

<b>H-ZK11</b>	<b>639555</b>
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nd =1.63854	vd =55.45	nF - nC =0.011516
ne =1.64129	ve =55.18	nF' - nc' =0.011621

Refractive Indices		
	$\lambda$ ( nm )	
$n_r$	706.5	1.63308
$n_c$	656.3	1.63505
$n_{c'}$	643.8	1.63561
$n_{He-Ne}$	632.8	1.63613
$n_D$	589.3	1.63844
$n_d$	587.6	1.63854
$n_e$	546.1	1.64129
$n_F$	486.1	1.64657
$n_{F'}$	480.0	1.64723
$n_g$	435.8	1.65287
$n_h$	404.7	1.65813
$n_i$	365.0	1.66715

Constants of Dispersion (Cauchy)	
$A_0$	2.6365277
$A_1$	$-9.75584641 \times 10^{-3}$
$A_2$	$1.71436651 \times 10^{-2}$
$A_3$	$2.25924971 \times 10^{-4}$
$A_4$	$3.08553421 \times 10^{-6}$
$A_5$	$4.58319171 \times 10^{-7}$

Relative Partial Dispersions			
$P_{d,c}$	0.303	$P'_{d,c'}$	0.2522
$P_{e,d}$	0.2387	$P'_{e,d}$	0.2367
$P_{g,F}$	0.5469	$P'_{g,F'}$	0.4854

Deviation of Relative Partial Dispersions	
$\Delta P_{F,e}$	-0.0013
$\Delta P_{g,F}$	-0.0046

NHG	HOYA	OHARA	SCHOTT
H-ZK11	BaCD18	S-BSM18	N-SK18

Chemical Properties	
	Group
RC(S)	1
RA(S)	3
DW	2
DA	4

Thermal Properties	
$T_g$ ( °C )	623
$T_s$ ( °C )	697
$T_{10}^{14.5}$ ( °C )	601
$T_{10}^{13}$ ( °C )	636
$\alpha_{20/120^\circ C}$ ( $10^{-7}/K$ )	71
$\alpha_{20/300^\circ C}$ ( $10^{-7}/K$ )	82

Mechanical Properties	
Hardness ( $10^7 Pa$ )	512
FA (Relative Abrasion)	
Young's Modulus ( $10^7 Pa$ )	8711
Rigidity Modulus ( $10^7 Pa$ )	3423
Poisson's Ratio	0.272

Photoelastic Constant	
$\beta$ ( $10^{-12}/Pa$ )	

Color	
$\lambda_{80}/\lambda_5$	38/33

Specific Gravity	
$\rho$ ( $g/cm^3$ )	3.66

Internal Transmission		
$\lambda$ ( nm )	$\tau_{5mm}$	$\tau_{10mm}$
2400	0.880	0.780
2200	0.945	0.893
2000	0.981	0.962
1800	0.991	0.982
1600	0.997	0.994
1400	0.998	0.997
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
700	0.999	0.998
650	0.999	0.998
600	0.999	0.998
550	0.999	0.998
500	0.997	0.995
480	0.996	0.993
460	0.994	0.989
440	0.993	0.986
420	0.991	0.983
400	0.983	0.967
390	0.974	0.948
380	0.952	0.907
370	0.911	0.830
360	0.820	0.680
350	0.660	0.430
340	0.370	0.140
330	0.080	0.010
320		
310		
300		
290		
280		



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