Glossary

Black-body radiator

A black body (also black-body radiator, perfectly black body) is an idealised source of thermal radiation. This black body is 'perfect' in the sense that it completely absorbs all incident electromagnetic radiation it encounters at any wavelength. Simultaneously, this body emits thermal radiation, whose intensity and spectral distribution is independent of the body's composition and surface, and which depends solely on the body's temperature. Assuming the area is the same, this body emits thermal radiationin every wavelength region more strongly than any real body at the same temperature. Such bodies serve both as a basis for theoretical research and as a reference for practical investigations of electromagnetic radiation. (Source: www.wikipedia.de, 2015)

■ Brewster's angle

Brewster's angle – also 'polarisation angle' – considers an unpolarised light source and describes the angle at which only the polarised portions of this light perpendicular to the incident plane are reflected. According to this law, if unpolarised light falls onto the surface at the right angle, it will be reflected back from the surface as a beam of linearly polarised light.

Irradiance

This describes the sum total of electromagnetic energy or optical radiation energy that falls as light onto the surface. The value is given in watts per square metre. From this particular perspective, the sensitivity of the human eye is not considered at all.

Jitter

The term jitter refers to a periodic variation in a digital signal or the transmission of such signals from a true, reference periodicity. This jitter causes inaccuracies in the transmission of the signal.

■ Lambertian scatterer

A Lambertian scatterer is an emitter for which the radiance over the entire light field is constant in all directions.