

<b>H-ZF72GT 923189</b>	$n_d = 1.92286$	$v_d = 18.90$	$n_F - n_C = 0.048837$
	$n_e = 1.93429$	$v_e = 18.74$	$n_{F'} - n_{C'} = 0.049853$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.84193
$n_{1970}$	1970.09	1.85076
$n_{1530}$	1529.58	1.86140
$n_{1129}$	1128.64	1.87330
$n_{1064}$	1064.00	1.87587
$n_t$	1013.98	1.87811
$n_s$	852.11	1.88761
$n_{A'}$	768.19	1.89481
$n_r$	706.52	1.90181
$n_C$	656.27	1.90916
$n_{C'}$	643.85	1.91127
$n_{He-Ne}$	632.80	1.91327
$n_D$	589.29	1.92245
$n_d$	587.56	1.92286
$n_e$	546.07	1.93429
$n_F$	486.13	1.95800
$n_{F'}$	479.99	1.96112
$n_g$	435.84	1.98974
$n_h$	404.66	2.01970
$n_i$	365.01	

Constants of Dispersion Formula	
$A_0$	3.47907547E+00
$A_1$	-1.82056514E-02
$A_2$	6.44069814E-02
$A_3$	4.67488595E-03
$A_4$	-2.34014347E-04
$A_5$	6.37833754E-05

Density	
$\rho$ (g/cm <sup>3</sup> )	3.57

Solarization	
$\Delta\lambda$ (%)	-0.4

Relative Partial Dispersion	
$P_{d,C}$	0.2805
$P_{e,d}$	0.2340
$P_{g,F}$	0.6499
$P'_{d,c'}$	0.2325
$P'_{e,d}$	0.2293
$P'_{g,F'}$	0.5741

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0057
$\Delta P_{g,F}$	0.0377
$\Delta P_{C,t}$	0.0041
$\Delta P_{C,s}$	-0.0045

Thermal Properties	
Tg (°C)	656
Ts (°C)	684
T <sub>10</sub> <sup>14.5</sup> (°C)	585
T <sub>10</sub> <sup>13</sup> (°C)	634
$\alpha_{-50/80^\circ C}$ (10 <sup>-7</sup> /K)	65
$\alpha_{100/300^\circ C}$ (10 <sup>-7</sup> /K)	81
$\lambda$ (W/(m·K))	1.13

Mechanical Properties	
HK (10 <sup>7</sup> Pa)	488
F <sub>A</sub>	206
E (GPa)	100.3
G (GPa)	40.3
$\mu$	0.243
$\sigma_b$ (MPa)	55.6
B (10 <sup>-12</sup> /Pa)	3.24

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

Expansion Coefficient $\alpha$ (×10 <sup>-7</sup> /K)	
°C	$\alpha$
-50/-40	57
-40/-30	60
-30/-20	62
-20/-10	65
-10/0	66
0/10	67
10/20	69
20/30	69
30/40	70
40/50	70
50/60	70
60/70	71
70/80	71
80/90	72
90/100	72
100/110	73
110/120	74
120/130	74
130/140	75
140/150	76
150/160	77

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.983	0.966
2200	0.995	0.990
2000	0.997	0.994
1800	0.999	0.998
1600	0.999	0.998
1400	0.999	0.998
1200	0.999	0.998
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	0.999	0.998
650	0.999	0.997
600	0.998	0.997
550	0.996	0.991
500	0.988	0.977
480	0.983	0.965
460	0.974	0.949
440	0.959	0.919
420	0.921	0.848
400	0.671	0.450
390	0.305	0.093
380		
370		
360		
350		
340		
330		
320		
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	(420)/385
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	417/387

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	-0.5	0.3	0.8	0.9	1.0	1.4	2.2	4.3	4.4	6.7
-40 ~ -20	-0.3	0.3	0.9	1.0	1.1	1.6	2.5	4.5	4.6	7.0
-20 ~ 0	-0.1	0.4	1.1	1.2	1.3	1.9	2.9	4.9	5.0	8.0
0 ~ 20	-0.1	0.5	1.2	1.3	1.6	2.1	3.1	5.3	5.5	8.6
20 ~ 40	0.0	0.6	1.6	1.7	1.8	2.4	3.3	5.7	6.0	9.4
40 ~ 60	0.2	0.8	1.8	1.8	2.0	2.6	3.6	6.3	6.5	9.9
60 ~ 80	0.3	1.0	1.9	2.0	2.2	2.9	4.0	6.8	7.0	10.7
80 ~ 100	0.5	1.2	2.1	2.3	2.4	3.1	4.3	7.3	7.5	11.1
100 ~ 120	0.6	1.4	2.3	2.4	2.5	3.3	4.6	7.8	8.0	11.9
120 ~ 140	0.6	1.5	2.5	2.6	2.8	3.6	4.8	8.2	8.3	12.4
140 ~ 160	0.7	1.7	2.7	2.9	3.0	3.8	5.1	8.6	8.7	12.8

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
-3.91E-06	1.21E-08	-2.37E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
1.14E-06	1.61E-09	3.25E-01