

Solar Radiation Measurements There are numerous types and components of solar radiation as shown in the list below. The following image shows the solar spectral intensity distribution at the top of the Earth's atmosphere and at the Earth's surface. Direct solar irradiance, also called the "direct solar irradiation" or the "direct normal irradiation (DNI)" – the solar irradiance on a surface held perpendicular to the sun's rays while blocking the diffuse sky radiation. Global solar irradiance, commonly called the "global radiation" – the solar irradiance on a horizontal surface which includes both direct sunrays and diffuse sky radiation. In addition, a portion of the incoming solar radiation is absorbed, reflected and reemitted by the atmosphere and the earth. Units are typically in  $W/m^2$ .