# Gate Drive Optocoupler Provides Robust Insulation in IGBT Destructive Tests

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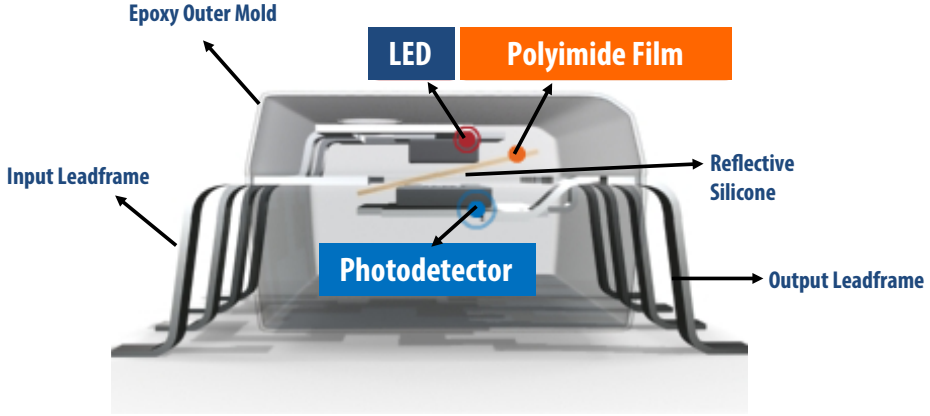
**White Paper**

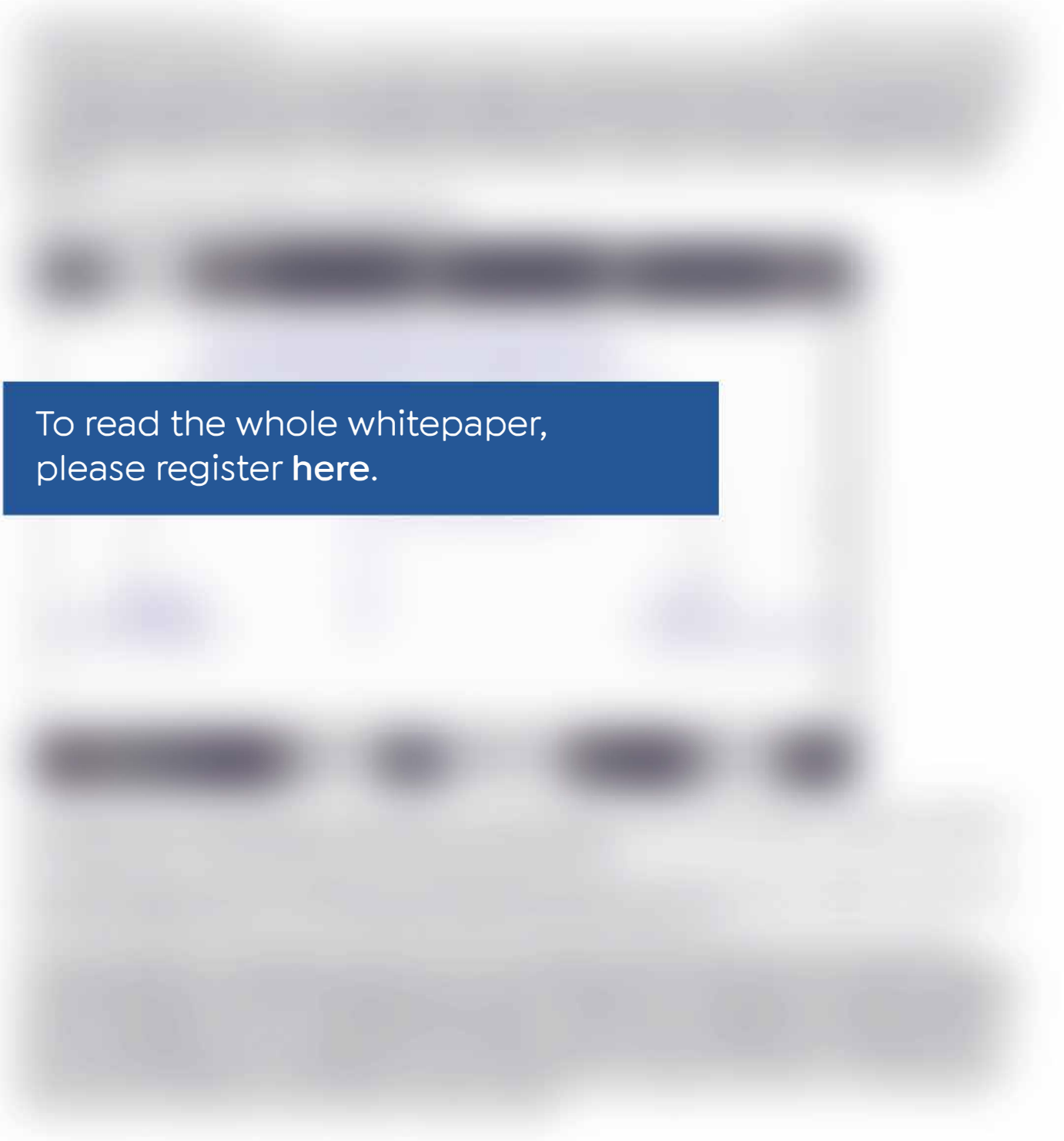
## Introduction

Avago Technologies gate drive optocouplers are used extensively to drive IGBTs in applications such as motor drives and solar inverters. Optocouplers are a proven technology to provide reinforced galvanic insulation for high voltage protection between IGBTs and control circuits. They are also used to reject high common-mode noise (CMR) and prevent erroneous driving of the IGBTs.

But in order not to compromise the optocoupler insulation barrier, power safety limits must not be exceeded in the event of component failure by protective circuits in application. This can be extremely difficult if catastrophic failures like IGBTs short circuit induce higher energy power into the optocoupler. This paper discusses the impact of unprotected IGBT destructive tests on the insulation barrier of an Avago gate drive optocoupler.

## Optocoupler's Structure with Three Layers of Insulation Barrier





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