_{F'} - n_{C'}$	0.019 320

Refractive Indices		
λ (μm)		
n_{2325}	2.325 42	1.681 98
n_{1970}	1.970 09	1.688 08
n_{1530}	1.529 58	1.694 90
n_{1129}	1.128 64	1.701 54
n_t	1.013 98	1.703 96
n_s	0.852 11	1.708 44
$n_{A'}$	0.768 19	1.711 67
n_r	0.706 52	1.714 71
n_C	0.656 27	1.717 82
$n_{C'}$	0.643 85	1.718 70
$n_{He\text{-}Ne}$	0.632 8	1.719 52
n_D	0.589 29	1.723 25
n_d	0.587 56	1.723 42
n_e	0.546 07	1.727 94
n_F	0.486 13	1.736 88
$n_{F'}$	0.479 99	1.738 02
$n_{He\text{-}Cd}$	0.441 57	1.746 49
n_g	0.435 835	1.748 00
n_h	0.404 656	1.757 69
n_i	0.365 015	

Constants of Dispersion Formula	
A_1	1.694 934 84E+00
A_2	1.928 902 98E-01
A_3	1.563 859 48E+00
B_1	1.027 231 90E-02
B_2	5.211 876 40E-02
B_3	1.378 180 35E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	2
Weathering Resistance(Surface) Group W(S)	1～2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Mechanical Properties		
Young's Modulus E (GPa)	91.1	
Rigidity Modulus G (GPa)	37.5	
Poisson's Ratio σ	0.213	
Knoop Hardness Hk[Class]	600	6
Abrasion Aa	131	

Partial Dispersions	
$n_C - n_t$	0.013 857
$n_C - n_{A'}$	0.006 146
$n_d - n_C$	0.005 604
$n_e - n_C$	0.010 119
$n_g - n_d$	0.024 580
$n_g - n_F$	0.011 124
$n_h - n_g$	0.009 689
$n_i - n_g$	
$n_{C'} - n_t$	0.014 736
$n_e - n_{C'}$	0.009 240
$n_{F'} - n_e$	0.010 080
$n_i - n_{F'}$	

Relative Partial Dispersions	
$\theta_{C,t}$	0.727 0
$\theta_{C,A'}$	0.322 5
$\theta_{d,C}$	0.294 0
$\theta_{e,C}$	0.530 9
$\theta_{g,d}$	1.289 6
$\theta_{g,F}$	0.583 6
$\theta_{h,g}$	0.508 3
$\theta_{i,g}$	
$\theta'_{C,t}$	0.762 7
$\theta'_{e,C'}$	0.478 3
$\theta'_{F,e}$	0.521 7
$\theta'_{i,F'}$	

Anomalous dispersion	
$\Delta\theta_{C,t}$	0.002 3
$\Delta\theta_{C,A'}$	0.000 6
$\Delta\theta_{g,d}$	0.003 7
$\Delta\theta_{g,F}$	0.003 5
$\Delta\theta_{i,g}$	

Coloring			
λ_{80}	415	λ_5	355
λ_{70}			

Internal transmission			
$\lambda_{0.80}$	395	$\lambda_{0.05}$	360

CCI		
B	G	R
0.00	2.78	2.88

Internal Transmittance	
λ (nm)	τ_i (10 mm)
280	
290	
300	
310	
320	
330	
340	
350	
360	0.06
370	0.32
380	0.58
390	0.75
400	0.85
420	0.934
440	0.963
460	0.975
480	0.982
500	0.987
550	0.994
600	0.995
650	0.995
700	0.996
800	0.998
900	0.998
1 000	0.998
1 200	0.998
1 400	0.994
1 600	0.995
1 800	0.990
2 000	0.979
2 200	0.938
2 400	0.84

Thermal Properties		
Strain Point StP (°C)		599
Annealing Point AP (°C)		626
Transformation Temperature Tg (°C)		636
Yield Point At (°C)		691
Softening Point SP (°C)		739
Expansion Coefficients α_l (10^{-7} K^{-1})	(-30 ℃ ~ 70 ℃)	65
	(100 °C ~ 300 °C)	79
Thermal Conductivity λ (W/(m·K))		0.889

Linear coefficient of thermal expansion	
Temperature range (°C)	α_l (10^{-7} K^{-1})
-100 ～ -90	51
-90 ～ -80	53
-80 ～ -70	54
-70 ～ -60	55
-60 ～ -50	56
-50 ～ -40	57
-40 ～ -30	59
-30 ～ -20	60
-20 ～ -10	61
-10 ～ 0	62
0 ～ 10	63
10 ～ 20	64
20 ～ 30	65
30 ～ 40	66
40 ～ 50	67
50 ～ 60	68
60 ～ 70	69
70 ～ 80	70
80 ～ 90	71
90 ～ 100	71
100 ～ 110	72
110 ～ 120	73
120 ～ 130	74
130 ～ 140	75
140 ～ 150	75
150 ～ 160	76
160 ～ 170	77
170 ～ 180	78
180 ～ 190	78
190 ～ 200	79
200 ～ 210	80
210 ～ 220	80
220 ～ 230	81
230 ～ 240	81
240 ～ 250	82
250 ～ 260	82
260 ～ 270	83
270 ～ 280	83
280 ～ 290	84
290 ～ 300	84

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	3.3	3.5	3.8	3.9	3.9	4.2	4.4	4.9	5.0	5.6	6.5	-
-60 ~ -40	3.2	3.3	3.8	3.9	4.0	4.2	4.4	4.9	5.0	5.8	6.6	-
-40 ~ -20	3.2	3.4	3.8	3.9	3.9	4.2	4.5	5.0	5.1	5.9	6.8	-
-20 ~ 0	3.2	3.4	3.9	4.0	4.1	4.3	4.6	5.2	5.2	6.1	7.1	-
0 ~ 20	3.3	3.5	4.0	4.1	4.2	4.4	4.7	5.3	5.4	6.3	7.3	-
20 ~ 40	3.4	3.7	4.1	4.3	4.3	4.6	4.9	5.5	5.6	6.5	7.7	-
40 ~ 60	3.5	3.8	4.3	4.4	4.5	4.8	5.1	5.8	5.8	6.9	8.0	-
60 ~ 80	3.6	3.9	4.5	4.6	4.7	5.0	5.3	6.0	6.1	7.1	8.2	-
80 ~ 100	3.7	4.0	4.5	4.7	4.7	5.2	5.5	6.2	6.3	7.4	8.6	-
100 ~ 120	3.8	4.1	4.6	4.8	4.9	5.2	5.7	6.4	6.5	7.6	8.9	-
120 ~ 140	3.8	4.1	4.7	4.9	5.0	5.3	5.7	6.6	6.7	7.8	9.1	-
140 ~ 160	3.9	4.2	4.9	5.1	5.1	5.5	5.9	6.7	6.8	8.0	9.3	-
160 ~ 180	3.9	4.3	4.9	5.1	5.2	5.5	5.9	6.8	6.9	8.1	9.5	-

Other Properties	
Photoelastic Constant β nm/(cm·105Pa)	2.31
Specific Gravity d	3.67
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.