

## *Table of Charge Distributions*

<b>Charge Density</b>	<b>Definition &amp; Dimensions</b>	<b>Units</b>	<b>For <u>uniform charge density only</u>*</b>
$\lambda$ lambda (for a line of charge)	$\lambda = \frac{dq}{dl} = \frac{\text{charge}}{\text{length}}$	$\frac{C}{m} = \frac{\text{Coulomb}}{\text{meter}}$	$\lambda = \frac{dq}{dl} = \frac{Q^*}{L}$
$\sigma$ sigma (for a sheet of charge)	$\sigma = \frac{dq}{dA} = \frac{\text{charge}}{\text{Area}}$	$\frac{C}{m^2}$	$\sigma = \frac{dq}{dA} = \frac{Q^*}{A}$
$\rho$ rho (for a volume of charge)	$\rho = \frac{dq}{dV} = \frac{\text{charge}}{\text{Volume}}$	$\frac{C}{m^3}$	$\rho = \frac{dq}{dV} = \frac{Q^*}{V}$

\*Where Q = total charge on distribution, L = total length of charge distribution, A = total area of charge distribution  
 and V = total volume of charge distribution.