

# S-LAH65V

Code(d) **804466**

Code(e) **808463**

Refractive Index $n_d$	<b>1.80400</b>	Abbe Number $\nu_d$	<b>46.58</b>	Dispersion $n_F-n_C$	<b>0.017259</b>
	1.804000				
Refractive Index $n_e$	1.808107	Abbe Number $\nu_e$	46.34	Dispersion $n_F-n_{C'}$	0.017440

Refractive Indices		
$\lambda(\mu\text{m})$		
$n_{2325}$	2.32542	1.75986
$n_{1970}$	1.97009	1.76741
$n_{1530}$	1.52958	1.77552
$n_{1129}$	1.12864	1.78286
$n_t$	1.01398	1.78538
$n_s$	0.85211	1.78987
$n_{A'}$	0.76819	1.79300
$n_f$	0.70652	1.79590
$n_C$	0.65627	1.79882
$n_{C'}$	0.64385	1.79964
$n_{\text{He-Ne}}$	0.6328	1.80041
$n_D$	0.58929	1.80385
$n_d$	0.58756	1.80400
$n_e$	0.54607	1.80811
$n_F$	0.48613	1.81608
$n_{F'}$	0.47999	1.81708
$n_{\text{He-Cd}}$	0.44157	1.82441
$n_g$	0.435835	1.82569
$n_h$	0.404656	1.83380
$n_i$	0.365015	1.84786

Constants of Dispersion Formula	
$A_1$	1.81419034E+00
$A_2$	3.61376301E-01
$A_3$	1.32729484E+00
$B_1$	8.74935029E-03
$B_2$	3.18352836E-02
$B_3$	9.13406898E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	3
Acid Resistance(Surface) Group SR	4.1
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E (GPa)	122.0
Rigidity Modulus G (GPa)	47.0
Poisson's Ratio $\sigma$	0.298
Knoop Hardness Hk(Class)	730 * 7
Abrasion Aa	57

Partial Dispersions	
$n_C-n_t$	0.013439
$n_C-n_{A'}$	0.005818
$n_d-n_C$	0.005183
$n_e-n_C$	0.009290
$n_g-n_d$	0.021694
$n_g-n_F$	0.009618
$n_h-n_g$	0.008101
$n_i-n_g$	0.022167
$n_C-n_t$	0.014259
$n_e-n_{C'}$	0.008470
$n_{F'}-n_e$	0.008970
$n_i-n_{F'}$	0.030784

Relative Partial Dispersions	
$\theta_{C,t}$	0.7787
$\theta_{C,A'}$	0.3371
$\theta_{d,C}$	0.3003
$\theta_{e,C}$	0.5383
$\theta_{g,d}$	1.2570
$\theta_{g,F}$	0.5573
$\theta_{h,g}$	0.4694
$\theta_{i,g}$	1.2844
$\theta'_{C,t}$	0.8176
$\theta'_{e,C}$	0.4857
$\theta'_{F',e}$	0.5143
$\theta'_{i,F'}$	1.7651

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta \theta_{C,t}$	0.0135
$\Delta \theta_{C,A'}$	0.0048
$\Delta \theta_{g,d}$	-0.0110
$\Delta \theta_{g,F}$	-0.0088
$\Delta \theta_{i,g}$	-0.0506

Thermal Properties	
Strain Point StP (°C)	639
Annealing Point AP (°C)	664
Transformation Temperature Tg (°C)	691
Yield Point At (°C)	711
Softening Point SP (°C)	740
Expansion Coefficients (-30~+70°C)	60
$\alpha$ (10 <sup>-7</sup> K <sup>-1</sup> ) (+100~+300°C)	74
Thermal Conductivity $\lambda$ W/(m·K)	0.841

Coloring			
$\lambda_{80}$	385	$\lambda_5$	315
$\lambda_{70}$			

Internal transmission			
$\lambda_{0.80}$	355	$\lambda_{0.05}$	319

CCI		
B	G	R
0.00	0.65	0.67

Internal Transmittance	
$\lambda(\text{nm})$	$\tau$ 10mm
280	
290	
300	
310	
320	0.11
330	0.37
340	0.60
350	0.75
360	0.85
370	0.906
380	0.939
390	0.959
400	0.970
420	0.981
440	0.986
460	0.990
480	0.993
500	0.996
550	0.998
600	0.998
650	0.998
700	0.999
800	0.999
900	0.999
1000	0.999
1200	0.999
1400	0.997
1600	0.996
1800	0.989
2000	0.967
2200	0.910
2400	0.68

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n/\Delta T$ relative (10 <sup>-6</sup> K <sup>-1</sup> )						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.6	4.1	4.2	4.4	4.6	5.2	5.7
-20~ 0	3.7	4.3	4.4	4.6	4.8	5.4	6.0
0~20	3.8	4.4	4.5	4.7	4.9	5.5	6.1
20~40	3.8	4.5	4.5	4.7	5.0	5.6	6.2
40~60	3.8	4.5	4.6	4.8	5.1	5.7	6.4
60~80	3.9	4.7	4.7	5.0	5.3	5.9	6.6

Other Properties	
Photoelastic Constant $\beta$ nm/(cm·10 <sup>9</sup> Pa)	1.44
Specific Gravity d	4.72
Remarks	

OHARA 23-05

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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.