

Meller Optics, Inc.

Optics and Electro-Optics for
Lasers, Industry, and Defense

Sapphire Index of Refraction Table

03/11/02

Values at 20 ° C.

Ordinary ray along C axis, extraordinary ray normal to C axis.

| λ μm | Ordinary Ray | Extraordinary Ray | Difference (Or - Ex) | % Change (Diff / Ord) |
|----------------------------|-----------------|----------------------|-------------------------|--------------------------|
| 0.200 | 1.91271 | 1.90163 | 0.01108 | 0.58% |
| 0.240 | 1.85446 | 1.84453 | 0.00993 | 0.54% |
| 0.280 | 1.82437 | 1.81509 | 0.00928 | 0.51% |
| 0.320 | 1.80604 | 1.79752 | 0.00852 | 0.47% |
| 0.360 | 1.79467 | 1.78604 | 0.00863 | 0.48% |
| 0.400 | 1.78652 | 1.77807 | 0.00845 | 0.47% |
| 0.440 | 1.78059 | 1.77226 | 0.00833 | 0.47% |
| 0.480 | 1.77610 | 1.76768 | 0.00842 | 0.47% |
| 0.520 | 1.77260 | 1.76444 | 0.00816 | 0.46% |
| 0.560 | 1.76980 | 1.76169 | 0.00811 | 0.46% |
| 0.600 | 1.76750 | 1.75944 | 0.00806 | 0.46% |
| 0.640 | 1.76558 | 1.75755 | 0.00803 | 0.45% |
| 0.680 | 1.76394 | 1.75594 | 0.00800 | 0.45% |
| 0.720 | 1.76252 | 1.75454 | 0.00798 | 0.45% |
| 0.760 | 1.76126 | 1.75331 | 0.00795 | 0.45% |
| 0.800 | 1.76013 | 1.75220 | 0.00793 | 0.45% |
| 0.840 | 1.75911 | 1.75119 | 0.00792 | 0.45% |
| 0.880 | 1.75817 | 1.75026 | 0.00791 | 0.45% |
| 0.920 | 1.75729 | 1.74940 | 0.00789 | 0.45% |
| 0.960 | 1.75646 | 1.74858 | 0.00788 | 0.45% |
| 1.000 | 1.75568 | 1.74781 | 0.00787 | 0.45% |
| 1.300 | 1.75043 | 1.74260 | 0.00783 | 0.45% |
| 1.500 | 1.74705 | 1.73924 | 0.00781 | 0.45% |
| 1.700 | 1.74351 | 1.73572 | 0.00779 | 0.45% |
| 1.900 | 1.73971 | 1.73194 | 0.00777 | 0.45% |
| 2.100 | 1.73558 | 1.72784 | 0.00774 | 0.45% |
| 2.300 | 1.73110 | 1.72339 | 0.00771 | 0.45% |
| 2.500 | 1.72623 | 1.71855 | 0.00768 | 0.44% |
| 2.700 | 1.72095 | 1.71331 | 0.00764 | 0.44% |
| 2.900 | 1.71523 | 1.70765 | 0.00758 | 0.44% |
| 3.100 | 1.70907 | 1.70155 | 0.00752 | 0.44% |
| 3.300 | 1.70243 | 1.69500 | 0.00743 | 0.44% |
| 3.500 | 1.69531 | 1.68798 | 0.00733 | 0.43% |
| 3.700 | 1.68768 | 1.68047 | 0.00721 | 0.43% |
| 3.900 | 1.67951 | 1.67245 | 0.00706 | 0.42% |
| 4.100 | 1.67080 | 1.66391 | 0.00689 | 0.41% |
| 4.300 | 1.66151 | 1.65482 | 0.00669 | 0.40% |
| 4.500 | 1.65161 | 1.64517 | 0.00644 | 0.39% |
| 4.700 | 1.64108 | 1.63492 | 0.00616 | 0.38% |
| 4.900 | 1.62989 | 1.62406 | 0.00583 | 0.36% |
| 5.100 | 1.61799 | 1.61255 | 0.00544 | 0.34% |
| 5.300 | 1.60536 | 1.60036 | 0.00500 | 0.31% |
| 5.500 | 1.59195 | 1.58746 | 0.00449 | 0.28% |