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radiant intensity, *I*

Also contains definition of: intensity

Radiant power, P, at all wavelengths per solid angle, Ω. The radiant power emitted in a given direction by a source or an element of the source in a small cone containing the given direction divided by the solid angle of the cone. SI unit is W sr^{-1}.

Notes:

1. Mathematical definition: $I = dP / d\Omega$. If the radiant power is constant over the solid angle considered, $I = P / \Omega$.
2. Equivalent to $I = \int_{\lambda} I_{\lambda} d\lambda$, where I_{λ} is the spectral radiant intensity at wavelength λ.
3. It is not recommended to abbreviate this term to just intensity because it is confusing.

Source:

PAC, 2007, *79*, 293 *(Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006))* on page 410

