

## N-LASF46A 904313.445

|                 |               |                              |
|-----------------|---------------|------------------------------|
| $n_d = 1.90366$ | $v_d = 31.32$ | $n_F - n_C = 0.028853$       |
| $n_e = 1.91048$ | $v_e = 31.09$ | $n_{F'} - n_{C'} = 0.029287$ |

| Refractive Indices |                |         |
|--------------------|----------------|---------|
|                    | $\lambda$ [nm] |         |
| $n_{2325.4}$       | 2325.4         | 1.84576 |
| $n_{1970.1}$       | 1970.1         | 1.85364 |
| $n_{1529.6}$       | 1529.6         | 1.86255 |
| $n_{1060.0}$       | 1060.0         | 1.87353 |
| $n_t$              | 1014.0         | 1.87498 |
| $n_s$              | 852.1          | 1.88143 |
| $n_r$              | 706.5          | 1.89064 |
| $n_C$              | 656.3          | 1.89526 |
| $n_{C'}$           | 643.8          | 1.89657 |
| $n_{632.8}$        | 632.8          | 1.89781 |
| $n_D$              | 589.3          | 1.90341 |
| $n_d$              | 587.6          | 1.90366 |
| $n_e$              | 546.1          | 1.91048 |
| $n_F$              | 486.1          | 1.92411 |
| $n_{F'}$           | 480.0          | 1.92586 |
| $n_g$              | 435.8          | 1.94129 |
| $n_h$              | 404.7          | 1.95645 |
| $n_i$              | 365.0          |         |
| $n_{334.1}$        | 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                            | 0.556           | 0.230           |
| 2325                            | 0.793           | 0.560           |
| 1970                            | 0.954           | 0.890           |
| 1530                            | 0.991           | 0.977           |
| 1060                            | 0.999           | 0.997           |
| 700                             | 0.996           | 0.989           |
| 660                             | 0.994           | 0.985           |
| 620                             | 0.993           | 0.983           |
| 580                             | 0.993           | 0.982           |
| 546                             | 0.991           | 0.978           |
| 500                             | 0.980           | 0.950           |
| 460                             | 0.959           | 0.900           |
| 436                             | 0.937           | 0.850           |
| 420                             | 0.905           | 0.780           |
| 405                             | 0.847           | 0.660           |
| 400                             | 0.815           | 0.600           |
| 390                             | 0.707           | 0.420           |
| 380                             | 0.504           | 0.180           |
| 370                             | 0.181           | 0.014           |
| 365                             | 0.050           |                 |
| 350                             |                 |                 |
| 334                             |                 |                 |
| 320                             |                 |                 |
| 310                             |                 |                 |
| 300                             |                 |                 |
| 290                             |                 |                 |
| 280                             |                 |                 |
| 270                             |                 |                 |
| 260                             |                 |                 |
| 250                             |                 |                 |

| Relative Partial Dispersion |        |
|-----------------------------|--------|
| $P_{s,t}$                   | 0.2236 |
| $P_{C,s}$                   | 0.4793 |
| $P_{d,C}$                   | 0.2912 |
| $P_{e,d}$                   | 0.2364 |
| $P_{g,F}$                   | 0.5953 |
| $P_{i,h}$                   |        |
| $P'_{s,t}$                  | 0.2203 |
| $P'_{C',s}$                 | 0.5170 |
| $P'_{d,C'}$                 | 0.2420 |
| $P'_{e,d}$                  | 0.2329 |
| $P'_{g,F'}$                 | 0.5268 |
| $P'_{i,h}$                  |        |

### Deviation of Relative Partial Dispersions $\Delta P$ from the "Normal Line"

|                  |        |
|------------------|--------|
| $\Delta P_{C,t}$ | 0.0094 |
| $\Delta P_{C,s}$ | 0.0034 |
| $\Delta P_{F,e}$ | 0.0005 |
| $\Delta P_{g,F}$ | 0.0042 |
| $\Delta P_{i,g}$ |        |

| Constants of Dispersion Formula |              |
|---------------------------------|--------------|
| $B_1$                           | 2.16701566   |
| $B_2$                           | 0.319812761  |
| $B_3$                           | 1.66004486   |
| $C_1$                           | 0.0123595524 |
| $C_2$                           | 0.0560610282 |
| $C_3$                           | 107.047718   |

| Constants of Dispersion $dn/dT$ |                        |
|---------------------------------|------------------------|
| $D_0$                           | $3.53 \cdot 10^{-6}$   |
| $D_1$                           | $1.24 \cdot 10^{-8}$   |
| $D_2$                           | $-1.87 \cdot 10^{-11}$ |
| $E_0$                           | $8.39 \cdot 10^{-7}$   |
| $E_1$                           | $1.04 \cdot 10^{-9}$   |
| $\lambda_{TK} [\mu m]$          | 0.275                  |

| Color Code                     |        |
|--------------------------------|--------|
| $\lambda_{80}/\lambda_5$       | 41/37* |
| (*= $\lambda_{70}/\lambda_5$ ) |        |

| Remarks |  |
|---------|--|
|         |  |

| Other Properties                        |       |
|---|-------|
| $\alpha_{-30/+70^\circ C} [10^{-6}/K]$  | 6.0   |
| $\alpha_{+20/+300^\circ C} [10^{-6}/K]$ | 7.2   |
| $T_g [^\circ C]$                        | 638   |
| $T_{10}^{13.0} [^\circ C]$              | 639   |
| $T_{10}^{7.6} [^\circ C]$               | 733   |
| $c_p [J/(g \cdot K)]$                   | 0.540 |
| $\lambda [W/(m \cdot K)]$               | 0.910 |
| $\rho [g/cm^3]$                         | 4.45  |
| $E [10^3 N/mm^2]$                       | 124   |
| $\mu$                                   | 0.298 |
| $K [10^{-6} mm^2/N]$                    | 1.64  |
| $HK_{0.1/20}$                           | 666   |
| <b>HG</b>                               | 1     |
| <b>Abrasion Aa</b>                      | 88    |
| <b>CR</b>                               | 1     |
| <b>FR</b>                               | 0     |
| <b>SR</b>                               | 3     |
| <b>AR</b>                               | 1     |
| <b>PR</b>                               | 1     |

| Temperature Coefficients of Refractive Index |                                       |     |      |                                       |     |     |
|--|---------------------------------------|-----|------|---------------------------------------|-----|-----|
| [ $^\circ C$ ]                               | $\Delta n_{rel}/\Delta T [10^{-6}/K]$ |     |      | $\Delta n_{abs}/\Delta T [10^{-6}/K]$ |     |     |
|  | 1060.0                                | e   | g    | 1060.0                                | e   | g   |
| -40/ -20                                     | 4.4                                   | 6.4 | 8.8  | 1.9                                   | 3.8 | 6.1 |
| +20/ +40                                     | 4.7                                   | 7.0 | 9.8  | 3.1                                   | 5.3 | 8.1 |
| +60/ +80                                     | 5.0                                   | 7.4 | 10.5 | 3.7                                   | 6.1 | 9.2 |