

Indices of Refraction for Various Substances*

Solids at 20°C	<i>n</i>	Liquids at 20°C	<i>n</i>	Gases at 0°C, 1 atm	<i>n</i>
cubic zirconia	2.20	benzene	1.501	air	1.000 293
diamond	2.419	carbon disulfide	1.628	carbon dioxide	1.000 450
fluorite	1.434	carbon tetrachloride	1.461		
fused quartz	1.458	ethyl alcohol	1.361		
glass, crown	1.52	glycerine	1.473		
glass, flint	1.66	water	1.333		
ice (at 0°C)	1.309				
polystyrene	1.49				
sodium chloride	1.544				
zircon	1.923				

*measured with light of vacuum wavelength = 589 nm

Useful Atomic Data

Symbol	Quantity	Established value	Value used for calculations in this book
m_e	mass of electron	$9.109\,382\,15 \times 10^{-31}$ kg $5.485\,799\,0943 \times 10^{-4}$ u 0.510 998 910 MeV	9.109×10^{-31} kg 5.49×10^{-4} u 5.110×10^{-1} MeV
m_n	mass of neutron	$1.674\,927\,211 \times 10^{-27}$ kg 1.008 664 915 97 u 939.565 346 MeV	1.675×10^{-27} kg 1.008 665 u 9.396×10^2 MeV
m_p	mass of proton	$1.672\,621\,637 \times 10^{-27}$ kg 1.007 276 466 77 u 938.272 013 MeV	1.673×10^{-27} kg 1.007 276 u 9.383×10^2 MeV