

E-FD8

689-312

$n_d = 1.68893$ $\nu_d = 31.16$ $n_F - n_C = 0.022109$
 $n_e = 1.69416$ $\nu_e = 30.92$ $n_{F'} - n_{C'} = 0.022450$

| 屈折率 Refractive Index | | |
|----------------------|----------------|---------|
| | λ (nm) | |
| n_t | 1013.98 | 1.66709 |
| n_s | 852.11 | 1.67198 |
| $n_{A'}$ | 768.19 | 1.67556 |
| n_r | 706.52 | 1.67899 |
| n_c | 656.27 | 1.68251 |
| $n_{c'}$ | 643.85 | 1.68351 |
| n_{633} | 632.80 | 1.68445 |
| n_D | 589.29 | 1.68874 |
| n_d | 587.56 | 1.68893 |
| n_e | 546.07 | 1.69416 |
| n_F | 486.13 | 1.70462 |
| $n_{F'}$ | 479.99 | 1.70596 |
| n_g | 435.84 | 1.71786 |
| n_h | 404.66 | 1.72964 |
| n_i | 365.01 | 1.75182 |

| 化学的性質 Chemical Properties | |
|---------------------------|---|
| D_W | 1 |
| D_A | 1 |
| T_{Blue} | 1 |
| D_{NaOH} | 1 |
| D_{STPP} | 1 |
| D_0 | 1 |
| D_H | |

| 内部透過率 Internal Transmittance | | |
|------------------------------|------------|-------------|
| λ (nm) | τ 5mm | τ 10mm |
| 1550 | 0.998 | 0.995 |
| 1500 | 0.998 | 0.996 |
| 1400 | 0.998 | 0.996 |
| 1300 | 0.998 | 0.998 |
| 1200 | 0.998 | 0.999 |
| 1100 | 0.998 | 0.998 |
| 1060 | 0.998 | 0.998 |
| 1050 | 0.998 | 0.999 |
| 1000 | 0.998 | 0.998 |
| 950 | 0.998 | 0.999 |
| 900 | 0.998 | 0.998 |
| 850 | 0.998 | 0.997 |
| 830 | 0.998 | 0.997 |
| 800 | 0.998 | 0.997 |
| 780 | 0.998 | 0.997 |
| 750 | 0.998 | 0.997 |
| 700 | 0.998 | 0.996 |
| 650 | 0.997 | 0.994 |
| 600 | 0.998 | 0.996 |
| 550 | 0.999 | 0.997 |
| 500 | 0.994 | 0.987 |
| 480 | 0.994 | 0.988 |
| 460 | 0.991 | 0.981 |
| 440 | 0.988 | 0.977 |
| 420 | 0.980 | 0.960 |
| 400 | 0.951 | 0.904 |
| 390 | 0.907 | 0.822 |
| 380 | 0.800 | 0.640 |
| 370 | 0.555 | 0.308 |
| 360 | 0.192 | 0.037 |
| 350 | | |
| 340 | | |
| 330 | | |
| 320 | | |
| 310 | | |
| 300 | | |
| 290 | | |
| 280 | | |

| 分散式の定数 Constants of dispersion formula | |
|--|-----------------------------|
| A_0 | 2.7617586 |
| A_1 | $-1.1254039 \times 10^{-2}$ |
| A_2 | 2.8221737×10^{-2} |
| A_3 | 1.7540315×10^{-3} |
| A_4 | $-1.2127053 \times 10^{-4}$ |
| A_5 | 1.5522384×10^{-5} |

| 熱的性質 Thermal Properties | |
|------------------------------------|-------|
| T_g (°C) | 574 |
| T_s (°C) | 617 |
| $T_{10^{14.5}}$ (°C) | 545 |
| $T_{10^{13}}$ (°C) | 566 |
| $T_{10^{7.6}}$ (°C) | 665 |
| $\alpha_{-30/+70}$ ($10^{-7}/K$) | 93 |
| $\alpha_{100/300}$ ($10^{-7}/K$) | 112 |
| λ [W/(m·K)] | 0.987 |
| C_p [kJ/(kg·K)] | 0.708 |

| 部分分散 Partial dispersions | |
|--------------------------|----------|
| $n_c - n_t$ | 0.015414 |
| $n_d - n_c$ | 0.006423 |
| $n_F - n_d$ | 0.015686 |
| $n_g - n_F$ | 0.013241 |
| $n_{c'} - n_t$ | 0.016417 |
| $n_e - n_{c'}$ | 0.010646 |
| $n_{F'} - n_e$ | 0.011804 |
| $n_g - n_{F'}$ | 0.011897 |

| 機械的性質 Mechanical Properties | |
|-----------------------------|---------|
| H_K | 530 (5) |
| F_A | 170 |
| E (GPa) | 84 |
| G (GPa) | 33.2 |
| μ | 0.256 |
| σ_b (MPa) | |

| 部分分散比 Partial dispersion rates | | | |
|--------------------------------|--------|------------|--------|
| $P_{c,t}$ | 0.6972 | $P'_{c,t}$ | 0.7313 |
| $P_{d,c}$ | 0.2905 | $P'_{d,c}$ | 0.2414 |
| $P_{e,d}$ | 0.2364 | $P'_{e,d}$ | 0.2328 |
| $P_{F,e}$ | 0.4731 | $P'_{F,e}$ | 0.5258 |
| $P_{g,F}$ | 0.5989 | $P'_{g,F}$ | 0.5299 |
| $P_{h,g}$ | 0.5329 | $P'_{h,g}$ | 0.5248 |
| $P_{i,h}$ | 1.0034 | $P'_{i,h}$ | 0.9882 |

| 屈折率の温度係数 Thermal coefficient of refractive indices ($\times 10^{-6}/K$) | | |
|---|----------------|----------------|
| (°C) | dn/dT (rel.) | dn/dT (abs.) |
| -40/-20 | 0.5 | -1.8 |
| -20/ 0 | 0.6 | -1.3 |
| 0/+20 | 0.7 | -0.9 |
| +20/+40 | 0.9 | -0.6 |
| +40/+60 | 1.0 | -0.3 |
| +60/+80 | 1.2 | 0.0 |

| 異常分散性 Anomalous dispersions | |
|-----------------------------|---------|
| $\Delta P_{c,t}$ | 0.0057 |
| $\Delta P_{c,A'}$ | -0.0007 |
| $\Delta P_{g,d}$ | 0.0076 |
| $\Delta P_{g,F}$ | 0.0067 |
| $\Delta P_{i,g}$ | 0.0708 |

| 光弾性定数 Photoelastic Constant | |
|-----------------------------|--|
| B ($10^{-12}/Pa$) | |

| 比重 Specific Gravity | |
|---------------------|------|
| d | 2.97 |

| 着色度 Coloration Code | |
|--|---------|
| $\lambda 80 (\lambda 70) / \lambda 5$ | 405/360 |
| 着色度 (内部透過率) Coloration of Internal Transmittance | |
| $\lambda \tau 80 / \lambda \tau 5$ | 389/361 |

| 備考 Remarks | | | | | |
|-----------------------------------|---------|---------|---------|---------|---------|
| 硝種対照表 Glass Cross Reference Index | | | | | |
| | HOYA | SCHOTT | OHARA | HIKARI | CDGM |
| Glass Type | E-FD8 | N-SF8 | S-TIM28 | E-SF8 | H-ZF10 |
| Code | 689-312 | 689-313 | 689-311 | 689-311 | 689-312 |

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