

<b>H-ZBaF20</b>	<b>702412</b>	$n_d = 1.70154$	$v_d = 41.15$	$n_F - n_C = 0.017049$
		$n_e = 1.70559$	$v_e = 40.86$	$n_F - n_C = 0.017270$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	
$n_{1970}$	1970.09	
$n_{1530}$	1529.58	
$n_{1129}$	1128.64	1.68168
$n_{1064}$	1064.00	1.68293
$n_t$	1013.98	1.68396
$n_s$	852.11	1.68811
$n_{A'}$	768.19	1.69103
$n_f$	706.52	1.69375
$n_C$	656.27	1.69651
$n_{C'}$	643.85	1.69730
$n_{He-Ne}$	632.80	1.69806
$n_D$	589.29	1.70139
$n_d$	587.56	1.70154
$n_e$	546.07	1.70559
$n_F$	486.13	1.71356
$n_{F'}$	479.99	1.71457
$n_g$	435.84	1.72339
$n_h$	404.66	1.73179
$n_i$	365.01	1.74679

Relative Partial Dispersion	
$P_{d,C}$	0.2950
$P_{e,d}$	0.2376
$P_{g,F}$	0.5766
$P'_{d,c'}$	0.2455
$P'_{e,d}$	0.2345
$P'_{g,F'}$	0.5107

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
CR	1

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.949	0.901
2200	0.976	0.952
2000	0.991	0.982
1800	0.995	0.990
1600	0.998	0.996
1400	0.998	0.996
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	0.998	0.997
600	0.998	0.997
550	0.998	0.997
500	0.997	0.994
480	0.996	0.992
460	0.994	0.989
440	0.993	0.986
420	0.989	0.978
400	0.979	0.958
390	0.964	0.930
380	0.935	0.874
370	0.861	0.741
360	0.681	0.464
350	0.343	0.118
340		
330		
320		
310		
300		
290		
280		

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0000
$\Delta P_{g,F}$	0.0013
$\Delta P_{C,t}$	-0.0034
$\Delta P_{C,s}$	-0.0065

Expansion Coefficient $\alpha$ ( $\times 10^{-7}/K$ )	
$^{\circ}C$	$\alpha$
-50/-40	58
-40/-30	61
-30/-20	62
-20/-10	62
-10/0	66
0/10	67
10/20	67
20/30	68
30/40	68
40/50	70
50/60	70
60/70	73
70/80	73
80/90	73
90/100	74
100/110	76
110/120	77
120/130	78
130/140	79
140/150	79
150/160	82

Thermal Properties	
T <sub>g</sub> ( $^{\circ}C$ )	599
T <sub>s</sub> ( $^{\circ}C$ )	657
T <sub>10</sub> <sup>14.5</sup> ( $^{\circ}C$ )	555
T <sub>10</sub> <sup>13</sup> ( $^{\circ}C$ )	595
$\alpha_{-50/80^{\circ}C}$ ( $10^{-7}/K$ )	68
$\alpha_{100/300^{\circ}C}$ ( $10^{-7}/K$ )	84
$\lambda$ (W/(m K))	0.99

Constants of Dispersion Formula	
A <sub>0</sub>	2.82868941E+00
A <sub>1</sub>	-1.38728820E-02
A <sub>2</sub>	2.03272973E-02
A <sub>3</sub>	1.79527923E-03
A <sub>4</sub>	-1.30823668E-04
A <sub>5</sub>	8.20715361E-06

Mechanical Properties	
HK ( $10^7$ Pa)	618
F <sub>A</sub>	125
E (GPa)	98.5
G (GPa)	38.4
$\mu$	0.284
$\sigma_b$ (MPa)	78
B ( $10^{-12}$ /Pa)	2.05

Density	
$\rho$ (g/cm <sup>3</sup> )	3.64

Solarization	
$\Delta\lambda$ (%)	-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	2.5	3.1	3.6	3.6	3.7	4.1	4.7	5.4	5.5	5.9
-40 ~ -20	2.6	3.3	3.7	3.8	3.9	4.4	4.9	5.6	5.7	6.2
-20 ~ 0	2.8	3.4	4.0	4.1	4.2	4.6	5.0	5.7	5.9	6.4
0 ~ 20	3.1	3.6	4.3	4.4	4.4	4.7	5.1	5.8	6.0	6.6
20 ~ 40	3.4	3.9	4.6	4.6	4.7	5.0	5.2	6.1	6.2	6.9
40 ~ 60	3.7	4.2	4.8	4.9	4.9	5.2	5.3	6.2	6.3	7.1
60 ~ 80	4.1	4.4	4.9	5.3	5.3	5.5	5.7	6.4	6.6	7.5
80 ~ 100	4.4	4.6	5.1	5.3	5.4	5.7	5.9	6.7	6.9	7.9
100 ~ 120	4.7	4.9	5.3	5.4	5.6	6.0	6.1	7.0	7.2	8.3
120 ~ 140	5.0	5.1	5.4	5.6	5.7	6.1	6.3	7.3	7.5	8.7
140 ~ 160	5.2	5.3	5.7	5.8	5.9	6.3	6.6	7.6	7.7	9.0

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	390/350
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	373/347

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
2.34E-06	2.11E-08	-2.27E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
1.04E-06	-3.84E-11	1.99E-01