

Strobe Output and Why Needed

The ATS strobe (flash) operates with only 200W seconds of illumination output (energy). The ultra-short flash duration is designed to not startle or blind motorists; moreover, **this strobe system has never been known to cause any adverse driver behavior.**

ATS has installed more than 2,500 road safety cameras across the U.S. and in Canada equipped with strobe systems similar to the one that is utilized for ATS Road Safety Programs. These systems have captured millions of intersection safety camera images with this flash unit without issue. Worldwide, more than 50,000 road safety systems employ such flash technology effectively. To our knowledge, there has not been a single case reported of a person being blinded by a strobe light resulting in impaired driving ability or collision.

Intersection Safety Cameras require a flash because this is digital photography and images are taken from up to 100 feet away. **A flash is necessary with road safety program technology, even on a bright sunny day.** Besides photographing a moving object, other factors affect the image quality: cloud cover and weather in general, tree shadows, car angles, license plate reflective materials, etc.

ATS technology delivers all the information needed for exact prima facie evidence (scene including the traffic signal, tire placement, license plate, as well as driver) to avoid the wrong vehicle being identified for a violation. Bottom line for the images, a judge needs to know without a doubt whose vehicle it is and what the license plate reads.

Human Perception of Flash

ATS strobe units are specifically designed to discharge their flash power rapidly. This design is pursued for a number of reasons, one of which is to specifically preclude and reduce complaints of blinding light from drivers. However, from a technical perspective, over 50% of the total output of the unit is exhausted within 1 millisecond (1/1000th of a second) of trigger.

The first millisecond is the brightest portion of the entire flash. All of the strobe output is exhausted within 6 milliseconds (6/1000th of a second). In other words, the light is entirely gone in 6/1000th of a second.

The reaction time of the human eye—the accepted figures for mean simple reaction time has been about 190 milliseconds (0.19 sec) for light stimuli¹. Based on this time, the entire ATS strobe event is concluded 31 to 190 times faster than the human eye can register the event. This does not mean that people do not see the flash, it means they perceive and report it differently than it impacts the body.

¹ (Galton, 1899; Fieandt et al., 1956; Welford, 1980; Brebner and Welford, 1980)