

## GLOSSARY OF TERMS

- Actinic radiation*: electromagnetic radiation capable of initiating photochemical reactions; UVB and UVC radiation (180–315 nm)
- Albedo*: that fraction of the radiation incident on a surface which is reflected back in all directions
- Black light*: primarily near-UV radiant energy in the 320–380 nm (or 400 nm) range
- Effective irradiance*: hypothetical irradiance of monochromatic radiation with a wavelength at which the action spectrum of the relevant photobiological effect is equal to unity (see also section 1.1)
- Effective exposure dose*: time integral of effective irradiance
- Erythema*: sunburn
- Exposure dose*: radiant exposure ( $\text{J}/\text{m}^2$  unweighted) incident on biologically relevant surface
- Fluence*: radiant flux passing from all directions through a unit area in  $\text{J}/\text{m}^2$  or  $\text{J}/\text{cm}^2$ ; includes backscatter
- Global irradiance*: the irradiance of solar radiation at the Earth's surface
- Global radiation*: solar radiation at the Earth's surface comprising the sum of direct radiation from the sun and diffuse radiation from the sky
- Minimal erythema dose (MED)*: the lowest radiant exposure of UVR that produces a threshold erythematous response 8–24 h after irradiation. There is no consensus on this response; a just perceptible reddening of the skin and erythema with sharp margins are both used as end-points.
- Photoreactivation*: the enzyme-mediated reversal of the biological effects of UVC or UVB radiation mediated by radiation of longer wavelength and associated with the reversion of cyclobutane-type pyrimidine dimers to monomeric pyrimidines
- Radiant exposure*: radiant energy delivered to a given area ( $\text{J}/\text{m}^2$ )
- Radiant flux*: rate of flow of radiant energy (in W)
- Solar simulated radiation*: radiation from an artificial source (e.g., an optically filtered xenon arc lamp) that approximates the terrestrial solar spectrum
- Solar zenith angle*: angle between the point in the sky directly overhead (the zenith) and the sun
- Spectral distribution*: relative intensity of radiation of different wavelengths present in a source emission spectrum
- Spectral irradiance*: surface density of the radiant flux that is incident on a unit surface area per unit wavelength (see Table 1)
- UVA*: electromagnetic radiation of wavelength 315–400 nm

*UVB*: electromagnetic radiation of wavelength 280–315 nm

*UVC*: electromagnetic radiation of wavelength 100–280 nm

*UVR*: electromagnetic radiation of wavelength 100–400 nm

*Zenith angle*: the angle between the point in the sky directly overhead (the zenith) and another point or object