

EVALUATION OF THE THERMAL PERFORMANCE OF A LIGHT EMITTING DIODE (LED) PACKAGE MANUFACTURED USING POL-kW PACKAGING TECHNOLOGY

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Abstract

The thermal performance of an LED package is evaluated in this work. The research is conducted by using a modeling approach, followed by experimental analysis. Initially, thermal modeling/simulation software will be used to study the thermal performance of prototype designs with different substrates and geometry designs. The initial modeling/simulation effort will be utilized to select the substrate material and geometry parameters before an extensive prototyping process. Subsequently, the optimized prototype design will be validated by experimentally measuring the surface LED temperature using infrared (IR) microscopy.