

## Physical data

This file shows some physical data that I frequently use.

### Constants

symbol	value	units	constant
$c$	$2.9979 \cdot 10^8$	$m \cdot s^{-1}$	speed of light
$h$	$6.6261 \cdot 10^{-34}$	$J \cdot s$	Planck's constant
$e$	$1.6022 \cdot 10^{-19}$	$C$	electron charge
$N_A$	$6.0221 \cdot 10^{23}$	$mole^{-1}$	Avogadro's number
$a.m.u.$	$1.6605 \cdot 10^{-27}$	$kg$	atomic mass unit
$m_e$	$9.1094 \cdot 10^{-31}$	$kg$	electron mass
$k_B$	$1.3807 \cdot 10^{-23}$	$J \cdot K^{-1}$	Boltzmann's constant

### Data

Compound or Element	density ( $g \cdot cm^{-3}$ )	density ( $at \cdot cm^{-3}$ )	Reference
Quartz	2.65	$7.968 \cdot 10^{22}$	<i>Table of physical and chemical constants</i>
thermal silica	2.2	$6.6 \cdot 10^{22}$	<i>personal communications Teun van Dillen</i>
Silicon	2.329	$4.993 \cdot 10^{22}$	<i>Table of physical and chemical constants</i>

### Formula's

Conversion of wavelength to energy in electronvolts.

$$E(eV) = \frac{1239.8(eV \cdot nm)}{\lambda(nm)} \quad (1)$$