

photon fluence, $H_{p,o}$, $F_{p,o}$

Amount of photons (quanta of radiation) incident on a small sphere from all directions, divided by the cross-sectional area of that sphere and integrated over time. Photons per surface area (quanta m^{-2}). SI unit is m^{-2} .

Note 1: Mathematical definition: $H_{p,o} = F_{p,o} = dN_p/dS = \int_t E_{p,o} dt$, with $E_{p,o}$ the photon fluence rate, integrated over the duration of the irradiation, t . If $E_{p,o}$ is constant over the time interval, $H_{p,o} = F_{p,o} = E_{p,o} t$.

Note 2: This quantity can be used on a chemical amount basis by dividing $H_{p,o}$ by the Avogadro constant, the symbol then being $H_{n,p,o}$, the name “photon fluence, amount basis”, SI unit is $mol\ m^{-2}$; common unit is einstein m^{-2} .

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