Crystalline Quartz

refraction, transmission per 10mm (with Fresnel reflection)

λ [nm]	no	ne	T(λ) [%]
170.0	1.71103	1.72671	80.1
185.0	1.67680	1.69100	82.2
194.2	1.65890	1.67270	84.2
214.4	1.63050	1.64270	86.5
280.3	1.58517	1.59571	89.6
302.2	1.57733	1.58758	89.9
365.0	1.56283	1.57257	90.2
404.7	1.55715	1.56669	90.4
435.8	1.55379	1.56321	90.5
546.1	1.54614	1.55531	90.7
587.6	1.54427	1.55338	90.7
589.3	1.54421	1.55331	90.7
643.8	1.54224	1.55128	90.8
656.3	1.54185	1.55087	90.8
706.5	1.54044	1.54941	90.8
852.1	1.53735	1.54621	90.9
1014.0	1.53480	1.54356	91.0
1083.0	1.53384	1.54257	91.0
1128.7	1.53323	1.54193	91.0
1395.1	1.52976	1.53832	91.1
1709.1	1.52546	1.53384	91.2
1813.1	1.53391	1.53223	91.3
2058.1	1.51996	1.52810	91.4
2437.4	1.51284	1.52067	91.6
2500.0	1.51154	1.51931	91.0
2720.0	1.50662	1.51417	90.5
2800.0	1.50470	1.51217	89.9
2900.0	1.50219	1.50955	88.2
3000.0	1.49956	1.50681	87.5
3100.0	1.49681	1.50393	85.5
3243.9	1.49262	1.49955	90.0
3302.6	1.49082	1.49786	90.0
3507.0	1.48419	1.49075	84.9
3706.7	1.47707	1.48331	65.5
3750.0	1.47544	1.48160	60.2
3910.0	1.46912	1.47500	64.3
4000.0	1.46535	1.47106	56.1
4220.0	1.45544	1.46070	27.5
4300.0	1.45158	1.45666	27.3
4400.0	1.44654	1.45138	8.70

dispersion

λ [nm]	ν(λ)	ν(λ)
e-line 546.1	69.7	68.5
d-line 587.6	69.5	68.4

The crystalline quartz is grown in trapetzform blocks with maximal size of about 100mm along the optical axis (in rare cases it is possible to grow the crystal with the size up to 150mm along the optical axis). We offer the material in standard orientated grinded blocks like in the table below. Also complicated forms and other sizes are possible by request.

density: 2.65 g/cm^3
CTE@0-200°C: 13.2x10^{-6}/K parallel to optical axis
7.1x10^{-6}/K normal to optical axis
orientation of z surface to x- and y-axes:
zx +/- 15 arcmin
zy +/- 15 arcmin
dimensions: y up to 200mm
x up to 100mm
z up to 100mm (along optical axis)

size, mm	price, EUR/kg
x=32.0, y=80-160, z=32.0	595
x=30.0, y=80-160, z=30.0	595
x=27.3, y=80-160, z=27.3	595
x=21.8, y=80-160, z=21.8	595
x=19.8, y=80-160, z=19.8	595
x=18.8, y > 140, z=18.8	595
x=16.8, y > 140, z=16.8	595

recommended polishing slurries
- OXAPA BS SP
- OXAPA BS 69
- OXAPA BS N
- OXAPA BS PLUS
- OXAPA BS NANO *for finishing*
- OXAPA SOL

recommended polishing pads
- OXAPA polishing pad hard 8
- OXAPA polishing pad intermediate 5
- OXAPA polishing pad soft 4, 19 *for finishing*

recommended polishing pitches
- OXAPA PP 15-45