

S.I. Units & Prefixes

Abstract

This page outlines the base and some derived standard international (SI) units.

References

A Physicist's Desk Reference: The second edition of Physics Vade Mecum, AIP, 1989: pp. 5-6.

Base Units

<u>Quantity</u>	<u>Name</u>	<u>Symbol</u>
length	meter	m
mass	kilogram	kg
charge	coulomb	C
temperature	Kelvin	K

Derived Units

<u>Quantity</u>	<u>Name</u>	<u>Symbol</u>	<u>Dimensions</u>
Electric Capacitance	farad	F	$C^2 * s^2 * m^{-2} * kg^{-1}$
Electric Current	ampere	A	$C * s^{-1}$
Electric Inductance	henry	H	$m^2 * kg * C^{-2}$
Electric Potential	volt	V	$m^2 * kg * C^{-1} * s^{-2}$
Electric Resistance	ohm	Ω	$m^2 * kg * C^{-2} * s^{-1}$
Energy	joule	J	$m^2 * kg * s^{-2}$
Force	newton	N	$m * kg * s^{-2}$
Frequency	hertz	Hz	s^{-1}
Magnetic Flux	weber	Wb	$m^2 * kg * C^{-1} * s^{-1}$
Magnetic Flux Density (magnetic field strength)	tesla	T	$kg * C^{-1} * s^{-1}$
Power	watt	W	$m^2 * kg * s^{-3}$
Pressure or Stress	pascal	Pa	$m^{-1} * kg * s^{-2}$

Prefixes

<u>Factor</u>	<u>Prefix</u>	<u>Symbol</u>	<u>Factor</u>	<u>Prefix</u>	<u>Symbol</u>
10^9	giga	G	10^{-3}	milli	m
10^6	mega	M	10^{-6}	micro	μ
10^3	kilo	k	10^{-9}	nano	n
10^{-2}	centi	c	10^{-12}	pico	p