

BSM51Y

Code(d) **603606**

Code(e) **605604**

Refractive Index n_d	Abbe Number v_d	Dispersion n_F-n_C
1.60311 1.603109	60.6 60.65	0.00995 0.009944
Refractive Index n_e	Abbe Number v_e	Dispersion n_F-n_C
1.605481	60.40	0.010024

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.32542	1.57281
n_{1970}	1.97009	1.57865
n_{1530}	1.52958	1.58482
n_{1129}	1.12864	1.59008
n_t	1.01398	1.59177
n_s	0.85211	1.59465
$n_{A'}$	0.76819	1.59658
n_r	0.70652	1.59834
n_C	0.65627	1.60007
$n_{C'}$	0.64385	1.60056
$n_{\text{He-Ne}}$	0.6328	1.60101
n_D	0.58929	1.60302
n_d	0.58756	1.60311
n_e	0.54607	1.60548
n_F	0.48613	1.61002
$n_{F'}$	0.47999	1.61058
$n_{\text{He-Cd}}$	0.44157	1.61468
n_g	0.435835	1.61539
n_h	0.404656	1.61985
n_i	0.365015	1.62743
n_{334}	0.334148	1.63557
n_{326}	0.326106	1.63815

Partial Dispersions	
n_C-n_t	0.008303
$n_C-n_{A'}$	0.003489
n_d-n_C	0.003035
n_e-n_C	0.005407
n_g-n_d	0.012286
n_g-n_F	0.005377
n_h-n_g	0.004454
n_i-n_g	0.012031
n_C-n_t	0.008787
$n_e-n_{C'}$	0.004923
$n_{F'-n_e}$	0.005101
$n_{F'-n_F}$	0.016844

Relative Partial Dispersions	
$\theta_{C,t}$	0.8350
$\theta_{C,A'}$	0.3509
$\theta_{d,C}$	0.3052
$\theta_{e,C}$	0.5437
$\theta_{g,d}$	1.2355
$\theta_{g,F}$	0.5407
$\theta_{h,g}$	0.4479
$\theta_{i,g}$	1.2099
$\theta'_{C,t}$	0.8766
$\theta'_{e,C'}$	0.4911
$\theta'_{F',e}$	0.5089
$\theta'_{i,F}$	1.6804

Thermal Properties	
Strain Point StP (°C)	538
Annealing Point AP (°C)	568
Transformation Temperature Tg (°C)	585
Yield Point At (°C)	617
Softening Point SP (°C)	684
Expansion Coefficients (-30~+70°C)	63
α (10 ⁻⁷ /°C) (+100~+300°C)	77
Thermal Conductivity k (W/m·K)	0.961

Coloring			
λ_{80}	32	λ_5	29

Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$	$\tau_{25\text{mm}}$
240		
250		
260		
270		
280		
290	0.03	
300	0.33	0.06
310	0.69	0.40
320	0.88	0.72
330	0.950	0.87
340	0.977	0.944
350	0.988	0.970
360	0.993	0.983
365	0.995	0.987
370	0.996	0.990
380	0.997	0.993
390	0.998	0.995
400	0.998	0.996
420	0.998	0.996
440	0.998	0.996
460	0.999	0.997
480	0.999	0.998
500	0.999	0.998
550	0.999	0.998
600	0.999	0.998
650	0.999	0.998
700	0.999	0.998
800	0.999	0.998
900	0.999	0.997
1000	0.997	0.993
1200	0.997	0.993
1400	0.985	0.963
1600	0.992	0.980
1800	0.983	0.959
2000	0.967	0.920
2200	0.89	0.74
2400	0.78	0.54

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta \theta_{C,t}$	0.0037
$\Delta \theta_{C,A'}$	0.0015
$\Delta \theta_{g,d}$	-0.0033
$\Delta \theta_{g,F}$	-0.0026
$\Delta \theta_{i,g}$	-0.0073

Constants of Dispersion Formula *1	
A_1	1.22393171E+00
A_2	3.06482383E-01
A_3	8.23950901E-01
B_1	6.49521083E-03
B_2	2.08194161E-02
B_3	7.95168951E+01

*1 By using these contents, refractive indices for any wavelength between 326 and 1129nm can be calculated. When calculateing refractive indices for any wavelength between 1129 and 2325nm, please refer to us.

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	51.2
Phosphate Resistance PR	2.2

Other Properties	
Bubble Quality Group B	
Specific Gravity d	3.36
Remarks	

Temperature Coefficients of Refractive Index								
Range of Temperature (°C)	dn/dt relative (10 ⁻⁶ /°C)							
	t	C'	He-Ne	D	e	F'	g	i
-40~20	2.5	2.8	2.8	2.9	3.1	3.3	3.6	4.3
-20~ 0	2.6	2.9	2.9	3.0	3.1	3.4	3.7	4.4
0~20	2.6	2.9	2.9	3.1	3.2	3.5	3.8	4.6
20~40	2.6	3.0	3.0	3.1	3.3	3.6	3.9	4.7
40~60	2.7	3.0	3.0	3.2	3.3	3.6	4.0	4.8
60~80	2.7	3.1	3.1	3.3	3.4	3.7	4.1	4.9