

FDS24-W

921-240 $n_d = 1.92119$ $\nu_d = 23.96$ (23.956) $n_F - n_C = 0.038453$
 $n_e = 1.93024$ $\nu_e = 23.77$ (23.766) $n_{F'} - n_{C'} = 0.039142$

屈折率 Refractive Index		
	λ (nm)	
$n_{1529.6}$	1529.60	1.87097
$n_{1128.64}$	1128.64	1.88084
n_t	1013.98	1.88482
n_s	852.11	1.89264
$n_{A'}$	768.195	1.89854
n_r	706.519	1.90425
n_C	656.273	1.91020
$n_{C'}$	643.847	1.91191
n_{633}	632.8	1.91351
n_D	589.294	1.92086
n_d	587.562	1.92119
n_e	546.074	1.93024
n_F	486.133	1.94865
$n_{F'}$	479.991	1.95105
n_g	435.834	1.97250
n_h	404.656	1.99420
n_i	365.015	2.03607

分散式の定数 Constants of dispersion formula	
A_0	3.5126327
A_1	$-1.5301500 \times 10^{-2}$
A_2	5.3936061×10^{-2}
A_3	3.4949369×10^{-3}
A_4	$-1.7950295 \times 10^{-4}$
A_5	3.4403181×10^{-5}

部分分散 Partial dispersions	
$n_C - n_t$	0.025385
$n_d - n_C$	0.010988
$n_F - n_d$	0.027465
$n_g - n_F$	0.023850
$n_{C'} - n_t$	0.027090
$n_e - n_{C'}$	0.018335
$n_{F'} - n_e$	0.020807
$n_g - n_{F'}$	0.021456

部分分散比 Partial dispersion rates	
$P_{C,t}$	0.6602
$P_{d,C}$	0.2858
$P_{e,d}$	0.2354
$P_{F,e}$	0.4788
$P_{g,F}$	0.6202
$P_{h,g}$	0.5642
$P_{i,h}$	1.0888
$P'_{C,t}$	0.6921
$P'_{d,C'}$	0.2372
$P'_{e,d'}$	0.2313
$P'_{F',e'}$	0.5316
$P'_{g,F'}$	0.5482
$P'_{h,g'}$	0.5543
$P'_{i,h'}$	

異常分散性 Anomalous dispersions	
$\Delta P_{C,t}$	0.0023
$\Delta P_{C,A'}$	-0.0026
$\Delta P_{g,d}$	0.0173
$\Delta P_{g,F}$	0.0150
$\Delta P_{i,g}$	

光弾性定数 Photoelastic Constant	
B (10^{-12} /Pa)	1.93

比重 Specific Gravity	
d	3.84

化学的性質 Chemical Properties	
D_W	1
D_A	1
T_{Blue}	1
D_{NaOH}	1
D_{STPP}	1
D_0	1
D_H	1

熱的性質 Thermal Properties	
T_g (°C)	629
T_s (°C)	678
$T_{10^{14.5}}$ (°C)	603
$T_{10^{13}}$ (°C)	623
$T_{10^{7.6}}$ (°C)	
$\alpha_{-30/+70^\circ C}$ ($10^{-7}/^\circ C$)	78
$\alpha_{100/300^\circ C}$ ($10^{-7}/^\circ C$)	96
λ [W/(m·K)]	1.190
C_p [kJ/(kg·K)]	0.637

機械的性質 Mechanical Properties	
H_K	605 (6)
F_A	120
E (GPa)	115
G (GPa)	45.2
μ	0.275
σ_b (MPa)	

内部透過率 Internal Transmittance			
λ (nm)	τ 2mm	τ 5mm	τ 10mm
2500	0.973	0.933	0.870
2400	0.978	0.945	0.894
2200	0.990	0.974	0.949
2000	0.994	0.984	0.968
1800	0.996	0.989	0.979
1600	0.998	0.995	0.990
1550	0.998	0.995	0.990
1500	0.998	0.995	0.990
1400	0.998	0.996	0.992
1300	0.999	0.996	0.993
1200	0.999	0.997	0.993
1100	0.999	0.997	0.993
1060	0.999	0.997	0.993
1050	0.999	0.997	0.993
1000	0.999	0.997	0.993
950	0.999	0.997	0.994
900	0.999	0.997	0.994
850	0.999	0.997	0.994
830	0.999	0.997	0.994
800	0.999	0.997	0.993
780	0.998	0.996	0.992
750	0.998	0.996	0.992
700	0.998	0.994	0.988
650	0.996	0.991	0.982
600	0.991	0.978	0.956
550	0.983	0.958	0.917
500	0.993	0.983	0.967
480	0.991	0.978	0.956
460	0.988	0.971	0.942
440	0.983	0.958	0.917
420	0.972	0.932	0.868
400	0.946	0.871	0.759
390	0.915	0.801	0.642
380	0.838	0.644	0.414
370	0.646	0.336	0.113
360	0.248	0.031	
350	0.007		
340			
330			
320			
310			
300			
290			
280			

屈折率の温度係数 $d n/dT$ ($\times 10^{-6}/^{\circ}C$)						アッペ数の温度係数 $d \nu/dT$ ($\times 10^{-3}/^{\circ}C$)							
Temperature Coefficient of Refractive Index						Temperature Coefficient of Abbe-number							
	(°C)	$d n/dT$										$d \nu/dT$	
		n_h	n_g	$n_{F'}$	n_F	n_e	n_d	n_{633}	$n_{C'}$	n_C	n_r	ν_e	ν_d
		404.66	435.84	479.99	486.13	546.07	587.56	632.80	643.85	656.27	706.52	546.07	587.56
$d n/dT$ & $d \nu/dT$ (rel.)	-40 / -20	7.8	5.9	4.1	3.9	2.7	2.1	1.6	1.6	1.5	1.2	-1.5	-1.5
	-20 / 0	8.2	6.1	4.3	4.1	2.8	2.2	1.7	1.6	1.5	1.2	-1.6	-1.6
	0 / 20	8.6	6.4	4.5	4.3	2.9	2.3	1.8	1.7	1.6	1.2	-1.6	-1.6
	20 / 40	9.0	6.7	4.7	4.5	3.0	2.4	1.9	1.7	1.6	1.3	-1.7	-1.7
	40 / 60	9.5	7.0	4.9	4.7	3.2	2.5	2.0	1.8	1.7	1.3	-1.8	-1.8
	60 / 80	9.9	7.4	5.2	4.9	3.3	2.6	2.0	1.9	1.8	1.4	-1.9	-1.9
	80 / 100	10.3	7.7	5.4	5.1	3.5	2.7	2.1	2.0	1.9	1.5	-1.9	-1.9
	100 / 120	10.7	7.9	5.6	5.3	3.6	2.8	2.2	2.1	1.9	1.5	-2.0	-2.0
	120 / 140	11.1	8.2	5.7	5.5	3.7	2.9	2.2	2.1	2.0	1.5	-2.1	-2.1
	140 / 150	11.4	8.4	5.8	5.6	3.7	2.9	2.2	2.1	2.0	1.5	-2.1	-2.1
$d n/dT$ & $d \nu/dT$ (abs.)	-40 / -20	5.1	3.1	1.4	1.3	0.0	-0.5	-0.9	-1.0	-1.1	-1.4	-1.5	-1.5
	-20 / 0	5.9	3.8	2.0	1.8	0.5	-0.1	-0.5	-0.6	-0.7	-1.0	-1.6	-1.6
	0 / 20	6.6	4.4	2.5	2.3	0.9	0.3	-0.1	-0.2	-0.3	-0.7	-1.7	-1.7
	20 / 40	7.3	5.0	3.0	2.8	1.3	0.7	0.2	0.1	0.0	-0.4	-1.7	-1.7
	40 / 60	7.9	5.5	3.4	3.2	1.7	1.0	0.5	0.4	0.3	-0.1	-1.8	-1.8
	60 / 80	8.5	6.0	3.8	3.6	2.0	1.3	0.7	0.6	0.5	0.1	-1.9	-1.9
	80 / 100	9.1	6.4	4.2	3.9	2.3	1.5	1.0	0.8	0.7	0.3	-1.9	-1.9
	100 / 120	9.6	6.8	4.5	4.2	2.5	1.7	1.1	1.0	0.9	0.5	-2.0	-2.0
	120 / 140	10.1	7.2	4.8	4.5	2.7	1.9	1.3	1.2	1.0	0.6	-2.1	-2.1
	140 / 150	10.4	7.5	4.9	4.7	2.8	2.0	1.4	1.2	1.1	0.6	-2.1	-2.1

線膨張係数 α ($\times 10^{-7}/^\circ C$)	
Coefficient of Thermal Expansion	
(°C)	α
-40 / -30	70
-30 / -20	72
-20 / -10	74
-10 / 0	76
0 / 10	77
10 / 20	78
20 / 30	79
30 / 40	80
40 / 50	81
50 / 60	81
60 / 70	81
70 / 80	82
80 / 90	82
90 / 100	83
100 / 110	83
110 / 120	84
120 / 130	84
130 / 140	85
140 / 150	86

着色度 Coloration Code	
$\lambda_{80}(\lambda_{70})/\lambda_5$	(420)/370
着色度 (内部透過率) Coloration of Internal Transmittance	
$\lambda_{\tau 80}/\lambda_{\tau 5}$	405/367

CCI Color Contribution Index	
CCI (G)	4.72
CCI (R)	5.06

冷却速度による屈折率の変化 Difference of refractive indices by cooling rate	
β_C	
β_d	
β_F	
β_g	

備考 Remarks						
硝種対照表 Glass Cross Reference Index						
	HOYA	SCHOTT	OHARA	HIKARI	SUMITA	CDGM
Glass_Type	FDS24-W					
Code	921-240					

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