

S-FTL10

Code(d) **501564**

Code(e) **503561**

Refractive Index n_d	1.50137 1.501372	Abbe Number	V_d	56.4 56.42	Dispersion	n_F-n_C	0.00889 0.008886
Refractive Index n_e	1.503487	Abbe Number	V_e	56.12	Dispersion	$n_F-n_{C'}$	0.008971

Refractive Indices		
$\lambda(\mu\text{m})$		
n_{2325}	2.325420	1.475310
n_{1970}	1.970090	1.480240
n_{1530}	1.529580	1.485480
n_{1129}	1.128640	1.489980
n_t	1.013980	1.491440
n_s	0.852110	1.493940
$n_{A'}$	0.768190	1.495620
n_r	0.706520	1.497160
n_C	0.656270	1.498680
$n_{C'}$	0.643850	1.499110
$n_{\text{He-Ne}}$	0.632800	1.499510
n_D	0.589290	1.501290
n_d	0.587560	1.501370
n_e	0.546070	1.503490
n_F	0.486130	1.507570
$n_{F'}$	0.479990	1.508080
$n_{\text{He-Cd}}$	0.441570	1.511830
n_g	0.435835	1.512490
n_h	0.404656	1.516630
n_i	0.365015	1.523840

Deviation of Relative Dispersions $\Delta\theta$ from "Normal"	
$\Delta\theta_{C,t}$	0.004
$\Delta\theta_{C,A'}$	0.0004
$\Delta\theta_{g,d}$	0.0035
$\Delta\theta_{g,F}$	0.0031
$\Delta\theta_{i,g}$	0.0249

Constants of Dispersion Formula	
A_1	1.10542993
A_2	$1.16184325 \times 10^{-1}$
A_3	1.15396111
B_1	$6.69004168 \times 10^{-3}$
B_2	$3.60840691 \times 10^{-2}$
B_3	1.37546485×10^2

Other Properties	
Bubble Quality Group	
Specific Gravity	2.46
Remarks	

Temperature Coefficients of Refractive Index								
Range of Temperature (°C)	dn/dt relative ($10^{-6}/^\circ\text{C}$)							
	t	C'	He-Ne	D	e	F'	g	
-40~20	-1.3	-1.1	-1.0	-1.0	-0.8	-0.6	-0.3	-0.3
-20~0	-1.2	-1.0	-0.9	-0.8	-0.7	-0.5	-0.2	
0~20	-1.2	-0.9	-0.8	-0.7	-0.6	-0.3	0.0	
20~40	-1.1	-0.8	-0.7	-0.6	-0.5	-0.2	0.1	
40~60	-0.9	-0.6	-0.6	-0.5	-0.4	-0.1	0.3	
60~80	-0.8	-0.5	-0.5	-0.4	-0.3	0.1	0.4	

Partial Dispersions	
n_C-n_t	0.007246
$n_C-n_{A'}$	0.003036
n_d-n_C	0.002687
n_e-n_C	0.004802
n_g-n_d	0.011116
n_g-n_F	0.004917
n_h-n_g	0.004142
n_i-n_g	0.011352
n_C-n_t	0.007673
$n_e-n_{C'}$	0.004375
n_F-n_e	0.004596
$n_i-n_{F'}$	0.015757

Thermal Properties	
Strain Point StP (°C)	434
Annealing Point AP (°C)	472
Transformation Temperature Tg (°C)	475
Yield Point At (°C)	544
Softening Point SP (°C)	654
Expansion Coefficients (-30~+70°C)	88
α (10 ⁻⁷ /°C) (+100~+300°C)	99
Thermal Conductivity k (W/m·K)	0.942

Mechanical Properties	
Young's Modulus E (10 ⁹ N/m ²)	578
Rigidity Modulus G (10 ⁹ N/m ²)	233
Poisson's Ratio σ	0.238
Knoop Hardness Hk[Class]	470 5
Abrasion Aa	138
Photoelastic Constant β (nm/cm/105Pa)	5.34

Chemical Properties	
Water Resistance(Powder) Group RW(P)	1
Acid Resistance(Powder) Group RA(P)	2
Weathering Resistance(Surface) Group W(S)	1
Acid Resistance(Surface) Group SR	1.0
Phosphate Resistance PR	1.0

Relative Partial Dispersions	
$\theta_{C,t}$	0.8154
$\theta_{C,A'}$	0.3447
$\theta_{d,C}$	0.3024
$\theta_{e,C}$	0.5404
$\theta_{g,d}$	1.251
$\theta_{g,F}$	0.5533
$\theta_{h,g}$	0.4661
$\theta_{i,g}$	1.2775
$\theta'_{C,t}$	0.8553
$\theta'_{e,C'}$	0.4877
$\theta'_{F,e}$	0.5123
$\theta'_{i,F}$	1.7564

Coloring			
λ_{80}	36	λ_5	33
λ_{70}			

Internal Transmittance	
$\lambda(\text{nm})$	$\tau_{10\text{mm}}$
280	
290	
300	
310	
320	
330	0.04
340	0.43
350	0.79
360	0.931
370	0.970
380	0.980
390	0.990
400	0.992
420	0.991
440	0.990
460	0.990
480	0.992
500	0.994
550	0.996
600	0.996
650	0.995
700	0.997
800	0.999
900	0.999
1000	0.998
1200	0.998
1400	0.991
1600	0.994
1800	0.992
2000	0.998
2200	0.945
2400	0.920