

<b>H-ZK10</b>	<b>622567</b>	$n_d = 1.62210$	$v_d = 56.71$	$n_F - n_C = 0.010970$
		$n_e = 1.62470$	$v_e = 56.38$	$n_{F'} - n_{C'} = 0.011080$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.59235
$n_{1970}$	1970.09	1.59753
$n_{1530}$	1529.58	1.60321
$n_{1129}$	1128.64	1.60830
$n_{1064}$	1064.00	1.60923
$n_t$	1013.98	1.61000
$n_s$	852.11	1.61297
$n_{A'}$	768.19	1.61501
$n_r$	706.52	1.61689
$n_C$	656.27	1.61877
$n_{C'}$	643.85	1.61929
$n_{He-Ne}$	632.80	1.61979
$n_D$	589.29	1.62199
$n_d$	587.56	1.62210
$n_e$	546.07	1.62470
$n_F$	486.13	1.62974
$n_{F'}$	479.99	1.63037
$n_g$	435.84	1.63575
$n_h$	404.66	1.64074
$n_i$	365.01	1.64931

Constants of Dispersion Formula	
$A_0$	2.58741488E+00
$A_1$	-1.01011954E-02
$A_2$	1.49670832E-02
$A_3$	5.68916443E-04
$A_4$	-4.40176529E-05
$A_5$	2.64008379E-06

Density	
$\rho$ (g/cm <sup>3</sup> )	3.63

Solarization	
$\Delta\lambda$ (%)	-1.0

Relative Partial Dispersion	
$P_{d,C}$	0.3036
$P_{e,d}$	0.2370
$P_{g,F}$	0.5479
$P'_{d,c'}$	0.2536
$P'_{e,d}$	0.2347
$P'_{g,F'}$	0.4856

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0005
$\Delta P_{g,F}$	-0.0015
$\Delta P_{C,t}$	-0.0155
$\Delta P_{C,s}$	-0.0078

Thermal Properties	
T <sub>g</sub> (°C)	664
T <sub>s</sub> (°C)	704
T <sub>10</sub> <sup>14.5</sup> (°C)	597
T <sub>10</sub> <sup>13</sup> (°C)	635
$\alpha_{50/80^\circ C}$ (10 <sup>-7</sup> /K)	64
$\alpha_{100/300^\circ C}$ (10 <sup>-7</sup> /K)	78
$\lambda$ (W/(m·K))	0.94

Mechanical Properties	
HK (10 <sup>7</sup> Pa)	528
F <sub>A</sub>	147
E (GPa)	79.5
G (GPa)	31.9
$\mu$	0.248
$\sigma_b$ (MPa)	75.0
B (10 <sup>-12</sup> /Pa)	1.80

Chemical Properties (grade)	
RC (S)	1
RA (S)	3
D <sub>W</sub>	1
D <sub>A</sub>	4
R <sub>OH</sub> (S)	2
RP (S)	1

Expansion Coefficient $\alpha$ (×10 <sup>-7</sup> /K)	
°C	$\alpha$
-50/-40	55
-40/-30	57
-30/-20	58
-20/-10	59
-10/0	60
0/10	61
10/20	62
20/30	63
30/40	64
40/50	65
50/60	65
60/70	66
70/80	67
80/90	68
90/100	69
100/110	69
110/120	70
120/130	71
130/140	72
140/150	73
150/160	74

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.912	0.832
2200	0.962	0.925
2000	0.995	0.990
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	0.998
600	0.999	0.998
550	0.999	0.998
500	0.999	0.998
480	0.999	0.998
460	0.999	0.998
440	0.999	0.998
420	0.997	0.995
400	0.995	0.992
390	0.990	0.984
380	0.983	0.968
370	0.969	0.941
360	0.933	0.876
350	0.867	0.757
340	0.730	0.537
330	0.473	0.228
320	0.154	0.027
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	365/320
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	353/322

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	1.3	1.5	1.7	1.8	1.9	2.0	2.1	2.5	2.6	3.0
-40 ~ -20	1.3	1.5	1.7	1.8	1.9	2.1	2.2	2.6	2.7	3.2
-20 ~ 0	1.3	1.5	1.7	1.8	2.0	2.1	2.3	2.6	2.7	3.2
0 ~ 20	1.3	1.5	1.7	1.8	2.0	2.1	2.3	2.6	2.7	3.2
20 ~ 40	1.3	1.6	1.8	1.9	2.0	2.2	2.4	2.7	2.8	3.3
40 ~ 60	1.5	1.7	1.8	1.9	2.0	2.2	2.4	2.8	2.8	3.4
60 ~ 80	1.6	1.8	1.9	2.0	2.1	2.3	2.6	2.8	2.9	3.6
80 ~ 100	1.6	1.9	2.0	2.1	2.2	2.4	2.7	2.9	3.0	3.7
100 ~ 120	1.6	1.9	2.0	2.1	2.2	2.4	2.8	3.0	3.1	3.8
120 ~ 140	1.7	1.9	2.0	2.2	2.3	2.4	2.8	3.0	3.1	3.8
140 ~ 160	1.7	1.9	2.1	2.2	2.3	2.5	2.9	3.1	3.2	4.0

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
-7.55E-07	1.29E-08	-2.51E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
5.33E-07	3.07E-10	2.48E-01