

## Radiometric and Photometric Quantities (Radio- und photometrische Größen)

Quantification of electromagnetic radiation ...	Radiometric quantity	Spectral quantity	Photometric quantity	Quantity depends on
... emitted by a source in total	Radiant power $\Phi_e$ [W]	Spectral radiant power $\Phi_\lambda(\lambda)$ [W nm <sup>-1</sup> ]	Luminous flux $\Phi_v$ [lm = lumen]	-
... emitted in a certain direction	Radiant intensity $I_e$ [W sr <sup>-1</sup> ]	Spectral radiant intensity $I_\lambda(\lambda)$ [W sr <sup>-1</sup> nm <sup>-1</sup> ]	Luminous intensity $I_v$ [lm / sr = cd]	direction
... emitted by a location on a surface	Radiant exitance $M_e$ [W m <sup>-2</sup> ]	Spectral radiant exitance $M_\lambda(\lambda)$ [W m <sup>-2</sup> nm <sup>-1</sup> ]	Luminous exitance $M_v$ [lm m <sup>-2</sup> ]	position on source's surface
... emitted by a location on a surface in a certain direction	Radiance $L_e$ [W sr <sup>-1</sup> m <sup>-2</sup> ]	Spectral radiance $L_\lambda(\lambda)$ [W sr <sup>-1</sup> m <sup>-2</sup> nm <sup>-1</sup> ]	Luminance $L_v$ [lm sr <sup>-1</sup> m <sup>-2</sup> = cd m <sup>-2</sup> ]	position on source's surface and direction
... impinging upon a surface	Irradiance $E_e$ [W m <sup>-2</sup> ]	Spectral irradiance $E_\lambda(\lambda)$ [W m <sup>-2</sup> nm <sup>-1</sup> ]	Illuminance $E_v$ [lm m <sup>-2</sup> = lx = lux]	position on irradiated surface