

## P-LASF50 809405.454

|                 |               |                              |
|-----------------|---------------|------------------------------|
| $n_d = 1.80860$ | $v_d = 40.46$ | $n_F - n_C = 0.019985$       |
| $n_e = 1.81335$ | $v_e = 40.22$ | $n_{F'} - n_{C'} = 0.020223$ |

| Refractive Indices |                |         |
|--------------------|----------------|---------|
|                    | $\lambda$ [nm] |         |
| $n_{2325.4}$       | 2325.4         | 1.76261 |
| $n_{1970.1}$       | 1970.1         | 1.76975 |
| $n_{1529.6}$       | 1529.6         | 1.77759 |
| $n_{1060.0}$       | 1060.0         | 1.78657 |
| $n_t$              | 1014.0         | 1.78770 |
| $n_s$              | 852.1          | 1.79259 |
| $n_r$              | 706.5          | 1.79934 |
| $n_C$              | 656.3          | 1.80266 |
| $n_{C'}$           | 643.8          | 1.80359 |
| $n_{632.8}$        | 632.8          | 1.80447 |
| $n_D$              | 589.3          | 1.80842 |
| $n_d$              | 587.6          | 1.80860 |
| $n_e$              | 546.1          | 1.81335 |
| $n_F$              | 486.1          | 1.82264 |
| $n_{F'}$           | 480.0          | 1.82382 |
| $n_g$              | 435.8          | 1.83399 |
| $n_h$              | 404.7          | 1.84367 |
| $n_i$              | 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                            | 0.525           | 0.200           |
| 2325                            | 0.776           | 0.530           |
| 1970                            | 0.950           | 0.880           |
| 1530                            | 0.992           | 0.981           |
| 1060                            | 0.999           | 0.998           |
| 700                             | 0.998           | 0.995           |
| 660                             | 0.997           | 0.993           |
| 620                             | 0.997           | 0.992           |
| 580                             | 0.997           | 0.992           |
| 546                             | 0.997           | 0.992           |
| 500                             | 0.995           | 0.987           |
| 460                             | 0.990           | 0.975           |
| 436                             | 0.985           | 0.963           |
| 420                             | 0.980           | 0.950           |
| 405                             | 0.971           | 0.930           |
| 400                             | 0.967           | 0.920           |
| 390                             | 0.954           | 0.890           |
| 380                             | 0.928           | 0.830           |
| 370                             | 0.877           | 0.720           |
| 365                             | 0.842           | 0.650           |
| 350                             | 0.657           | 0.350           |
| 334                             | 0.292           | 0.030           |
| 320                             | 0.032           |                 |
| 310                             |                 |                 |
| 300                             |                 |                 |
| 290                             |                 |                 |
| 280                             |                 |                 |
| 270                             |                 |                 |
| 260                             |                 |                 |
| 250                             |                 |                 |

| Relative Partial Dispersion |        |
|-----------------------------|--------|
| $P_{s,t}$                   | 0.2448 |
| $P_{C,s}$                   | 0.5037 |
| $P_{d,C}$                   | 0.2973 |
| $P_{e,d}$                   | 0.2376 |
| $P_{g,F}$                   | 0.5680 |
| $P_{i,h}$                   |        |
| $P'_{s,t}$                  | 0.2419 |
| $P'_{C',s}$                 | 0.5441 |
| $P'_{d,C'}$                 | 0.2475 |
| $P'_{e,d}$                  | 0.2348 |
| $P'_{g,F'}$                 | 0.5032 |
| $P'_{i,h}$                  |        |

| Deviation of Relative Partial Dispersions $\Delta P$ from the "Normal Line" |         |
|---|---------|
| $\Delta P_{C,t}$  | 0.0116  |
| $\Delta P_{C,s}$  | 0.0065  |
| $\Delta P_{F,e}$  | -0.0020 |
| $\Delta P_{g,F}$  | -0.0078 |
| $\Delta P_{i,g}$  |         |

| Constants of Dispersion Formula |               |
|---------------------------------|---------------|
| $B_1$                           | 1.84910553    |
| $B_2$                           | 0.329828674   |
| $B_3$                           | 1.30400901    |
| $C_1$                           | 0.00999234757 |
| $C_2$                           | 0.0387437988  |
| $C_3$                           | 95.8967681    |

| Color Code                     |       |
|--------------------------------|-------|
| $\lambda_{80}/\lambda_5$       | 39/32 |
| (*= $\lambda_{70}/\lambda_5$ ) |       |

| Remarks                        |
|--------------------------------|
| suitable for precision molding |

| Constants of Dispersion dn/dT |                        |
|-------------------------------|------------------------|
| $D_0$                         | $8.04 \cdot 10^{-6}$   |
| $D_1$                         | $1.20 \cdot 10^{-8}$   |
| $D_2$                         | $-2.19 \cdot 10^{-11}$ |
| $E_0$                         | $8.20 \cdot 10^{-7}$   |
| $E_1$                         | $9.08 \cdot 10^{-10}$  |
| $\lambda_{TK} [\mu m]$        | 0.209                  |

| Other Properties                        |       |
|---|-------|
| $\alpha_{-30/+70^\circ C} [10^{-6}/K]$  | 5.9   |
| $\alpha_{+20/+300^\circ C} [10^{-6}/K]$ | 7.3   |
| $T_g [^\circ C]$                        | 527   |
| $T_{10}^{13.0} [^\circ C]$              | 526   |
| $T_{10}^{7.6} [^\circ C]$               | 660   |
| $c_p [J/(g \cdot K)]$                   | 0.560 |
| $\lambda [W/(m \cdot K)]$               | 0.950 |
| AT [°C]                                 | 571   |
| $\rho [g/cm^3]$                         | 4.54  |
| $E [10^3 N/mm^2]$                       | 119   |
| $\mu$                                   | 0.298 |
| $K [10^{-6} mm^2/N]$                    | 2.41  |
| HK <sub>0.1/20</sub>                    | 655   |
| HG                                      |       |
| Abrasion Aa                             | 62    |
| CR                                      | 0     |
| FR                                      | 0     |
| SR                                      | 0     |
| AR                                      | 0     |
| PR                                      | 0     |
| SR-J                                    | 3     |
| WR-J                                    | 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                                     | 6.9                                   | 8.5 | 10.0 | 4.5                                   | 6.0 | 7.5 |
| +20/ +40                                     | 7.1                                   | 8.9 | 10.6 | 5.5                                   | 7.3 | 9.0 |
| +60/ +80                                     | 7.3                                   | 9.2 | 11.1 | 6.1                                   | 8.0 | 9.9 |