

**LLF1HTi**  
**548459.294**

$n_d = 1.54815$	$v_d = 45.90$	$n_F - n_C = 0.011942$
$n_e = 1.55099$	$v_e = 45.62$	$n_{F'} - n_{C'} = 0.012078$

Refractive Indices		
	$\lambda$ [nm]	
$n_{2325.4}$	2325.4	1.51863
$n_{1970.1}$	1970.1	1.52354
$n_{1529.6}$	1529.6	1.52886
$n_{1060.0}$	1060.0	1.53473
$n_t$	1014.0	1.53544
$n_s$	852.1	1.53848
$n_r$	706.5	1.54259
$n_C$	656.3	1.54459
$n_{C'}$	643.8	1.54515
$n_{632.8}$	632.8	1.54568
$n_D$	589.3	1.54804
$n_d$	587.6	1.54815
$n_e$	546.1	1.55099
$n_F$	486.1	1.55653
$n_{F'}$	480.0	1.55723
$n_g$	435.8	1.56328
$n_h$	404.7	1.56904
$n_i$	365.0	1.57920
$n_{334.1}$	334.1	
$n_{312.6}$	312.6	
$n_{296.7}$	296.7	
$n_{280.4}$	280.4	
$n_{248.3}$	248.3	

Internal Transmittance $\tau_i$		
$\lambda$ [nm]	$\tau_i$ (10mm)	$\tau_i$ (25mm)
2500	0.744	0.477
2325	0.804	0.579
1970	0.930	0.833
1530	0.996	0.990
1060	0.999	0.999
700	0.999	0.999
660	0.999	0.998
620	0.999	0.998
580	0.999	0.998
546	0.999	0.998
500	0.999	0.998
460	0.999	0.998
436	0.999	0.997
420	0.999	0.997
405	0.999	0.997
400	0.999	0.997
390	0.998	0.996
380	0.998	0.995
370	0.998	0.994
365	0.997	0.993
350	0.993	0.982
334	0.955	0.892
320	0.721	0.441
310	0.231	0.026
300		
290		
280		
270		
260		
250		

Relative Partial Dispersion	
$P_{s,t}$	0.2544
$P_{C,s}$	0.5114
$P_{d,C}$	0.2985
$P_{e,d}$	0.2376
$P_{g,F}$	0.5656
$P_{i,h}$	0.8512
$P'_{s,t}$	0.2515
$P'_{C',s}$	0.5523
$P'_{d,C'}$	0.2485
$P'_{e,d}$	0.2349
$P'_{g,F'}$	0.5014
$P'_{i,h}$	0.8416

Deviation of Relative Partial Dispersions $\Delta P$ from the "Normal Line"	
$\Delta P_{C,t}$	0.0031
$\Delta P_{C,s}$	0.0015
$\Delta P_{F,e}$	-0.0003
$\Delta P_{g,F}$	-0.0010
$\Delta P_{i,g}$	-0.0062

Constants of Dispersion Formula	
$B_1$	1.22510445
$B_2$	0.125155671
$B_3$	0.892236751
$C_1$	0.00870432098
$C_2$	0.0427325235
$C_3$	108.049968

Constants of Dispersion $dn/dT$	
$D_0$	$2.55 \cdot 10^{-7}$
$D_1$	$1.41 \cdot 10^{-8}$
$D_2$	$-3.32 \cdot 10^{-11}$
$E_0$	$6.74 \cdot 10^{-7}$
$E_1$	$6.27 \cdot 10^{-10}$
$\lambda_{TK}$ [μm]	0.227

Color Code	
$\lambda_{80}/\lambda_5$	33/31
(*= $\lambda_{70}/\lambda_5$ )	

Remarks	
i-line glass	

Other Properties	
$\alpha_{-30/+70^\circ C}$ [ $10^{-6}/K$ ]	8.1
$\alpha_{+20/+300^\circ C}$ [ $10^{-6}/K$ ]	9.2
$T_g$ [°C]	431
$T_{10}^{13.0}$ [°C]	426
$T_{10}^{7.6}$ [°C]	628
$c_p$ [J/(g·K)]	0.650
$\lambda$ [W/(m·K)]	0.990
$\rho$ [g/cm <sup>3</sup> ]	2.94
$E$ [ $10^3$ N/mm <sup>2</sup> ]	60
$\mu$	0.208
$K$ [ $10^{-6}$ mm <sup>2</sup> /N]	3.05
$HK_{0.1/20}$	450
<b>HG</b>	
<b>CR</b>	1
<b>FR</b>	0
<b>SR</b>	1
<b>AR</b>	2
<b>PR</b>	1

Temperature Coefficients of Refractive Index						
[°C]	$\Delta n_{rel}/\Delta T$ [ $10^{-6}/K$ ]			$\Delta n_{abs}/\Delta T$ [ $10^{-6}/K$ ]		
	1060.0	e	g	1060.0	e	g
-40/ -20	1.7	2.6	3.5	-0.4	0.5	1.4
+20/ +40	1.8	2.9	3.9	0.5	1.5	2.5
+60/ +80	2.0	3.1	4.2	0.9	2.0	3.1