

Optical Sapphire

We offer preformed and prepolished substrates of the optical sapphire in sizes up to ca. 500mm in dependence on the orientation.

refraction, transmission per 10mm (with Fresnel reflection)

λ [nm]	n_o	n_e	$T(\lambda)$ [%]
200.0	1.9127	1.9016	75.0
250.0	1.8452	1.8315	82.0
300.0	1.8144	1.8053	83.8
350.0	1.7972	1.7885	84.2
400.0	1.7865	1.7781	84.6
450.0	1.7794	1.7710	84.9
480.0	1.7761	1.7679	85.0
486.1	1.7755	1.7673	85.0
546.1	1.7707	1.7626	85.1
587.6	1.7681	1.7601	85.2
643.8	1.7654	1.7574	85.3
656.3	1.7649	1.7569	85.3
1000.0	1.7557	1.7678	85.5
3000.0	1.7122	1.7047	86.7
4000.0	1.6752	1.6682	78.0
5000.0	1.6240	1.6184	40.0
7000.0	1.4663	1.4590	5.0

density: 3.98 g/cm³
 CTE@0-200°C: 6.7x10⁻⁶/K parallel to optical axis
 5.0x10⁻⁶/K normal to optical axis
 orientation z surface to x- and y-axes:
 zx +/- 15 arcmin
 zy +/- 15 arcmin
 dimensions: y up to 350mm
 x up to 500mm
 z up to 300mm (along optical axis)

dispersion

λ [nm]	$v(\lambda)$	$v(\lambda)$
e-line 546.1	72.0	72.6
d-line 587.6	72.5	73.1
4000.0	7.7	7.7