

S-LAL7Q

Code(d) **652585**

Code(e) **654584**

Refractive Index n_d	1.65160 1.651600	Abbe Number ν_d	58.54	Dispersion n_F-n_C	0.011130
Refractive Index n_e	1.654255	Abbe Number ν_e	58.34	Dispersion $n_F-n_{C'}$	0.011215

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.61523
n_{1970}	1.97009	1.62265
n_{1530}	1.52958	1.63034
n_{1129}	1.12864	1.63671
n_t	1.01398	1.63870
n_s	0.85211	1.64204
$n_{A'}$	0.76819	1.64425
n_r	0.70652	1.64624
n_C	0.65627	1.64819
$n_{C'}$	0.64385	1.64874
$n_{\text{He-Ne}}$	0.6328	1.64924
n_D	0.58929	1.65150
n_d	0.58756	1.65160
n_e	0.54607	1.65426
n_F	0.48613	1.65932
$n_{F'}$	0.47999	1.65995
$n_{\text{He-Cd}}$	0.44157	1.66453
n_g	0.435835	1.66532
n_h	0.404656	1.67029
n_i	0.365015	1.67873

Constants of Dispersion Formula	
A_1	9.05277143E-01
A_2	7.77955684E-01
A_3	1.18137286E+00
B_1	1.55606507E-02
B_2	2.84718626E-03
B_3	8.80737900E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	2
Acid Resistance(Powder) Group RA(P)	4
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	52.0
Phosphate Resistance PR	4.0

Mechanical Properties	
Young's Modulus E (10^9N/m^2)	1108
Rigidity Modulus G (10^9N/m^2)	433
Poisson's Ratio σ	0.280
Knoop Hardness Hk[Class]	680 7
Abrasion Aa	75
Photoelastic Constant β nm/(cm \cdot 10 5 Pa)	1.98

Partial Dispersions	
n_C-n_t	0.009488
$n_C-n_{A'}$	0.003943
n_d-n_C	0.003408
n_e-n_C	0.006063
n_g-n_d	0.013721
n_g-n_F	0.005999
n_h-n_g	0.004966
n_i-n_g	0.013410
n_C-n_t	0.010033
$n_e-n_{C'}$	0.005518
n_F-n_e	0.005697
$n_i-n_{F'}$	0.018779

Relative Partial Dispersions	
$\theta_{C,t}$	0.8525
$\theta_{C,A'}$	0.3543
$\theta_{d,C}$	0.3062
$\theta_{e,C}$	0.5447
$\theta_{g,d}$	1.2328
$\theta_{g,F}$	0.5390
$\theta_{h,g}$	0.4462
$\theta_{i,g}$	1.2049
$\theta'_{C,t}$	0.8946
$\theta'_{e,C'}$	0.4920
$\theta'_{F',e}$	0.5080
$\theta'_{i,F'}$	1.6745

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0312
$\Delta\theta_{C,A'}$	0.0075
$\Delta\theta_{g,d}$	-0.0103
$\Delta\theta_{g,F}$	-0.0078
$\Delta\theta_{i,g}$	-0.0299

Thermal Properties	
Strain Point StP ($^{\circ}\text{C}$)	580
Annealing Point AP ($^{\circ}\text{C}$)	601
Transformation Temperature Tg ($^{\circ}\text{C}$)	620
Yield Point At ($^{\circ}\text{C}$)	646
Softening Point SP ($^{\circ}\text{C}$)	683
Expansion Coefficients (-30~+70 $^{\circ}\text{C}$)	55
α ($10^{-7}/^{\circ}\text{C}$) (+100~+300 $^{\circ}\text{C}$)	70
Thermal Conductivity λ W/(m \cdot K)	0.989

Coloring		
λ_{80}	365	λ_5
λ_{70}		

Internal transmission			
$\lambda_{0.80}$	351	$\lambda_{0.05}$	294

CCI		
B	G	R
0.00	0.32	0.29

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	0.01
290	0.03
300	0.08
310	0.19
320	0.34
330	0.51
340	0.67
350	0.79
360	0.88
370	0.930
380	0.960
390	0.974
400	0.983
420	0.990
440	0.993
460	0.995
480	0.997
500	0.998
550	0.998
600	0.997
650	0.997
700	0.998
800	0.998
900	0.998
1000	0.998
1200	0.998
1400	0.984
1600	0.989
1800	0.977
2000	0.948
2200	0.83
2400	0.59

Temperature Coefficients of Refractive Index							
Range of Temperature ($^{\circ}\text{C}$)	$\Delta n/\Delta T$ relative ($10^{-6}/^{\circ}\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.8	4.2	4.2	4.3	4.4	4.8	5.0
-20~ 0	3.8	4.2	4.2	4.3	4.5	4.8	5.1
0~20	3.8	4.2	4.2	4.4	4.5	4.8	5.2
20~40	3.8	4.2	4.3	4.4	4.5	4.9	5.2
40~60	3.9	4.3	4.4	4.5	4.6	5.0	5.3
60~80	4.1	4.5	4.5	4.7	4.8	5.2	5.6

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.24
Remarks	

OHARA 18-08

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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.