

## 25.3: Constants of Nature

Symbol	Value	Meaning
$h$	$6.63 \times 10^{-34} \text{ J s}$	Planck's constant
$\hbar$	$1.06 \times 10^{-34} \text{ J s}$	$h(2\pi)$
$c$	$2.998 \times 10^8 \text{ m s}^{-1}$	speed of light
$G$	$6.67 \times 10^{-11} \text{ m}^3 \text{ s}^{-2} \text{ kg}^{-1}$	universal gravitational constant
$k_B$	$1.38 \times 10^{-23} \text{ J K}^{-1}$	Boltzmann's constant
$\sigma$	$5.67 \times 10^{-8} \text{ W m}^{-2} \text{ K}^{-4}$	Stefan-Boltzmann constant
$K$	$3.67 \times 10^{11} \text{ s}^{-1} \text{ K}^{-1}$	thermal frequency constant
$\epsilon_0$	$8.85 \times 10^{-12} \text{ C}^2 \text{ N}^{-1} \text{ m}^{-2}$	permittivity of free space
$\mu_0$	$4\pi \times 10^{-7} \text{ N s}^2 \text{ C}^{-2}$	permeability of free space $(= 1/(\epsilon_0 c^2))$

This page titled [25.3: Constants of Nature](#) is shared under a [CC BY-NC-SA 3.0](#) license and was authored, remixed, and/or curated by [David J. Raymond](#) ([The New Mexico Tech Press](#)) via [source content](#) that was edited to the style and standards of the LibreTexts platform.