

H-ZF11 699301	$n_d = 1.69894$	$v_d = 30.05$	$n_F - n_C = 0.023259$
	$n_e = 1.70444$	$v_e = 29.81$	$n_{F'} - n_{C'} = 0.023628$

Refractive Indices		
	$\lambda(\text{nm})$	n_λ
n_{2325}	2325.42	1.65368
n_{1970}	1970.09	1.65957
n_{1530}	1529.58	1.66640
n_{1129}	1128.64	1.67343
n_t	1013.98	1.67610
n_s	852.11	1.68119
$n_{A'}$	768.19	1.68494
n_r	706.52	1.68852
n_C	656.27	1.69221
$n_{C'}$	643.85	1.69326
$n_{\text{He-Ne}}$	632.80	1.69425
n_D	589.29	1.69875
n_d	587.56	1.69894
n_e	546.07	1.70444
n_F	486.13	1.71547
$n_{F'}$	479.99	1.71689
n_g	435.84	1.72948
n_h	404.66	1.74204
n_i	365.01	1.76590

Constants of Dispersion Formula	
A_0	2.79026920E+00
A_1	-1.13154551E-02
A_2	2.98537059E-02
A_3	1.85548133E-03
A_4	-1.33930426E-04
A_5	1.81714166E-05

Relative Partial Dispersions			
$P_{d,C}$	0.2893	$P'_{d,C'}$	0.2404
$P_{e,d}$	0.2365	$P'_{e,d}$	0.2328
$P_{g,F}$	0.6023	$P'_{g,F'}$	0.5328

Range of Temperature (°C)	Temperature Coefficients of Refractive Index						
	dn/dt relative (10 ⁻⁶ / °C)						
	t	C'	He-Ne	D	e	F'	g
-40 ~ -20	0.4	1.2	1.3	1.6	2.0	2.9	4.0
-20 ~ 0	0.4	1.3	1.3	1.6	2.0	3.1	4.2
0 ~ 20	0.4	1.3	1.4	1.7	2.1	3.2	4.4
20 ~ 40	0.4	1.4	1.4	1.8	2.2	3.3	4.6
40 ~ 60	0.5	1.5	1.5	1.9	2.4	3.5	4.9
60 ~ 80	0.6	1.6	1.7	2.1	2.5	3.8	5.2

Chemical Properties (grade)	
RC(S)	1
RA(S)	1
D _W	1
D _A	1
R _{OH} (S)	1
RP(S)	1

Thermal Properties	
T _g (°C)	579
T _s (°C)	624
T ₁₀ ^{14.5} (°C)	528
T ₁₀ ¹³ (°C)	558
$\alpha_{-50/80^\circ\text{C}}$ (10 ⁻⁷ /K)	86
$\alpha_{100/300^\circ\text{C}}$ (10 ⁻⁷ /K)	108

Mechanical Properties	
HK(10 ⁷ Pa)	524
F _A	139
E(10 ⁷ Pa)	8531
G(10 ⁷ Pa)	3426
μ	0.245
B(nm/cm/10 ⁵ Pa)	2.950

Density	
ρ (g/cm ³)	2.96

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	0.0006
$\Delta P_{g,F}$	0.0086
$\Delta P_{C,t}$	0.0069
$\Delta P_{C,s}$	0.0013

Internal Transmittance		
$\lambda(\text{nm})$	$\tau_{5\text{mm}}$	$\tau_{10\text{mm}}$
2400	0.930	0.857
2200	0.956	0.905
2000	0.980	0.961
1800	0.993	0.985
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	0.997	0.994
500	0.995	0.990
480	0.993	0.986
460	0.991	0.982
440	0.987	0.975
420	0.981	0.958
400	0.951	0.899
390	0.902	0.809
380	0.786	0.610
370	0.498	0.244
360		
350		
340		
330		
320		
310		
300		
290		
280		

Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	405/365

Coloration of Internal Transmittance	
$\lambda\tau_{80}/\lambda\tau_5$	387/363