

SAE J845 Difference

Did you know that there are currently **TWO** standards for SAE J845??? That's right. Some companies claim to have their lights certified SAE J845 but they are referring to the **old** standard that was established in 1997, and not the new standard.

In 2007, the SAE J845 standard was updated due to continually changing LED technology and the ability for devices to easily meet the 1997 standard. Is your light under the new 2007 standard???

Many points in the new standard take their roots from the old standard, such as colour, and flash rate requirements and the mechanical tests have not changed. However, the photometric side of things has changed dramatically. Different values such as peak intensity and optical power are prevalent instead of flash intensity, which is similar to peak intensity but not quite the same. Perhaps the greatest change is the requirement for the photometric output to be stable prior to testing.

Stability is achieved when the devices light output maintains less than a 5% change over a 15 minute period. This requires that the test be conducted after the light has been operating for a period of time. For LED lights, this causes heat to be generated inside the light resulting in a decrease in light intensity, which is an artifact of LEDs. If tested by the old standard, the light can simply be turned on and measured instead of requiring the allotted time to stabilize its light output. This results in higher values that may not be realistic after the light has been operating for some time.

Previously, photometric measurements were done in units of candela-seconds, which is a measure of the intensity of light over the flash duration. This value is perfectly fine but it does not take into account the pattern of flashes or length of the flash pattern. The new standard requires that lights meet a certain photometric intensity and total photometric power over the course of one minute. The total photometric power measurement takes into effect the length between flashes, and the different flash patterns called "pulse trains". Further, for such devices as minibars and full size lightbars, the photometric measurement must now be tested as a unit instead of as individual components.

This paper has covered some of the main differences between the old (1997) and new (2007) SAE J845 standard. It has focused primarily on the photometric differences but does not cover all the differences.