

<b>H-ZK11      639555</b>	$n_d = 1.63854$	$v_d = 55.45$	$n_F - n_C = 0.011516$
	$n_e = 1.64129$	$v_e = 55.18$	$n_{F'} - n_{C'} = 0.011621$

Refractive Indices		
	$\lambda(\text{nm})$	$n_\lambda$
$n_{2325}$	2325.42	1.60803
$n_{1970}$	1970.09	1.61325
$n_{1530}$	1529.58	1.61900
$n_{1129}$	1128.64	1.62419
$n_t$	1013.98	1.62593
$n_s$	852.11	1.62900
$n_{A'}$	768.19	1.63114
$n_r$	706.52	1.63310
$n_C$	656.27	1.63505
$n_{C'}$	643.85	1.63561
$n_{\text{He-Ne}}$	632.80	1.63613
$n_D$	589.29	1.63844
$n_d$	587.56	1.63854
$n_e$	546.07	1.64129
$n_F$	486.13	1.64657
$n_{F'}$	479.99	1.64723
$n_g$	435.84	1.65291
$n_h$	404.66	1.65819
$n_i$	365.01	1.66725

Constants of Dispersion Formula	
$A_0$	2.63821944E+00
$A_1$	-1.02473310E-02
$A_2$	1.58983043E-02
$A_3$	5.77973503E-04
$A_4$	-3.90220391E-05
$A_5$	2.35832993E-06

Relative Partial Dispersions			
$P_{d,C}$	0.3030	$P'_{d,C'}$	0.2522
$P_{e,d}$	0.2387	$P'_{e,d}$	0.2367
$P_{g,F}$	0.5503	$P'_{g,F'}$	0.4888

Range of Temperature (°C)	Temperature Coefficients of Refractive Index						
	dn/dt relative (10 <sup>-6</sup> / °C)						
	t	C'	He-Ne	D	e	F'	g
-40 ~ -20	1.4	1.9	1.9	2.0	2.2	2.5	2.9
-20 ~ 0	1.4	1.8	1.8	2.0	2.1	2.5	2.9
0 ~ 20	1.4	1.8	1.9	2.0	2.2	2.6	2.9
20 ~ 40	1.4	1.8	1.9	2.0	2.2	2.6	3.0
40 ~ 60	1.4	1.9	1.9	2.1	2.3	2.7	3.1
60 ~ 80	1.6	2.1	2.1	2.2	2.4	2.8	3.3

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

Thermal Properties	
T <sub>g</sub> (°C)	633
T <sub>s</sub> (°C)	683
T <sub>10</sub> <sup>14.5</sup> (°C)	591
T <sub>10</sub> <sup>13</sup> (°C)	624
$\alpha_{-50/80^\circ\text{C}}$ (10 <sup>-7</sup> /K)	71
$\alpha_{100/300^\circ\text{C}}$ (10 <sup>-7</sup> /K)	85

Mechanical Properties	
HK(10 <sup>7</sup> Pa)	510
F <sub>A</sub>	160
E(10 <sup>7</sup> Pa)	8336
G(10 <sup>7</sup> Pa)	3282
$\mu$	0.270
B(nm/cm/10 <sup>5</sup> Pa)	1.780

Density	
$\rho$ (g/cm <sup>3</sup> )	3.66

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	-0.0013
$\Delta P_{g,F}$	-0.0012
$\Delta P_{C,t}$	-0.0171
$\Delta P_{C,s}$	-0.0083

Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.902	0.815
2200	0.964	0.930
2000	0.994	0.989
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
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	0.998	0.996
460	0.995	0.993
440	0.995	0.990
420	0.993	0.986
400	0.988	0.976
390	0.981	0.962
380	0.968	0.937
370	0.945	0.893
360	0.898	0.806
350	0.801	0.642
340	0.616	0.379
330	0.326	0.106
320	0.067	0.004
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	365/325

Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	358/325