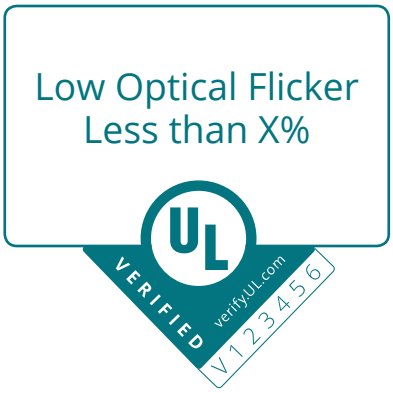
UL VERIFICATION

LOW OPTICAL FLICKER

In today's global market, customers encounter several product claims, but it's often difficult for them to determine which are accurate. Providing customers with a reason to trust a claim can make all the difference.

UL VERIFIED MARK

The UL Verification Mark allows brands to prove the accuracy of specific claims, helping a product stand out on the shelf and in the eyes of the customer. By leveraging UL's science background and respected brand, we test and verify both industry standard and one-of-a-kind claims that help brands gain customers and, most important, build trust.



UL VERIFIED "LOW OPTICAL FLICKER"

One of the first programs labelled UL Verified is the UL Verification Mark for Low Optical Flicker.

Flicker is a well-known issue in the lighting industry and the challenges associated with it have caused some energy efficiency programs and local governments to include flicker requirements. While there are some localized requirements, international testing methods and/or specific standards have not been fully developed to address this problem. As issues with flicker become better understood, more lighting requirements are likely to add limitations to the amount of flicker that a light source or luminaire can produce.

UL photometric laboratories are familiar with standard methods of flicker testing and are actively involved in the development of lighting measurement test methods. With this existing expertise, UL developed a testing method which provides information on the percentage of optical light flicker in a verified product. The UL Verification Mark demonstrates that the product has been tested and evaluated for flicker performance with particular reference to the percentage of optical flicker present in the product.

The test method was developed to test performance for dimming and non-dimming products, and the results are compared to existing knowledge on flicker performance. This information allows us to verify flicker claims and, if the claims are found accurate, authorize brands to market their product(s) using the UL Verification Mark, V12345.

Most important, the Mark allows end users to make informed decisions about where a light can be used to minimize the risk of flicker issues.

UNDERSTANDING OPTICAL FLICKER

Flicker is present, to some degree, in nearly all light sources; however, the degree in which flicker can be perceived, or is considered acceptable, varies depending on the amount of variation present and the frequency at which the variation occurs. This presents a challenge with LED products (and many discharge products) as the technology has a low light persistence, meaning LEDs react quickly to changes in current, increasing the potential for the frequency components found in line voltage and the driver circuitry to be converted into adverse visual effects.

To learn more about UL's new Low Optical Flicker Verification service, please visit **verify.UL.com**