

Abstract Submitted
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Measuring Light Emitting Diodes with a Scanner for Radiant Flux and Color Characterization ANTHONY PHUNG, CLINT NAQUIN, OMAR HASAN, WEI-TING LIOU, ROXANNE LEE, ARMAND HALBERT, AN-TING LIU, EMIN BURSA, DAVID TAYLOR, JASON SLINKER, The University of Texas at Dallas — Due to the performance requirements of displays and lighting applications, there is great need to measure the radiant flux and color of light emitting diodes (LEDs) simultaneously in a high throughput format. We evaluate the feasibility of obtaining reliable color and radiant flux values of light emitting diodes with a conventional commercially available scanner under factory settings versus conventional measurements. Color purity was evaluated against a spectrometer and a digital camera, while radiant flux was evaluated against photodiodes. Scanner color rendition of red, green, and yellow LEDs was of variable quality. The scanner showed better correlation to conventional radiant flux measurements, with linear least squares agreement between 0.934 and 0.985. A scanner represents a low cost and high throughput means of evaluating LEDs with simultaneous measures of both electroluminescent flux and emission color with operational time.

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