

## N-PSK53A 618634.357

|                 |               |                              |
|-----------------|---------------|------------------------------|
| $n_d = 1.61800$ | $v_d = 63.39$ | $n_F - n_C = 0.009749$       |
| $n_e = 1.62033$ | $v_e = 63.10$ | $n_{F'} - n_{C'} = 0.009831$ |

| Refractive Indices |                |         |
|--------------------|----------------|---------|
|                    | $\lambda$ [nm] |         |
| $n_{2325.4}$       | 2325.4         | 1.59015 |
| $n_{1970.1}$       | 1970.1         | 1.59528 |
| $n_{1529.6}$       | 1529.6         | 1.60073 |
| $n_{1060.0}$       | 1060.0         | 1.60641 |
| $n_t$              | 1014.0         | 1.60706 |
| $n_s$              | 852.1          | 1.60979 |
| $n_r$              | 706.5          | 1.61334 |
| $n_C$              | 656.3          | 1.61503 |
| $n_{C'}$           | 643.8          | 1.61550 |
| $n_{632.8}$        | 632.8          | 1.61595 |
| $n_D$              | 589.3          | 1.61791 |
| $n_d$              | 587.6          | 1.61800 |
| $n_e$              | 546.1          | 1.62033 |
| $n_F$              | 486.1          | 1.62478 |
| $n_{F'}$           | 480.0          | 1.62534 |
| $n_g$              | 435.8          | 1.63007 |
| $n_h$              | 404.7          | 1.63445 |
| $n_i$              | 365.0          | 1.64190 |
| $n_{334.1}$        | 334.1          | 1.64991 |
| $n_{312.6}$        | 312.6          | 1.65724 |
| $n_{296.7}$        | 296.7          | 1.66390 |
| $n_{280.4}$        | 280.4          |         |
| $n_{248.3}$        | 248.3          |         |

| Internal Transmittance $\tau_i$ |                 |                 |
|---------------------------------|-----------------|-----------------|
| $\lambda$ [nm]                  | $\tau_i$ (10mm) | $\tau_i$ (25mm) |
| 2500                            | 0.609           | 0.290           |
| 2325                            | 0.764           | 0.510           |
| 1970                            | 0.915           | 0.800           |
| 1530                            | 0.982           | 0.956           |
| 1060                            | 0.998           | 0.994           |
| 700                             | 0.998           | 0.994           |
| 660                             | 0.997           | 0.993           |
| 620                             | 0.997           | 0.992           |
| 580                             | 0.998           | 0.994           |
| 546                             | 0.998           | 0.995           |
| 500                             | 0.997           | 0.992           |
| 460                             | 0.994           | 0.986           |
| 436                             | 0.993           | 0.982           |
| 420                             | 0.992           | 0.979           |
| 405                             | 0.988           | 0.970           |
| 400                             | 0.985           | 0.964           |
| 390                             | 0.976           | 0.940           |
| 380                             | 0.959           | 0.900           |
| 370                             | 0.928           | 0.830           |
| 365                             | 0.905           | 0.780           |
| 350                             | 0.776           | 0.530           |
| 334                             | 0.525           | 0.200           |
| 320                             | 0.230           | 0.030           |
| 310                             | 0.061           |                 |
| 300                             |                 |                 |
| 290                             |                 |                 |
| 280                             |                 |                 |
| 270                             |                 |                 |
| 260                             |                 |                 |
| 250                             |                 |                 |

| Relative Partial Dispersion |        |
|-----------------------------|--------|
| $P_{s,t}$                   | 0.2797 |
| $P_{C,s}$                   | 0.5380 |
| $P_{d,C}$                   | 0.3044 |
| $P_{e,d}$                   | 0.2385 |
| $P_{g,F}$                   | 0.5424 |
| $P_{i,h}$                   | 0.7642 |
|                             |        |
| $P'_{s,t}$                  | 0.2774 |
| $P'_{C',s}$                 | 0.5816 |
| $P'_{d,C'}$                 | 0.2538 |
| $P'_{e,d}$                  | 0.2365 |
| $P'_{g,F'}$                 | 0.4815 |
| $P'_{i,h}$                  | 0.7578 |

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

|                  |         |
|------------------|---------|
| $\Delta P_{C,t}$ | -0.0279 |
| $\Delta P_{C,s}$ | -0.0127 |
| $\Delta P_{F,e}$ | 0.0020  |
| $\Delta P_{g,F}$ | 0.0052  |
| $\Delta P_{i,g}$ | 0.0208  |

| Constants of Dispersion Formula |               |
|---------------------------------|---------------|
| $B_1$                           | 1.38121836    |
| $B_2$                           | 0.196745645   |
| $B_3$                           | 0.886089205   |
| $C_1$                           | 0.00706416337 |
| $C_2$                           | 0.0233251345  |
| $C_3$                           | 97.4847345    |

| Constants of Dispersion $dn/dT$ |                       |
|---------------------------------|-----------------------|
| $D_0$                           | $-9.28 \cdot 10^{-6}$ |
| $D_1$                           | $7.19 \cdot 10^{-9}$  |
| $D_2$                           | $1.45 \cdot 10^{-12}$ |
| $E_0$                           | $4.06 \cdot 10^{-7}$  |
| $E_1$                           | $3.17 \cdot 10^{-10}$ |
| $\lambda_{TK} [\mu m]$          | 0.19                  |

| Color Code                      |       |
|---------------------------------|-------|
| $\lambda_{80}/\lambda_5$        | 36/31 |
| (* = $\lambda_{70}/\lambda_5$ ) |       |

| Remarks            |  |
|--------------------|--|
| step 0.5 available |  |

| Other Properties                        |       |
|---|-------|
| $\alpha_{-30/+70^\circ C} [10^{-6}/K]$  | 9.6   |
| $\alpha_{+20/+300^\circ C} [10^{-6}/K]$ | 10.8  |
| $T_g [^\circ C]$                        | 606   |
| $T_{10}^{13.0} [^\circ C]$              | 609   |
| $T_{10}^{7.6} [^\circ C]$               | 699   |
| $c_p [J/(g \cdot K)]$                   | 0.590 |
| $\lambda [W/(m \cdot K)]$               | 0.640 |
| $AT [^\circ C]$                         | 647   |
| $\rho [g/cm^3]$                         | 3.57  |
| $E [10^3 N/mm^2]$                       | 76    |
| $\mu$                                   | 0.288 |
| $K [10^{-6} mm^2/N]$                    | 1.16  |
| $HK_{0.1/20}$                           | 415   |
| $HG$                                    | 6     |
| <b>Abrasion Aa</b>                      | 284   |
|   |       |
|   |       |
|   |       |
| <b>CR</b>                               | 1     |
| <b>FR</b>                               | 1     |
| <b>SR</b>                               | 53.3  |
| <b>AR</b>                               | 2.3   |
| <b>PR</b>                               | 4.3   |
| <b>SR-J</b>                             | 5     |
| <b>WR-J</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                                     | -2.6                                  | -2.1 | -1.6 | -4.7                                  | -4.3 | -3.8 |
| +20/ +40                                     | -2.9                                  | -2.4 | -1.8 | -4.3                                  | -3.8 | -3.3 |
| +60/ +80                                     | -2.9                                  | -2.3 | -1.8 | -4.0                                  | -3.5 | -2.9 |