

<b>ZF3</b>	<b>717295</b>	$n_d = 1.71736$	$v_d = 29.50$	$n_F - n_C = 0.024317$
		$n_e = 1.72311$	$v_e = 29.27$	$n_{F'} - n_{C'} = 0.024703$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.67350
$n_{1970}$	1970.09	1.67852
$n_{1530}$	1529.58	1.68453
$n_{1129}$	1128.64	1.69113
$n_{1064}$	1064.00	1.69254
$n_t$	1013.98	1.69376
$n_s$	852.11	1.69890
$n_{A'}$	768.19	1.70276
$n_r$	706.52	1.70647
$n_C$	656.27	1.71032
$n_{C'}$	643.85	1.71142
$n_{He-Ne}$	632.80	1.71245
$n_D$	589.29	1.71715
$n_d$	587.56	1.71736
$n_e$	546.07	1.72311
$n_F$	486.13	1.73464
$n_{F'}$	479.99	1.73612
$n_g$	435.84	1.74915
$n_h$	404.66	1.76195
$n_i$	365.01	1.78575

Relative Partial Dispersion	
$P_{d,C}$	0.2895
$P_{e,d}$	0.2365
$P_{g,F}$	0.5967
$P'_{d,c'}$	0.2405
$P'_{e,d}$	0.2328
$P'_{g,F'}$	0.5275

Chemical Properties (grade)	
RC (S)	1
RA (S)	3
$D_W$	1
$D_A$	3
$R_{OH}$ (S)	2
RP (S)	2

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.948	0.905
2200	0.962	0.929
2000	0.983	0.970
1800	0.990	0.982
1600	0.998	0.996
1400	0.998	0.996
1200	0.998	0.996

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0002
$\Delta P_{g,F}$	0.0021
$\Delta P_{C,t}$	-0.0021
$\Delta P_{C,s}$	-0.0016

Expansion Coefficient $\alpha$ ( $\times 10^{-7}/K$ )	
$^{\circ}C$	$\alpha$
-50/-40	71
-40/-30	73
-30/-20	74
-20/-10	75
-10/0	76
0/10	77
10/20	78
20/30	79
30/40	79
40/50	80
50/60	80
60/70	81
70/80	81
80/90	82
90/100	82
100/110	83
110/120	84
120/130	85
130/140	86
140/150	87
150/160	87

1060	0.998	0.996
1000	0.998	0.996
950	0.998	0.996
900	0.998	0.996
850	0.998	0.996
800	0.998	0.996
750	0.998	0.996
700	0.998	0.996
650	0.998	0.996
600	0.998	0.996
550	0.998	0.996
500	0.998	0.996
480	0.996	0.992
460	0.994	0.989
440	0.991	0.983
420	0.986	0.973
400	0.968	0.938
390	0.947	0.899
380	0.911	0.833
370	0.848	0.722
360	0.714	0.512
350	0.440	0.196
340		
330		
320		
310		
300		
290		
280		

Constants of Dispersion Formula	
$A_0$	2.84584649E+00
$A_1$	-9.46700467E-03
$A_2$	3.18063247E-02
$A_3$	1.98612859E-03
$A_4$	-1.26050821E-04
$A_5$	1.48076105E-05

Thermal Properties	
$T_g$ ( $^{\circ}C$ )	437
$T_s$ ( $^{\circ}C$ )	486
$T_{10}^{14.5}$ ( $^{\circ}C$ )	385
$T_{10}^{13}$ ( $^{\circ}C$ )	409
$\alpha_{50/80^{\circ}C}$ ( $10^{-7}/K$ )	77
$\alpha_{100/300^{\circ}C}$ ( $10^{-7}/K$ )	92
$\lambda$ (W/(m·K))	0.68

Mechanical Properties	
HK ( $10^7Pa$ )	385
$F_A$	232
E (GPa)	56.1
G (GPa)	22.7
$\mu$	0.234
$\sigma_b$ (MPa)	
B ( $10^{-12}/Pa$ )	1.81

Density		Solarization	
$\rho$ ( $g/cm^3$ )	4.46	$\Delta\lambda$ (%)	-0.7

Range of Temperature ( $^{\circ}C$ )	Temperature Coefficients of Refractive Index									
	dn/dt relative ( $\times 10^{-6} / ^{\circ}C$ )									
	t	s	C	C'	He-Ne	d	e	F	F'	g
-60~-40	4.4	5.2	5.8	5.9	6.0	6.4	6.9	8.3	8.4	9.9
-40~-20	4.5	5.3	5.9	6.0	6.1	6.6	7.0	8.6	8.7	10.2
-20~0	4.7	5.5	6.1	6.2	6.3	6.8	7.4	8.9	9.0	10.6
0~20	4.8	5.6	6.3	6.4	6.5	7.0	7.6	9.2	9.3	10.9
20~40	5.0	5.9	6.6	6.6	6.8	7.3	7.9	9.4	9.5	11.3
40~60	5.2	6.1	6.8	6.8	6.9	7.5	8.0	9.6	9.8	11.7
60~80	5.5	6.3	7.2	7.2	7.3	7.9	8.4	10.0	10.2	12.1
80~100	5.7	6.5	7.4	7.4	7.4	8.2	8.5	10.4	10.5	12.4
100~120	5.9	6.7	7.5	7.5	7.6	8.5	9.0	10.7	10.8	12.5
120~140	6.1	6.9	7.6	7.6	7.7	8.7	9.2	11.0	11.0	13.0
140~160	6.2	7.1	7.8	7.8	7.9	8.8	9.4	11.2	11.3	13.2

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	400/345
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	385/342

Constants of dn/dt		
$D_0$	$D_1$	$D_2$
5.06E-06	1.85E-08	-2.75E-11
$E_0$	$E_1$	$\lambda_{TK}$
1.31E-06	7.78E-10	2.67E-01