

<b>D-FK90</b>	<b>459902</b>	$n_d = 1.45860$	$v_d = 90.19$	$n_F - n_C = 0.005085$
		$n_e = 1.45981$	$v_e = 89.77$	$n_F - n_C = 0.005122$

Refractive Indices		
	$\lambda$ (nm)	$n_\lambda$
$n_{2325}$	2325.42	1.44358
$n_{1970}$	1970.09	1.44630
$n_{1530}$	1529.58	1.44928
$n_{1129}$	1128.64	1.45191
$n_{1064}$	1064.00	1.45238
$n_t$	1013.98	1.45277
$n_s$	852.11	1.45425
$n_{A'}$	768.19	1.45524
$n_f$	706.52	1.45615
$n_C$	656.27	1.45704
$n_{C'}$	643.85	1.45729
$n_{He-Ne}$	632.80	1.45752
$n_D$	589.29	1.45855
$n_d$	587.56	1.45860
$n_e$	546.07	1.45981
$n_F$	486.13	1.46212
$n_{F'}$	479.99	1.46241
$n_g$	435.84	1.46486
$n_h$	404.66	1.46710
$n_i$	365.01	1.47085

Relative Partial Dispersion	
$P_{d,C}$	0.3068
$P_{e,d}$	0.2380
$P_{g,F}$	0.5388
$P'_{d,c'}$	0.2558
$P'_{e,d}$	0.2362
$P'_{g,F'}$	0.4783

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

Internal Transmittance		
$\lambda$ (nm)	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.999	0.998
2200	0.999	0.998
2000	0.999	0.998
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	0.999	0.998
400	0.999	0.998
390	0.999	0.998
380	0.999	0.998
370	0.999	0.998
360	0.998	0.996
350	0.997	0.994
340	0.993	0.986
330	0.984	0.968
320	0.967	0.935
310	0.935	0.874
300	0.883	0.779
290	0.809	0.654
280	0.721	0.520

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0139
$\Delta P_{g,F}$	0.0450
$\Delta P_{C,t}$	-0.1374
$\Delta P_{C,s}$	-0.0682

Expansion Coefficient $\alpha$ ( $\times 10^{-7}/K$ )	
$^{\circ}C$	$\alpha$
-50/-40	123
-40/-30	126
-30/-20	128
-20/-10	130
-10/0	132
0/10	133
10/20	135
20/30	138
30/40	140
40/50	143
50/60	144
60/70	145
70/80	146
80/90	147
90/100	149
100/110	150
110/120	151
120/130	153
130/140	155
140/150	157
150/160	160

Thermal Properties	
T <sub>g</sub> ( $^{\circ}C$ )	442
T <sub>s</sub> ( $^{\circ}C$ )	467
T <sub>10</sub> <sup>14.5</sup> ( $^{\circ}C$ )	423
T <sub>10</sub> <sup>13</sup> ( $^{\circ}C$ )	436
$\alpha_{-50/80^{\circ}C}$ ( $10^{-7}/K$ )	134
$\alpha_{100/300^{\circ}C}$ ( $10^{-7}/K$ )	164
$\lambda$ (W/(m K))	0.71
$\beta_d$	48

Constants of Dispersion Formula	
A <sub>0</sub>	2.10866977E+00
A <sub>1</sub>	-4.81589397E-03
A <sub>2</sub>	7.02478609E-03
A <sub>3</sub>	-2.48667024E-05
A <sub>4</sub>	1.78185408E-05
A <sub>5</sub>	-1.09874507E-06

Mechanical Properties	
HK ( $10^7 Pa$ )	354
F <sub>A</sub>	459
E (GPa)	68.9
G (GPa)	26.2
$\mu$	0.313
$\sigma_b$ (MPa)	48
B ( $10^{-12}/Pa$ )	0.60

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

Solarization	
$\Delta\lambda$ (%)	-0.5

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	-7.0	-6.7	-6.5	-6.4	-6.2	-6.0	-5.9	-5.6	-5.6	-5.3
-40 ~ -20	-7.2	-6.8	-6.5	-6.5	-6.4	-6.2	-6.0	-5.8	-5.8	-5.5
-20 ~ 0	-7.3	-6.9	-6.7	-6.7	-6.6	-6.4	-6.3	-6.0	-5.9	-5.7
0 ~ 20	-7.3	-7.0	-6.8	-6.8	-6.7	-6.5	-6.5	-6.1	-6.1	-6.0
20 ~ 40	-7.5	-7.1	-7.0	-6.9	-6.8	-6.5	-6.5	-6.2	-6.2	-6.2
40 ~ 60	-7.6	-7.3	-7.2	-7.2	-7.1	-6.7	-6.6	-6.5	-6.5	-6.3
60 ~ 80	-7.9	-7.6	-7.5	-7.5	-7.4	-7.0	-7.0	-6.8	-6.7	-6.6
80 ~ 100	-8.0	-7.8	-7.7	-7.6	-7.4	-7.2	-7.1	-6.9	-6.8	-6.7
100 ~ 120	-8.1	-8.1	-8.0	-7.9	-7.8	-7.6	-7.4	-7.2	-7.2	-7.0
120 ~ 140	-8.2	-8.0	-8.0	-8.0	-7.9	-7.8	-7.7	-7.5	-7.5	-7.3
140 ~ 160	-8.4	-8.3	-8.3	-8.2	-8.2	-8.0	-8.0	-7.9	-7.8	-7.6

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	310/260
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	300/260

Constants of dn/dt		
D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>
-2.37E-05	5.32E-09	-4.63E-11
E <sub>0</sub>	E <sub>1</sub>	$\lambda_{TK}$
9.51E-07	-1.08E-09	2.02E-08