

66.11: Units of Physical Quantities

Quantity	SI Units	Gaussian Units
Absorbed dose	Gy	erg g ⁻¹
Acceleration	m s ⁻²	cm s ⁻²
Amount of substance	mol	mol
Angle (plane)	rad	rad
Angle (solid)	sr	sr
Angular acceleration	rad s ⁻²	rad s ⁻²
Angular momentum	N m s	dyn cm s
Angular velocity	rad s ⁻¹	rad s ⁻¹
Area	m ²	cm ²
Bulk modulus	Pa	ba
Catalytic activity	kat	kat
Coercivity	A m ⁻¹	Oe
Crackle	m s ⁻⁵	cm s ⁻⁵
Density	kg m ⁻³	g cm ⁻³
Distance	m	cm
Dose equivalent	Sv	erg g ⁻¹
Elastic modulus	N m ⁻²	dyn cm ⁻²
Electric capacitance	F	stat F
Electric charge	C	stat C
Electric conductance	S	statΩ ⁻¹
Electric conductivity	S m ⁻¹	statΩ ⁻¹ cm ⁻¹
Electric current	A	statA
Electric dipole moment	C m	statC cm
Electric displacement (D)	C m ⁻²	statC cm ⁻²
Electric elastance	F ⁻¹	statF ⁻¹
Electric field (E)	V m ⁻¹	statV cm ⁻¹
Electric flux	Vm	statV cm
Electric permittivity	F m ⁻¹	-
Electric polarization (P)	C m ⁻²	statC cm ⁻²
Electric potential	V	statV
Electric resistance	Ω	statΩ
Electric resistivity	Ω m	statΩ cm
Energy	J	erg
Enthalpy	J	erg
Entropy	J K ⁻¹	erg K ⁻¹
Force	N	dyn
Frequency	Hz	Hz
Heat	J	erg
Heat capacity	J K ⁻¹	erg K ⁻¹
Illuminance	lx	ph
Impulse	N s	dyn s
Inductance	H	statH

Quantity	SI Units	Gaussian Units
Jerk	m s^{-3}	cm s^{-3}
Jounce	m s^{-4}	cm s^{-4}
Latent heat	J kg^{-1}	erg g^{-1}
Length	m	cm
Luminance	cd m^{-2}	sb
Luminous flux	lm	lm
Luminous intensity	cd	cd
Magnetic flux	Wb	Mx
Magnetic induction (B)	T	G
Magnetic intensity (H)	A m^{-1}	Oe
Magnetic dipole moment (B convention)	A m^2	pole cm
Magnetic dipole moment (H convention)	Wb m	pole cm
Magnetic permeability	H m^{-1}	-
Magnetic permeance	H	s
Magnetic pole strength (B convention)	A m	unit pole
Magnetic pole strength (H convention)	Wb	unit pole
Magnetic potential (scalar)	A	Oe cm
Magnetic potential (vector)	T m	G cm
Magnetic reluctance	H^{-1}	s^{-1}
Magnetization (M)	A m^{-1}	Mx cm^{-2}
Magnetomotive force	A	Gb
Mass	kg	g
Memristance	Ω	stat Ω
Molality	mol kg^{-1}	mol g^{-1}
Molarity	mol m^{-3}	mol cm^{-3}
Moment of inertia	kg m^2	g cm^2
Momentum	N s	dyn s
Pop	m s^{-6}	cm s^{-6}
Power	W	statW
Pressure	Pa	bs
Radioactivity	Bq	Bq
Remanence	T	G
Retentivity	T	G
Shear modulus	N m^{-2}	dyn cm^{-2}
Snap	m s^{-4}	cm s^{-4}
Specific heat	$\text{J K}^{-1} \text{ kg}^{-1}$	$\text{erg K}^{-1} \text{ g}^{-1}$
Strain	-	-
Stress	N m^{-2}	dyn cm^{-2}
Temperature	K	L
Tension	N	dyn
Time	S	S

Quantity	SI Units	Gaussian Units
Torque	N m	dyn cm
Velocity	m s ⁻¹	cm s ⁻¹
Viscosity (dynamic)	Pa s	P
Viscosity (kinematic)	m ² s ⁻¹	St
Volume	m ³	cm ³
Wave number	m ⁻¹	kayser
Weight	N	dyn
Work	J	erg
Young's modulus	N m ⁻²	dyn cm ⁻²

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