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CIE Technical Note
"Guidance on the Measurement of Temporal Light Modulation of Light Sources and Lighting Systems"

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New regulations are coming into force in several regions with respect to temporal light modulation (TLM) of lighting products. However, standardized test methods and even basic understanding of requirements are largely lacking in the area. Newly introduced metrics, like the stroboscopic visibility measure, are used in these regulations without the existence of standardized measurement methods to support these.

This document provides recommendations on measurement protocols to measure periodic waveforms and light modulations. The recommendations should enable test and calibration laboratories to apply the same measurement methodology and to report the results in a consistent and reproducible way.

The document covers methods of measurement for TLM and temporal light artefacts (TLA) of lighting equipment. Its primary application is for general lighting purposes; however, the principles can be applied to other fields (e.g. display equipment, or facade lighting), though these generally require different input optics for the measurement equipment.

The recommendations given in this document can be used to measure non-periodic signals, but there might be specific aspects of these signals that will not be covered in this document (e.g. signal-triggering).

This document sets the stage for an understanding of these new metrics and provides guidelines for the correct measurement of them. The document is meant to provide respective recommendations, which do not imply any kind of standardization.

In addition to this Technical Note a CIE Technical Report is in preparation, which will cover a test method for flicker and the stroboscopic effect using existing or new metrics to be developed is going to follow this publication in due course.

The publication is written in English, consists of 16 pages and is freely downloadable from the CIE website.