

H-ZF13	785257	$n_d = 1.78472$	$v_d = 25.72$	$n_F - n_C = 0.030510$
		$n_e = 1.79191$	$v_e = 25.51$	$n_F - n_C' = 0.031042$

Refractive Indices			Relative Partial Dispersion		Chemical Properties (grade)		Internal Transmittance		
	λ (nm)	n_λ					λ (nm)	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
n_{2325}	2325.42	1.73037	$P_{d,C}$	0.2868	RC (S)	1	2400	0.950	0.900
n_{1970}	1970.09	1.73662	$P_{e,d}$	0.2357	RA (S)	1	2200	0.976	0.950
n_{1530}	1529.58	1.74411	$P_{g,F}$	0.6142	D_W	1	2000	0.987	0.972
n_{1129}	1128.64	1.75231	$P'_{d,c'}$	0.2381	D_A	1	1800	0.993	0.984
n_{1064}	1064.00	1.75406	$P'_{e,d}$	0.2316	$R_{OH}(S)$	1	1600	0.998	0.996
n_t	1013.98	1.75557	$P'_{g,F'}$	0.5428	RP (S)	1	1400	0.998	0.996
n_s	852.11	1.76192			CR	1	1200	0.998	0.996
$n_{A'}$	768.19	1.76666	Deviation of Relative Partial Dispersions		Expansion Coefficient $\alpha (\times 10^{-7}/K)$		1060	0.998	0.996
n_r	706.52	1.77124					1000	0.998	0.996
n_C	656.27	1.77597					950	0.998	0.996
$n_{C'}$	643.85	1.77733					900	0.998	0.996
n_{He-Ne}	632.80	1.77861					850	0.998	0.996
n_D	589.29	1.78446	ΔP_{Fe}	0.0015	$^{\circ}C$	α	800	0.998	0.996
n_d	587.56	1.78472	$\Delta P_{g,F}$	0.0133	-50/-40	80	750	0.998	0.996
n_e	546.07	1.79191	$\Delta P_{C,t}$	0.0039	-40/-30	81	700	0.998	0.996
n_F	486.13	1.80648	$\Delta P_{C,s}$	-0.0016	-30/-20	82	650	0.998	0.996
$n_{F'}$	479.99	1.80837	Thermal Properties		-20/-10	82	600	0.998	0.996
n_g	435.84	1.82522	$T_g (^{\circ}C)$	601	-10/0	84	550	0.996	0.992
n_h	404.66	1.84210	$T_s (^{\circ}C)$	638	0/10	87	500	0.994	0.988
n_i	365.01	1.87399	$T_{10}^{14.5} (^{\circ}C)$	535	10/20	88	480	0.990	0.980
			$T_{10}^{13} (^{\circ}C)$	573	20/30	88	460	0.984	0.968
			$\alpha_{-50/80^{\circ}C} (10^{-7}/K)$	87	30/40	89	440	0.976	0.953
			$\alpha_{100/300^{\circ}C} (10^{-7}/K)$	111	40/50	91	420	0.962	0.925
			$\lambda (W/(m K))$	0.98	50/60	93	400	0.907	0.819
					60/70	93	390	0.812	0.658
					70/80	95	380	0.640	0.407
					80/90	96	370	0.308	0.095
					90/100	98	360		
					100/110	98	350		
					110/120	99	340		
					120/130	102	330		
					130/140	103	320		
					140/150	104	310		
					150/160	107	300		
							290		
							280		

Constants of Dispersion Formula	
A_0	3.05227481E+00
A_1	-1.21808741E-02
A_2	4.16791281E-02
A_3	1.79932930E-03
A_4	1.91659600E-05
A_5	1.22563456E-05

Density		Solarization	
$\rho (g/cm^3)$	3.22	$\Delta\lambda (\%)$	-0.9

Mechanical Properties	
HK (10^7Pa)	528
F_A	181
E (GPa)	91.5
G (GPa)	35.7
μ	0.281
σ_b (MPa)	70
B ($10^{-12}/Pa$)	2.73

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	-0.8	-0.1	0.4	0.4	0.5	0.8	1.3	2.4	2.5	3.7
-40 ~ -20	-0.7	0.0	0.4	0.4	0.6	0.8	1.3	2.5	2.6	3.9
-20 ~ 0	-0.7	0.0	0.5	0.5	0.6	1.0	1.4	2.7	2.8	4.3
0 ~ 20	-0.6	0.1	0.6	0.6	0.7	1.1	1.6	3.0	3.1	4.8
20 ~ 40	-0.6	0.2	0.7	0.7	0.8	1.2	1.9	3.2	3.2	5.1
40 ~ 60	-0.5	0.3	0.8	0.8	0.9	1.3	2.0	3.4	3.4	5.3
60 ~ 80	-0.5	0.4	0.9	0.9	1.0	1.5	2.2	3.6	3.7	5.7
80 ~ 100	-0.3	0.5	1.0	1.0	1.1	1.7	2.3	3.9	4.0	6.0
100 ~ 120	-0.2	0.6	1.1	1.2	1.2	2.0	2.4	4.2	4.3	6.3
120 ~ 140	0.0	0.7	1.2	1.3	1.3	2.1	2.7	4.4	4.5	6.5
140 ~ 160	0.0	0.8	1.3	1.4	1.5	2.2	2.9	4.6	4.7	6.7

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	425/365
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	393/365

Constants of dn/dt		
D_0	D_1	D_2
-4.52E-06	1.15E-08	-2.19E-11
E_0	E_1	λ_{TK}
9.64E-07	1.10E-09	2.96E-01