

# H-ZF52NGT 847238

$n_d = 1.84666$	$v_d = 23.78$	$n_F - n_C = 0.035608$
$n_e = 1.85504$	$v_e = 23.59$	$n_{F'} - n_{C'} = 0.036247$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.78524
$n_{1970}$	1970.09	1.79201
$n_{1530}$	1529.58	1.80020
$n_{1129}$	1128.64	1.80936
$n_{1064}$	1064.00	1.81133
$n_t$	1013.98	1.81304
$n_s$	852.11	1.82028
$n_{A'}$	768.19	1.82573
$n_r$	706.52	1.83101
$n_C$	656.27	1.83649
$n_{C'}$	643.85	1.83807
$n_{He-Ne}$	632.80	1.83956
$n_D$	589.29	1.84635
$n_d$	587.56	1.84666
$n_e$	546.07	1.85504
$n_F$	486.13	1.87210
$n_{F'}$	479.99	1.87431
$n_g$	435.84	1.89416
$n_h$	404.66	1.91418
$n_i$	365.01	1.95237

Relative Partial Dispersion	
$P_{d,C}$	0.2856
$P_{e,d}$	0.2353
$P_{g,F}$	0.6195
$P'_{d,c'}$	0.2370
$P'_{e,d}$	0.2312
$P'_{g,F'}$	0.5476

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

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.893	0.928
2200	0.954	0.953
2000	0.994	0.977
1800	0.999	0.985
1600	0.999	0.994
1400	0.999	0.995
1200	0.999	0.996
1060	0.999	0.998
1000	0.999	0.998
950	0.999	0.998
900	0.999	0.998
850	0.999	0.998
800	0.999	0.998
750	0.999	0.998
700	0.998	0.997
650	0.998	0.996
600	0.997	0.994
550	0.996	0.992
500	0.991	0.983
480	0.988	0.977
460	0.985	0.970
440	0.978	0.957
420	0.964	0.930
400	0.925	0.855
390	0.863	0.745
380	0.695	0.483
370	0.346	0.120
360		
350		
340		
330		
320		
310		
300		
290		
280		

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0020
$\Delta P_{g,F}$	0.0154
$\Delta P_{C,t}$	0.0032
$\Delta P_{C,s}$	-0.0022

Expansion Coefficient $\alpha$ ( $\times 10^{-7}/K$ )	
$^{\circ}C$	$\alpha$
-50/-40	75
-40/-30	78
-30/-20	79
-20/-10	81
-10/0	82
0/10	83
10/20	84
20/30	85
30/40	85
40/50	86
50/60	86
60/70	87
70/80	87
80/90	88
90/100	89
100/110	90
110/120	92
120/130	93
130/140	94
140/150	96
150/160	97

Thermal Properties	
$T_g$ ( $^{\circ}C$ )	632
$T_s$ ( $^{\circ}C$ )	662
$T_{10}^{14.5}$ ( $^{\circ}C$ )	582
$T_{10}^{13}$ ( $^{\circ}C$ )	608
$\alpha_{50/80^{\circ}C}$ ( $10^{-7}/K$ )	83
$\alpha_{100/300^{\circ}C}$ ( $10^{-7}/K$ )	101
$\lambda$ (W/(m·K))	1.04
$\beta_d$	260

Constants of Dispersion Formula	
$A_0$	3.25093122E+00
$A_1$	-1.35032313E-02
$A_2$	4.90304607E-02
$A_3$	2.49344608E-03
$A_4$	-1.81762799E-05
$A_5$	1.94686410E-05

Mechanical Properties	
HK ( $10^7$ Pa)	531
$F_A$	176
E (GPa)	96.1
G (GPa)	38.1
$\mu$	0.262
$\sigma_b$ (MPa)	56.1
B ( $10^{-12}$ /Pa)	2.54

Density		Solarization	
$\rho$ (g/cm <sup>3</sup> )	3.54	$\Delta\lambda$ (%)	-1.1

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	-1.0	-0.9	0.0	0.5	0.5	0.7	1.0	1.6	1.7	3.0
-40 ~ -20	-0.9	-0.9	0.0	0.5	0.6	0.8	1.1	1.9	2.0	3.6
-20 ~ 0	-0.7	-0.8	0.1	0.5	0.6	0.9	1.3	2.4	2.5	4.0
0 ~ 20	-0.7	-0.7	0.2	0.6	0.7	0.9	1.4	2.7	3.1	4.4
20 ~ 40	-0.7	-0.6	0.4	0.7	0.7	1.0	1.6	3.1	3.7	4.8
40 ~ 60	-0.7	-0.6	0.4	0.7	0.7	1.0	1.9	3.5	4.0	5.3
60 ~ 80	-0.7	-0.6	0.4	0.7	0.8	1.2	2.1	3.8	4.3	5.7
80 ~ 100	-0.6	-0.6	0.5	0.7	0.8	1.3	2.1	4.1	4.6	6.1
100 ~ 120	-0.6	-0.5	0.5	0.8	0.9	1.3	2.2	4.4	4.8	6.5
120 ~ 140	-0.6	-0.4	0.7	0.8	1.0	1.5	2.3	4.7	5.0	6.9
140 ~ 160	-0.7	-0.4	0.8	0.9	1.1	1.9	2.5	5.1	5.4	7.2

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	(399)/369
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	395/368

Constants of dn/dt		
$D_0$	$D_1$	$D_2$
-5.25E-06	7.18E-09	-2.89E-11
$E_0$	$E_1$	$\lambda_{TK}$
1.16E-06	2.39E-09	2.61E-01