ガラスレンズ用プレス品硝種　Glass Lens Pressed Blanks
ガラス研磨レンズ用硝種　Glass Polished Lens

# E-F5

# 603-380

$n_d = 1.60342$　$\nu_d = 38.01$　$n_F - n_C = 0.015875$
$n_e = 1.60718$　$\nu_e = 37.74$　$n_{F'} - n_{C'} = 0.016088$

| 屈折率 Refractive Index | | |
|---|---|---|
| | λ (nm) | |
| $n_t$ | 1013.98 | 1.58703 |
| $n_s$ | 852.11 | 1.59087 |
| $n_{A'}$ | 768.19 | 1.59359 |
| $n_r$ | 706.52 | 1.59615 |
| $n_C$ | 656.27 | 1.59874 |
| $n_{C'}$ | 643.85 | 1.59948 |
| $n_{633}$ | 632.80 | 1.60017 |
| $n_D$ | 589.29 | 1.60328 |
| $n_d$ | 587.56 | 1.60342 |
| $n_e$ | 546.07 | 1.60718 |
| $n_F$ | 486.13 | 1.61462 |
| $n_{F'}$ | 479.99 | 1.61557 |
| $n_g$ | 435.84 | 1.62387 |
| $n_h$ | 404.66 | 1.63195 |
| $n_i$ | 365.01 | 1.64678 |

| 分散式の定数 Constants of dispersion formula | |
|---|---|
| $A_0$ | 2.5095673 |
| $A_1$ | $-1.0862661 \times 10^{-2}$ |
| $A_2$ | $1.9894774 \times 10^{-2}$ |
| $A_3$ | $1.0137134 \times 10^{-3}$ |
| $A_4$ | $-6.2697117 \times 10^{-5}$ |
| $A_5$ | $7.5080045 \times 10^{-6}$ |

| 部分分散 Partial dispersions | |
|---|---|
| $n_C - n_t$ | 0.011716 |
| $n_d - n_C$ | 0.004677 |
| $n_F - n_d$ | 0.011198 |
| $n_g - n_F$ | 0.009250 |
| $n_{C'} - n_t$ | 0.012450 |
| $n_e - n_{C'}$ | 0.007704 |
| $n_{F'} - n_e$ | 0.008384 |
| $n_g - n_{F'}$ | 0.008303 |

| 部分分散比 Partial dispersion rates | | | |
|---|---|---|---|
| $P_{C\_t}$ | 0.7380 | $P'_{C'\_t}$ | 0.7739 |
| $P_{d\_C}$ | 0.2946 | $P'_{d\_C'}$ | 0.2451 |
| $P_{e\_d}$ | 0.2369 | $P'_{e\_d}$ | 0.2338 |
| $P_{F\_e}$ | 0.4685 | $P'_{F'\_e}$ | 0.5211 |
| $P_{g\_F}$ | 0.5827 | $P'_{g\_F'}$ | 0.5161 |
| $P_{h\_g}$ | 0.5089 | $P'_{h\_g}$ | 0.5022 |
| $P_{i\_h}$ | 0.9340 | $P'_{i\_h}$ | 0.9217 |

| 異常分散性 Anomalous dispersions | |
|---|---|
| $\Delta P_{C\_t}$ | 0.0145 |
| $\Delta P_{C\_A'}$ | 0.0015 |
| $\Delta P_{g\_d}$ | 0.0029 |
| $\Delta P_{g\_F}$ | 0.0029 |
| $\Delta P_{i\_g}$ | 0.0381 |

| 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 |
| $D_H$ | |

| 熱的性質 Thermal Properties | |
|---|---|
| $T_g$ (℃) | 583 |
| $T_s$ (℃) | 632 |
| $T_{10^{14.5}}$ (℃) | 547 |
| $T_{10^{13}}$ (℃) | 573 |
| $T_{10^{7.6}}$ (℃) | 692 |
| $\alpha_{-30/+70℃}$ ($10^{-7}$/K) | 80 |
| $\alpha_{100/300℃}$ ($10^{-7}$/K) | 95 |
| λ [W/(m·K)] | 1.110 |
| $C_P$ [kJ/(kg·K)] | 0.771 |

| 機械的性質 Mechanical Properties | |
|---|---|
| $H_K$ | 515(5) |
| $F_A$ | 130 |
| E (GPa) | 79 |
| G (GPa) | 32.0 |
| μ | 0.232 |
| $\sigma_b$ (MPa) | |

| 屈折率の温度係数 (×$10^{-6}$/K) Thermal coefficient of refractive indices | | |
|---|---|---|
| (℃) | dn/dT (rel.) | dn/dT (abs.) |
| -40/-20 | 2.2 | 0.1 |
| -20/ 0 | 2.4 | 0.5 |
| 0/+20 | 2.5 | 1.0 |
| +20/+40 | 2.7 | 1.3 |
| +40/+60 | 2.8 | 1.6 |
| +60/+80 | 2.9 | 1.9 |

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

| 比重 Specific Gravity | |
|---|---|
| d | 2.63 |

| 内部透過率 Internal Transmittance | | |
|---|---|---|
| λ (nm) | τ 5mm | τ 10mm |
| 1550 | 0.997 | 0.994 |
| 1500 | 0.997 | 0.994 |
| 1400 | 0.995 | 0.990 |
| 1300 | 0.999 | 0.998 |
| 1200 | 0.999 | 0.998 |
| 1100 | 0.999 | 0.998 |
| 1060 | 0.999 | 0.998 |
| 1050 | 0.999 | 0.998 |
| 1000 | 0.999 | 0.998 |
| 950 | 0.999 | 0.998 |
| 900 | 0.999 | 0.999 |
| 850 | 0.999 | 0.999 |
| 830 | 0.999 | 0.999 |
| 800 | 0.999 | 0.999 |
| 780 | 0.999 | 0.999 |
| 750 | 0.999 | 0.999 |
| 700 | 0.998 | 0.996 |
| 650 | 0.997 | 0.994 |
| 600 | 0.998 | 0.997 |
| 550 | 0.998 | 0.996 |
| 500 | 0.996 | 0.991 |
| 480 | 0.994 | 0.988 |
| 460 | 0.993 | 0.985 |
| 440 | 0.992 | 0.984 |
| 420 | 0.989 | 0.978 |
| 400 | 0.978 | 0.957 |
| 390 | 0.957 | 0.916 |
| 380 | 0.906 | 0.820 |
| 370 | 0.758 | 0.574 |
| 360 | 0.435 | 0.190 |
| 350 | | |
| 340 | | |
| 330 | | |
| 320 | | |
| 310 | | |
| 300 | | |
| 290 | | |
| 280 | | |

| 着色度 Coloration Code | |
|---|---|
| λ80(λ70)/λ5 | 390/355 |

| 着色度(内部透過率) Coloration of Internal Transmittance | |
|---|---|
| λτ80/λτ5 | 379/355 |

備考 Remarks

硝種対照表 Glass Cross Reference Index

| | HOYA | SCHOTT | OHARA | HIKARI | CDGM |
|---|---|---|---|---|---|
| Glass Type | E-F5 | | S-TIM5 | E-F5 | H-F1 |
| Code | 603-380 | | 603-380 | 603-380 | 603-380 |

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