

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%