

In-situ Measurement of Photoluminescent Signs and Markings - Does it Pass?

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Abstract

The use of photoluminescent materials in safety signs and various emergency way guidance systems is on the increase. It can be anticipated that a similar increase in the need to provide in-situ measurement for quality control and certification purposes can be expected. At present the various standards which could be applied to performing in-situ measurements require luminance measurements to be performed at times up to 60 minutes after the removal of the exciting illumination.

This paper discusses how it might be possible to predict the luminance of a sign at 60 minutes using data acquired for only 10 minutes at the beginning of the decay period. This improved test throughput could be used either to reduce the cost of testing to the customer or to increase the proportion of signs tested in a survey.

Some initial experimental work has been performed and an initial analysis of the data is very encouraging.

Profile of Dr Robert Hunt

Dr Hunt is a physicist who has specialised in the development of electro-optical instrumentation. These instruments range from simple infra-red imaging systems to spacebourne sensors for astronomy and meteorological sensors for Earth observation.

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