

S-LAH58

Code(d) **883408**

Code(e) **888405**

Refractive Index n_d	1.88300 1.882997	Abbe Number ν_d	40.76	Dispersion n_F-n_C	0.021661
Refractive Index n_e	1.888146	Abbe Number ν_e	40.52	Dispersion n_F-n_C'	0.021919

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.83590
n_{1970}	1.97009	1.84264
n_{1530}	1.52958	1.85023
n_{1129}	1.12864	1.85776
n_t	1.01398	1.86054
n_s	0.85211	1.86572
$n_{A'}$	0.76819	1.86946
n_r	0.70652	1.87298
n_C	0.65627	1.87656
$n_{C'}$	0.64385	1.87757
$n_{\text{He-Ne}}$	0.6328	1.87852
n_D	0.58929	1.88281
n_d	0.58756	1.88300
n_e	0.54607	1.88815
n_F	0.48613	1.89822
$n_{F'}$	0.47999	1.89949
$n_{\text{He-Cd}}$	0.44157	1.90885
n_g	0.435835	1.91050
n_h	0.404656	1.92092
n_i	0.365015	1.93917

Constants of Dispersion Formula	
A_1	1.78764964E+00
A_2	6.52635600E-01
A_3	1.79914564E+00
B_1	8.47378536E-03
B_2	3.13126408E-02
B_3	1.32788001E+02

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	1
Weathering Resistance(Surface) Group W(S)	1~2
Acid Resistance(Surface) Group SR	2.2
Phosphate Resistance PR	1.0

Mechanical Properties	
Young's Modulus E (10^9N/m^2)	1268
Rigidity Modulus G (10^8N/m^2)	487
Poisson's Ratio σ	0.301
Knoop Hardness Hk[Class]	710 7
Abrasion Aa	61
Photoelastic Constant β (nm/cm/ 10^9Pa)	1.30

Partial Dispersions	
n_C-n_t	0.016022
$n_C-n_{A'}$	0.007103
n_d-n_C	0.006437
n_e-n_C	0.011586
n_g-n_d	0.027500
n_g-n_F	0.012276
n_h-n_g	0.010422
n_i-n_g	0.028677
n_C-n_t	0.017035
$n_e-n_{C'}$	0.010573
n_F-n_e	0.011346
$n_i-n_{F'}$	0.039682

Relative Partial Dispersions	
$\theta_{C,t}$	0.7397
$\theta_{C,A'}$	0.3279
$\theta_{d,C}$	0.2972
$\theta_{e,C}$	0.5349
$\theta_{g,d}$	1.2696
$\theta_{g,F}$	0.5667
$\theta_{h,g}$	0.4811
$\theta_{i,g}$	1.3239
$\theta'_{C,t}$	0.7772
$\theta'_{e,C'}$	0.4824
$\theta'_{F,e}$	0.5176
$\theta'_{i,F'}$	1.8104

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.0018
$\Delta\theta_{C,A'}$	0.0026
$\Delta\theta_{g,d}$	-0.0105
$\Delta\theta_{g,F}$	-0.0088
$\Delta\theta_{i,g}$	-0.0598

Thermal Properties	
Strain Point StP ($^{\circ}\text{C}$)	666
Annealing Point AP ($^{\circ}\text{C}$)	714
Transformation Temperature Tg ($^{\circ}\text{C}$)	738
Yield Point At ($^{\circ}\text{C}$)	765
Softening Point SP ($^{\circ}\text{C}$)	803
Expansion Coefficients (-30~+70 $^{\circ}\text{C}$)	66
α ($10^{-7}/^{\circ}\text{C}$) (+100~+300 $^{\circ}\text{C}$)	78
Thermal Conductivity k (W/m·K)	0.827

Coloring			
λ_{80}		λ_5	315
λ_{70}	375		

Internal transmission			
$\lambda_{0.80}$	374	$\lambda_{0.05}$	320

CCI		
B	G	R
0.00	1.69	1.75

Internal Transmittance	
$\lambda(\text{nm})$	τ 10mm
280	
290	
300	
310	
320	0.05
330	0.17
340	0.34
350	0.51
360	0.66
370	0.77
380	0.84
390	0.89
400	0.924
420	0.951
440	0.965
460	0.974
480	0.982
500	0.988
550	0.995
600	0.995
650	0.995
700	0.995
800	0.995
900	0.995
1000	0.995
1200	0.996
1400	0.996
1600	0.996
1800	0.992
2000	0.980
2200	0.956
2400	0.84

Temperature Coefficients of Refractive Index							
Range of Temperature ($^{\circ}\text{C}$)	dn/dT relative ($10^{-6}/^{\circ}\text{C}$)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	3.3	4.1	4.1	4.4	4.7	5.4	6.2
-20~ 0	3.4	4.2	4.3	4.6	4.9	5.6	6.4
0~20	3.6	4.3	4.4	4.7	5.0	5.8	6.6
20~40	3.7	4.5	4.5	4.9	5.2	6.0	6.8
40~60	3.9	4.6	4.6	5.0	5.3	6.2	7.1
60~80	4.0	4.7	4.8	5.2	5.5	6.4	7.3

Other Properties	
Bubble Quality Group B	
Specific Gravity d	5.52
Remarks	

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