

## D-LaF814 815370

|             |           |                     |
|-------------|-----------|---------------------|
| nd =1.81474 | vd =37.03 | nF – nC =0.022004   |
| ne =1.81995 | ve =36.78 | nF' – nc' =0.022294 |

| Refractive indices |                  |         |
|--------------------|------------------|---------|
|                    | $\lambda$ ( nm ) |         |
| $n_r$              | 706.5            | 1.80464 |
| $n_c$              | 656.3            | 1.80825 |
| $n_{c'}$           | 643.8            | 1.80927 |
| $n_{He-Ne}$        | 632.8            | 1.81023 |
| $n_D$              | 589.3            | 1.81455 |
| $n_d$              | 587.6            | 1.81474 |
| $n_e$              | 546.1            | 1.81995 |
| $n_F$              | 486.1            | 1.83025 |
| $n_{F'}$           | 480.0            | 1.83156 |
| $n_g$              | 435.8            | 1.84305 |
| $n_h$              | 404.7            | 1.85417 |
| $n_i$              | 365.0            | 1.87422 |

| Chemical Properties |       |
|---------------------|-------|
|                     | Group |
| RC(S)               |       |
| RA(S)               |       |
| DW                  | 1     |
| DA                  | 4     |

| Internal Transmittance |              |               |
|------------------------|--------------|---------------|
| $\lambda$ ( nm )       | $\tau_{5mm}$ | $\tau_{10mm}$ |
| 2400                   |              |               |
| 2200                   |              |               |
| 2000                   |              |               |
| 1800                   |              |               |
| 1600                   |              |               |
| 1400                   |              |               |
| 1200                   |              |               |
| 1060                   |              |               |
| 1000                   |              |               |
| 950                    |              |               |
| 900                    |              |               |
| 850                    |              |               |
| 800                    |              |               |
| 700                    | 0.999        | 0.998         |
| 650                    | 0.998        | 0.997         |
| 600                    | 0.998        | 0.997         |
| 550                    | 0.998        | 0.997         |
| 500                    | 0.997        | 0.994         |
| 480                    | 0.995        | 0.991         |
| 460                    | 0.993        | 0.987         |
| 440                    | 0.99         | 0.981         |
| 420                    | 0.985        | 0.97          |
| 400                    | 0.97         | 0.94          |
| 390                    | 0.95         | 0.9           |
| 380                    | 0.9          | 0.81          |
| 370                    | 0.8          | 0.63          |
| 360                    | 0.57         | 0.33          |
| 350                    | 0.21         | 0.05          |
| 340                    |              |               |
| 330                    |              |               |
| 320                    |              |               |
| 310                    |              |               |
| 300                    |              |               |
| 290                    |              |               |
| 280                    |              |               |

| Thermal Properties                                |     |
|---|-----|
| Tg ( °C )   | 538 |
| Ts ( °C )   |     |
| T <sub>10</sub> <sup>14.5</sup> ( °C )            |     |
| T <sub>10</sub> <sup>13</sup> ( °C )              |     |
| $\alpha_{20/120^\circ C}$ ( 10 <sup>-7</sup> /K ) |     |
| $\alpha_{20/300^\circ C}$ ( 10 <sup>-7</sup> /K ) | 74  |

| Constants of Dispersion (Cauchy) |                            |
|----------------------------------|----------------------------|
| A <sub>0</sub>                   | 3.188026                   |
| A <sub>1</sub>                   | -1.217842×10 <sup>-2</sup> |
| A <sub>2</sub>                   | 3.719308×10 <sup>-2</sup>  |
| A <sub>3</sub>                   | -2.817531×10 <sup>-4</sup> |
| A <sub>4</sub>                   | 1.804480×10 <sup>-4</sup>  |
| A <sub>5</sub>                   | -4.182909×10 <sup>-6</sup> |

| Mechanical Properties                 |       |
|---------------------------------------|-------|
| Hardness ( 10 <sup>7</sup> Pa )       | 615   |
| FA (Relative Abrasion)                |       |
| Young's Modulus (10 <sup>7</sup> Pa)  | 11490 |
| Rigidity Modulus (10 <sup>7</sup> Pa) | 4440  |
| Poisson's Ratio                       | 0.292 |

| Relative Partial Dispersions |        |                    |        |
|------------------------------|--------|--------------------|--------|
| P <sub>d,c</sub>             | 0.295  | P' <sub>d,c'</sub> | 0.2454 |
| P <sub>e,d</sub>             | 0.2368 | P' <sub>e,d</sub>  | 0.2337 |
| P <sub>g,F</sub>             | 0.5818 | P' <sub>g,F'</sub> | 0.5155 |

| Photoelastic Constant             |      |
|-----------------------------------|------|
| $\beta$ ( 10 <sup>-12</sup> /Pa ) | 1.95 |

| Deviation of Relative Partial Dispersions |         |
|---|---------|
| $\Delta P_{F,e}$                          | -0.0016 |
| $\Delta P_{g,F}$                          | -0.0003 |

| Color                    |       |
|--------------------------|-------|
| $\lambda_{80}/\lambda_5$ | 42/35 |

| Specific Gravity             |      |
|------------------------------|------|
| $\rho$ ( g/cm <sup>3</sup> ) | 4.22 |

| NHG      | HOYA     | OHARA | SCHOTT |
|----------|----------|-------|--------|
| D-LaF814 | M-NBFD82 |       |        |



Naked Optics Corp.  
 16 Mt. Bethel Rd. #374  
 Warren, NJ 07059  
 908-685-0352 (ph) . 908-325-0250 (fax)