

<b>ZF13</b>	<b>785258</b>	$n_d = 1.78472$	$v_d = 25.76$	$n_F - n_C = 0.030468$
		$n_e = 1.79190$	$v_e = 25.55$	$n_{F'} - n_{C'} = 0.030990$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.73295
$n_{1970}$	1970.09	1.73841
$n_{1530}$	1529.58	1.74509
$n_{1129}$	1128.64	1.75271
$n_{1064}$	1064.00	1.75438
$n_t$	1013.98	1.75583
$n_s$	852.11	1.76202
$n_{A'}$	768.19	1.76671
$n_r$	706.52	1.77125
$n_C$	656.27	1.77598
$n_{C'}$	643.85	1.77735
$n_{He-Ne}$	632.80	1.77862
$n_D$	589.29	1.78446
$n_d$	587.56	1.78472
$n_e$	546.07	1.79190
$n_F$	486.13	1.80645
$n_{F'}$	479.99	1.80834
$n_g$	435.84	1.82518
$n_h$	404.66	1.84208
$n_i$	365.01	

Constants of Dispersion Formula	
$A_0$	3.05204937E+00
$A_1$	-1.04510979E-02
$A_2$	4.04326587E-02
$A_3$	2.56140604E-03
$A_4$	-1.44794376E-04
$A_5$	2.40560900E-05

Density		Solarization	
$\rho$ (g/cm <sup>3</sup> )	4.89	$\Delta\lambda$ (%)	-0.7

Relative Partial Dispersion	
$P_{d,C}$	0.2869
$P_{e,d}$	0.2357
$P_{g,F}$	0.6147
$P'_{d,c'}$	0.2378
$P'_{e,d}$	0.2317
$P'_{g,F'}$	0.5434

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0016
$\Delta P_{g,F}$	0.0139
$\Delta P_{C,t}$	-0.0036
$\Delta P_{C,s}$	-0.0040

Thermal Properties	
T <sub>g</sub> (°C)	439
T <sub>s</sub> (°C)	477
T <sub>10</sub> <sup>14.5</sup> (°C)	384
T <sub>10</sub> <sup>13</sup> (°C)	412
$\alpha_{-50/80^\circ C}$ (10 <sup>-7</sup> /K)	81
$\alpha_{100/300^\circ C}$ (10 <sup>-7</sup> /K)	94
$\lambda$ (W/(m·K))	0.54

Mechanical Properties	
HK (10 <sup>7</sup> Pa)	405
F <sub>A</sub>	254
E (GPa)	57.5
G (GPa)	22.9
$\mu$	0.253
$\sigma_b$ (MPa)	48.2
B (10 <sup>-12</sup> /Pa)	1.02

Chemical Properties (grade)	
RC (S)	1
RA (S)	1
D <sub>W</sub>	1
D <sub>A</sub>	3
R <sub>OH</sub> (S)	2
RP (S)	2

Expansion Coefficient $\alpha$ (×10 <sup>-7</sup> /K)	
°C	$\alpha$
-50/-40	76
-40/-30	78
-30/-20	79
-20/-10	80
-10/0	81
0/10	82
10/20	82
20/30	83
30/40	84
40/50	84
50/60	85
60/70	85
70/80	86
80/90	86
90/100	87
100/110	88
110/120	88
120/130	89
130/140	90
140/150	91
150/160	92

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.960	0.922
2200	0.972	0.945
2000	0.985	0.970
1800	0.998	0.996
1600	0.998	0.996
1400	0.998	0.996
1200	0.998	0.996
1060	0.998	0.996
1000	0.998	0.996
950	0.998	0.996
900	0.998	0.996
850	0.999	0.998
800	0.999	0.998
750	0.999	0.998
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.996	0.992
480	0.993	0.986
460	0.988	0.976
440	0.979	0.958
420	0.948	0.899
400	0.834	0.696
390	0.693	0.480
380	0.446	0.199
370	0.149	0.022
360		
350		
340		
330		
320		
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	420/370
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	395/365

Range of Temperature (°C)	Temperature Coefficients of Refractive Index									
	dn/dt relative (×10 <sup>-6</sup> / °C)									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60 ~ -40	3.4	4.3	5.1	5.2	5.3	5.9	6.7	8.0	8.1	10.1
-40 ~ -20	3.6	4.6	5.4	5.5	5.6	6.2	7.0	8.4	8.5	10.7
-20 ~ 0	3.9	4.9	5.8	5.9	6.0	6.7	7.4	8.9	9.0	11.5
0 ~ 20	4.3	5.2	6.2	6.3	6.4	7.1	7.8	9.3	9.4	12.2
20 ~ 40	4.7	5.6	6.6	6.7	6.8	7.4	8.2	9.7	9.9	12.6
40 ~ 60	5.0	5.9	7.0	7.1	7.2	7.7	8.5	10.3	10.4	13.0
60 ~ 80	5.2	6.1	7.3	7.4	7.5	8.0	8.8	10.8	10.9	13.5
80 ~ 100	5.3	6.3	7.5	7.6	7.7	8.2	9.1	11.1	11.3	14.0
100 ~ 120	5.4	6.5	7.7	7.8	7.9	8.5	9.4	11.5	11.6	14.5
120 ~ 140	5.6	6.6	7.8	7.9	8.0	8.6	9.6	11.7	11.8	14.9
140 ~ 160	5.7	6.7	7.9	8.0	8.1	8.8	9.7	11.9	12.0	15.2

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
3.80E-06	2.07E-08	-4.79E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
1.38E-06	1.21E-09	2.84E-01