

H-ZF4A	728283	$n_d = 1.72825$	$v_d = 28.32$	$n_F - n_C = 0.025716$
		$n_e = 1.73432$	$v_e = 28.10$	$n_{F'} - n_{C'} = 0.026133$

Refractive Indices			Relative Partial Dispersion		Chemical Properties (grade)		Internal Transmittance		
	λ (nm)	n_λ	$P_{d,C}$		RC (S)	1	λ (nm)	τ_{5mm}	τ_{10mm}
n_{2325}	2325.42		$P_{e,d}$	0.2889	RA (S)	1	2400	0.922	0.851
n_{1970}	1970.09		$P_{g,F}$	0.2360	D_W	1	2200	0.951	0.904
n_{1530}	1529.58		$P'_{d,e'}$	0.6070	D_A	1	2000	0.982	0.965
n_{1129}	1128.64	1.70032	$P'_{e,d}$	0.2399	R_{OH} (S)	1	1800	0.990	0.980
n_{1064}	1064.00	1.70187	$P'_{g,F'}$	0.2323	RP (S)	1	1600	0.996	0.992
n_t	1013.98	1.70320		0.5373			1400	0.997	0.994
n_s	852.11	1.70873					1200	0.999	0.997
$n_{A'}$	768.19	1.71283	Deviation of Relative Partial Dispersions		Expansion Coefficient α ($\times 10^{-7}/K$)		1060	0.999	0.997
n_r	706.52	1.71676	$\Delta P_{F,e}$	0.0006	$^{\circ}C$	α	1000	0.999	0.997
n_C	656.27	1.72082	$\Delta P_{g,F}$	0.0105	-50/-40	79	950	0.999	0.997
$n_{C'}$	643.85	1.72198	$\Delta P_{C,t}$	0.0078	-40/-30	82	900	0.999	0.997
n_{He-Ne}	632.80	1.72306	$\Delta P_{C,s}$	0.0018	-30/-20	84	850	0.999	0.997
n_D	589.29	1.72802			-20/-10	84	800	0.999	0.997
n_d	587.56	1.72825	Thermal Properties		-10/0	85	750	0.999	0.997
n_e	546.07	1.73432	Tg ($^{\circ}C$)	594	0/10	86	700	0.998	0.997
n_F	486.13	1.74654	Ts ($^{\circ}C$)	621	10/20	87	650	0.998	0.996
$n_{F'}$	479.99	1.74811	$T_{10}^{14.5}$ ($^{\circ}C$)	530	20/30	90	600	0.997	0.994
n_g	435.84	1.76215	T_{10}^{13} ($^{\circ}C$)	559	30/40	91	550	0.996	0.992
n_h	404.66	1.77622	$\alpha_{-50/80^{\circ}C}$ ($10^{-7}/K$)	86	40/50	93	500	0.994	0.987
n_i	365.01	1.80305	$\alpha_{100/300^{\circ}C}$ ($10^{-7}/K$)	105	50/60	94	480	0.992	0.983
			λ (W/(m·K))	1.12	60/70	94	460	0.989	0.979
					70/80	95	440	0.984	0.970

Constants of Dispersion Formula	
A_0	2.87790099E+00
A_1	-1.14975391E-02
A_2	3.40752512E-02
A_3	1.83854310E-03
A_4	-1.04547399E-04
A_5	1.87465641E-05

Density		Solarization	
ρ (g/cm ³)	3.05	$\Delta\lambda$ (%)	-0.3

Mechanical Properties	
HK (10 ⁷ Pa)	551
F_A	210
E (GPa)	90.7
G (GPa)	36.0
μ	0.262
σ_b (MPa)	73
B (10 ⁻¹² /Pa)	2.65

80/90	95
90/100	97
100/110	97
110/120	99
120/130	100
130/140	100
140/150	101
150/160	103

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	-1.2	-1.0	-0.7	-0.6	-0.5	-0.3	0.4	1.3	1.4	1.9
-40 ~ -20	-1.2	-0.9	-0.5	-0.4	-0.4	-0.1	0.6	1.5	1.7	2.4
-20 ~ 0	-1.1	-0.7	-0.3	-0.2	-0.1	0.3	0.9	1.6	1.8	2.7
0 ~ 20	-1.1	-0.5	-0.2	-0.1	0.1	0.4	1.2	1.7	1.9	2.9
20 ~ 40	-1.0	-0.3	0.0	0.1	0.2	0.6	1.4	1.8	2.0	3.1
40 ~ 60	-1.0	-0.3	0.2	0.3	0.4	0.8	1.6	1.9	2.2	3.4
60 ~ 80	-0.9	-0.1	0.3	0.4	0.5	1.0	1.8	2.3	2.5	3.5
80 ~ 100	-0.9	-0.1	0.5	0.5	0.6	1.2	2.0	2.6	2.8	4.0
100 ~ 120	-0.8	0.1	0.7	0.7	0.8	1.3	2.1	2.9	3.1	4.2
120 ~ 140	-0.7	0.3	0.8	0.9	0.9	1.7	2.5	3.2	3.4	4.4
140 ~ 160	-0.7	0.4	0.9	1.0	1.1	1.8	2.6	3.5	3.6	4.6

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	410/365
Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	391/364

Constants of dn/dt		
D_0	D_1	D_2
-6.13E-06	1.41E-08	-2.55E-11
E_0	E_1	λ_{TK}
1.37E-06	1.29E-09	1.57E-01