S-LAM 7

Code(d) **750353**
Code(e) **755350**

Refractive Index	n_d	**1,74950** 1,749497	Abbe Number	ν_d	**35,28**	Dispersion	n_{F}-n_{C} **0,021243**
Refractive Index	n_e	1,754527	Abbe Number	ν_e	35,02	Dispersion	$n_{F'}$-$n_{C'}$ 0,021544

Refractive Indices		
λ(μm)		
n_{2325}	2.32542	1,70583
n_{1970}	1.97009	1,71184
n_{1530}	1.52958	1,71866
n_{1129}	1.12864	1,72553
n_t	1.01398	1,72811
n_s	0.85211	1,73296
$n_{A'}$	0.76819	1,73649
n_r	0.70652	1,73984
n_C	0.65627	1,74328
$n_{C'}$	0.64385	1,74425
n_{He-Ne}	0.6328	1,74517
n_D	0.58929	1,74931
n_d	0.58756	1,74950
n_e	0.54607	1,75453
n_F	0.48613	1,76452
$n_{F'}$	0.47999	1,76579
n_{He-Cd}	0.44157	1,77530
n_g	0.435835	1,77699
n_h	0.404656	1,78787
n_i	0.365015	

Partial Dispersions	
n_C-n_t	0,015167
n_C-$n_{A'}$	0,006783
n_d-n_C	0,006222
n_e-n_C	0,011252
n_g-n_d	0,027489
n_g-n_F	0,012468
n_h-n_g	0,010884
n_i-n_g	
$n_{C'}$-n_t	0,016141
n_e-$n_{C'}$	0,010278
$n_{F'}$-n_e	0,011266
n_i-$n_{F'}$	

Coloring			
λ_{80}	420	λ_5	355
λ_{70}			

Internal Transmittance			
$\lambda_{0.80}$	396	$\lambda_{0.05}$	359

CCI		
B	G	R
0,00	2,84	2,97

Internal Transmittance	
λ(nm)	τ 10mm
280	
290	
300	
310	
320	
330	
340	
350	
360	0,08
370	0,34
380	0,59
390	0,75
400	0,84
420	0,935
440	0,965
460	0,977
480	0,984
500	0,989
550	0,996
600	0,997
650	0,998
700	0,998
800	0,999
900	0,999
1000	0,999
1200	0,999
1400	0,996
1600	0,996
1800	0,990
2000	0,982
2200	0,950
2400	0,88

Relative Partial Dispersion	
$\theta_{C,t}$	0,7140
$\theta_{C,A'}$	0,3193
$\theta_{d,C}$	0,2929
$\theta_{e,C}$	0,5297
$\theta_{g,d}$	1,2940
$\theta_{g,F}$	0,5869
$\theta_{h,g}$	0,5124
$\theta_{i,g}$	
$\theta'_{C',t}$	0,7492
$\theta'_{e,C'}$	0,4771
$\theta'_{F',e}$	0,5229
$\theta'_{i,F'}$	

Constants of Dispersion Formula	
A_1	1,71014712E+00
A_2	2,56943292E-01
A_3	1,63986271E+00
B_1	1,05161080E-02
B_2	5,02809636E-02
B_3	1,46181217E+02

Deviation of Relative Dispersions	
$\Delta\ \theta_{C,t}$	0,0018
$\Delta\ \theta_{C,A'}$	0,0007
$\Delta\ \theta_{g,d}$	0,0026
$\Delta\ \theta_{g,F}$	0,0025
$\Delta\ \theta_{i,g}$	

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

Thermal Properties		
Strain Point StP (°C)		583
Annealing Point AP (°C)		615
Transformation Temperature Tg (°C)		628
Yield Point At (°C)		673
Softening Point SP (°C)		739
Expansion Coefficients α (10^{-7}/°C)	(-30~+70°C)	67
	(+100~+300°C)	79
Thermal Conductivity k (W/m·K)		0,871

Mechanical Properties		
Young's Modulus E (10^8N/m^2)	970	
Rigidity Modulus G (10^8N/m^2)	381	
Poisson's Ratio σ	0,273	
Knoop Hardness Hk [Class]	560	6
Abrasion Aa	140	
Photoelastic Constant β (nm/cm/10^5Pa)		2,53

Temperature Coefficients of Refractive Index							
Range of Temperature (°C)	dn/dT relative (10^{-6}/°C)						
	t	C'	He-Ne	D	e	F'	g
-40~-20	4,2	5,0	5,1	5,3	5,7	6,5	7,5
-20~ 0	4,4	5,2	5,2	5,5	5,9	6,7	7,7
0~20	4,4	5,3	5,3	5,6	6,0	6,9	8,0
20~40	4,5	5,4	5,5	5,8	6,2	7,1	8,2
40~60	4,6	5,5	5,6	6,0	6,3	7,3	8,4
60~80	4,6	5,6	5,7	6,2	6,5	7,5	8,7

Other Properties	
Bubble Quality Group B	
Density d	3,81
Remarks	

© OHARA GmbH, Hofheim Germany

Date 12/2019