

# S-LAH65VS

Code(d) **804465**

Code(e) **808463**

Refractive Index $n_d$	<b>1.80400</b>	Abbe Number $\nu_d$	<b>46.53</b>	Dispersion $n_F-n_C$	<b>0.017281</b>
	1.804000				
Refractive Index $n_e$	1.808112	Abbe Number $\nu_e$	46.28	Dispersion $n_F-n_C'$	0.017463

Refractive Indices		
$\lambda(\mu\text{m})$		
$n_{2325}$	2.32542	1.76127
$n_{1970}$	1.97009	1.76833
$n_{1530}$	1.52958	1.77597
$n_{1129}$	1.12864	1.78303
$n_t$	1.01398	1.78548
$n_s$	0.85211	1.78991
$n_{A'}$	0.76819	1.79302
$n_f$	0.70652	1.79590
$n_C$	0.65627	1.79882
$n_{C'}$	0.64385	1.79964
$n_{\text{He-Ne}}$	0.6328	1.80040
$n_D$	0.58929	1.80385
$n_d$	0.58756	1.80400
$n_e$	0.54607	1.80811
$n_F$	0.48613	1.81610
$n_{F'}$	0.47999	1.81710
$n_{\text{He-Cd}}$	0.44157	1.82445
$n_g$	0.435835	1.82573
$n_h$	0.404656	1.83385
$n_i$	0.365015	1.84792

Constants of Dispersion Formula	
$A_1$	1.76068422E+00
$A_2$	4.14128906E-01
$A_3$	1.33415439E+00
$B_1$	8.53607198E-03
$B_2$	3.01826383E-02
$B_3$	9.80942100E+01

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	3
Weathering Resistance(Surface) Group W(S)	2
Acid Resistance(Surface) Group SR	4.0
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E (GPa)	122.3
Rigidity Modulus G (GPa)	47.1
Poisson's Ratio $\sigma$	0.300
Knoop Hardness Hk(Class)	730   7
Abrasion Aa	61

Partial Dispersions	
$n_C-n_t$	0.013334
$n_C-n_{A'}$	0.005801
$n_d-n_C$	0.005184
$n_e-n_C$	0.009296
$n_g-n_d$	0.021734
$n_g-n_F$	0.009637
$n_h-n_g$	0.008114
$n_i-n_g$	0.022188
$n_C-n_t$	0.014154
$n_e-n_{C'}$	0.008476
$n_{F'}-n_e$	0.008987
$n_i-n_{F'}$	0.030823

Relative Partial Dispersions	
$\theta_{C,t}$	0.7716
$\theta_{C,A'}$	0.3357
$\theta_{d,C}$	0.3000
$\theta_{e,C}$	0.5379
$\theta_{g,d}$	1.2577
$\theta_{g,F}$	0.5577
$\theta_{h,g}$	0.4695
$\theta_{i,g}$	1.2840
$\theta'_{C,t}$	0.8105
$\theta'_{e,C}$	0.4854
$\theta'_{F,e}$	0.5146
$\theta'_{i,F'}$	1.7650

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta \theta_{C,t}$	0.0066
$\Delta \theta_{C,A'}$	0.0034
$\Delta \theta_{g,d}$	-0.0104
$\Delta \theta_{g,F}$	-0.0085
$\Delta \theta_{i,g}$	-0.0514

Thermal Properties	
Strain Point StP (°C)	648
Annealing Point AP (°C)	677
Transformation Temperature Tg (°C)	691
Yield Point At (°C)	720
Softening Point SP (°C)	745
Expansion Coefficients (-30~+70°C)	61
$\alpha$ ( $10^{-7} \text{K}^{-1}$ ) (+100~+300°C)	75
Thermal Conductivity $\lambda$ W/(m·K)	0.856

Coloring			
$\lambda_{80}$	380	$\lambda_5$	310
$\lambda_{70}$			

Internal transmission			
$\lambda_{0.80}$	347	$\lambda_{0.05}$	310

CCI		
B	G	R
0.00	0.40	0.42

Internal Transmittance	
$\lambda(\text{nm})$	$\tau$ 10mm
280	
290	
300	
310	0.05
320	0.25
330	0.53
340	0.72
350	0.83
360	0.89
370	0.934
380	0.957
390	0.971
400	0.979
420	0.987
440	0.991
460	0.993
480	0.996
500	0.997
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	0.998
1600	0.996
1800	0.989
2000	0.968
2200	0.916
2400	0.72

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	$\Delta n/\Delta T$ relative ( $10^{-6}\text{K}^{-1}$ )						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.6	4.2	4.3	4.4	4.7	5.2	5.8
-20~ 0	3.5	4.2	4.2	4.4	4.7	5.3	5.9
0~20	3.5	4.2	4.2	4.4	4.7	5.3	5.9
20~40	3.5	4.2	4.2	4.4	4.7	5.3	6.0
40~60	3.5	4.3	4.3	4.5	4.8	5.5	6.1
60~80	3.7	4.4	4.5	4.7	5.0	5.7	6.4

Other Properties	
Photoelastic Constant $\beta$ nm/(cm·10 <sup>5</sup> Pa)	1.27
Specific Gravity d	4.46
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.