Reference Data

Temperature Coefficient of Refractive index of Crystal Quartz

Wavelength	dn_o/dT x 10-6 ºK	dn_e/dT x 10-6 ◦K
0.202	+3.21	+2.67
0.206	+2.53	+1.98
0.210	+1.93	+1.43
0.214	+1.24	+0.83
0.219	+0.74	+0.27
0.224	+0.17	-0.48
0.226	-0.08	-0.75
0.228	-0.27	-0.93
0.231	-0.52	-1.12
0.257	-1.86	-2.65
0.274	-2.35	-3.23
0.288	-2.79	-3.85
0.289	-3.11	-4.15
0.313	-3.48	-4.50
0.325	-3.52	-4.69
0.340	-3.93	-5.01
0.361	-4.18	-5.21
0.441	-4.75	-5.95
0.467	-4.85	-6.01
0.480	-4.99	-6.10
0.508	-5.14	-6.16
0.589	-5.39	-6.42
0.643	-5.49	-6.53

F.J.Micheli, *Ann Physik 4:7 (1902)*

This work covers the UV to red region of the spectrum. The later work by Toyoda & Yabe covers the 450nm to 1600nm region, but we note a slight discrepancy between the results in the overlapping region.

The temperature dependence of the refractive indices of fused silica and crystal quartz
T Toyoda and M Yabe - J. Phys. D: Appl. Phys.,**1 6** (1983) L97-L100.
Fuji Electric Corporate Research and Development Lt2d-,2 -1, Nagasaka, Yokosuka City 240-01, Japan
Abstract. The temperature dependence of the refractive indices of high-purity fused silica and crystal quartz as measured in the 450-1600 nm wavelength range and at temperatures from room temperature 400°C. The average thermal coefficients of the refractive indices of those materials show opposite sign. The wavelength dependence of the coefficient in fused silica is smaller than that in crystal quartz.

CRYSTRAN LTD
1, Broom Road Business Park, Poole, BH12 4PA, UK
TEL: +44 (0)1202 307650 FAX +44 (0)1202 307651
Email: sales@crystran.co.uk www.crystran.co.uk
Registered in England No. 2863378 VAT GB619 6814 12