



**SEMICONDUCTOR INDUSTRY**

## WAFER FILM FRAME HANDLING FOR LASER DICING SYSTEM

### ■ The Situation

The dramatic growth of the HBLED market had created an opportunity for laser companies to meet the need for increasing wafer dicing throughput, reducing costs, and displacing the competitor's mechanical dicing technology. However, capitalizing on the opportunity required them to hit the market window with a fully automated solution including wafer film frame handling on an extremely expedited schedule.

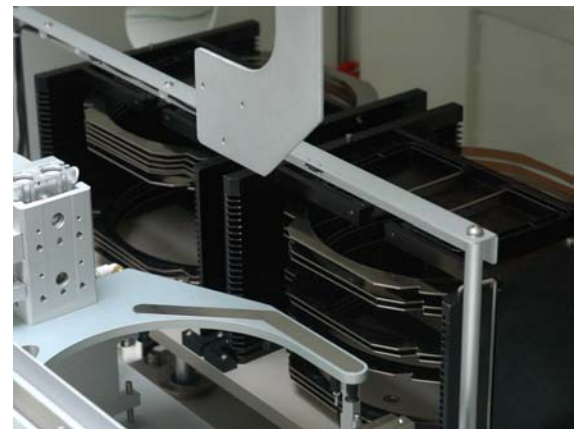
### ■ The Challenge

Developing the wafer film frame handling in house would require ramping up an engineering team,

learning the unique issues required to handle film frames, and risking the introduction of an unproven system into the market. A lower risk solution was needed.

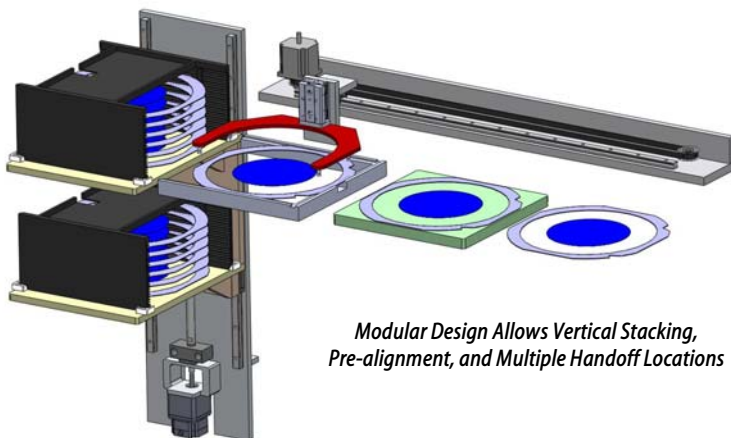
### ■ The Solution

Partnering with Owens Design allowed the equipment manufacturer to focus on their laser dicing technology while Owens Design customized the film frame modular automation to the laser system. The wafer film frame handling components developed by Owens Design supported multiple cassette sizes, cassette orientation



*Film Frame Handler Configured for Side by Side Cassettes*

(horizontal or vertical), and pre-alignment. The handler module's frame was designed to match aesthetically with the laser dicing module providing an integrated look. The fully automated system including wafer film frame handling was delivered in time to meet the market window.



*Modular Design Allows Vertical Stacking, Pre-alignment, and Multiple Handoff Locations*