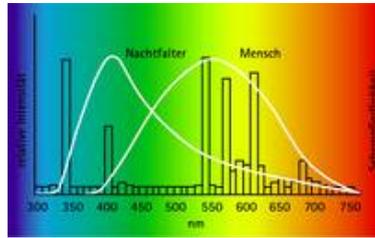




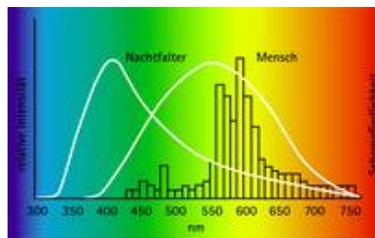
## Protection of insects and pleasant light for people

Artificial light attracts insects. For many nocturnal insects which are adapted to darkness in their mode of life, light fixtures can pose a danger, since artificial light sources interfere with their natural rhythm of life, which makes them prone to disorientation – this, in turn, causes them to fly toward these light sources.

Scientific experiments indicate that mercury-vapour high-pressure lamps (due to their reflected spectrum of light) especially attract nocturnal insects. The yellow light of the sodium-vapour high-pressure lamp displays a colour spectrum which only minimally attracts nocturnal insects.



The human eye cannot utilise a large percentage of the light emitted by mercury-vapour high-pressure lamps (the blue range). In this range lies the outer limit of nocturnal insects' visual capacity.



The light emitted by the sodium-vapour high-pressure lamp is adapted to human visual capacity. UV light is hardly emitted. In turn, the attraction effect on nocturnal insects is reduced to a minimum.

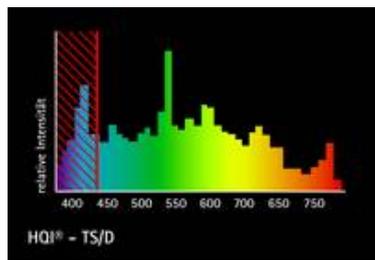


On the other hand, sodium-vapour high-pressure lamps display a colour of light which is rather unattractive to people, since significant colours which people consider pleasant are not emitted by sodium-vapour high-pressure lamps. With that, for instance, the green in park spreads is not recognisable as such.

**In this context, our insect-repellent glass is the decisive step taken to aid both sides.**

We help insects in that our insect-repellent glass, a special version of our **UV++protective-glass**, fully insulates from light below 430 nm. This means that for insects, the particularly high range of their visual sensitivity (approx. 400 nm) is clearly excluded.

On the other hand, our glass is helpful to people by keeping particularly the pleasant green shades in the exterior area (between 450 and 550 nm) perceptible and ensuring that everything is not bathed in a murky yellowish-red light.



Mercury-vapour high-pressure bulbs (here, for instance, a bulb made by Osram) have a more evenly balanced spectral distribution. Rare insects recognise this light source – thanks to our insect-repellent glass – as largely not "attractive", since our lamp glass insulates the range they view as "attractive" (< 430 nm).