

March 29, 2019

**Business Segment: ELECTRONICS**

### **MACDERMID ALPHA OPENS NEW TECHNICAL & APPLICATIONS CENTER IN TAIWAN**

- *New facility provides state-of-the-art laboratories and proving ground for customer co-development projects.*
- *Plating lines, assembly equipment, and analysis instrumentation serves Circuitry Solutions and Assembly Solutions divisions.*
- *Investment becomes company's fourth Taiwan facility and demonstrates commitment to the region's electronics industry.*

MacDermid Alpha Electronics Solutions officially opened a Global Development Application Center ("GDAC") at No 20, Andong Rd., Zhongli District, Taoyuan City, Taiwan R.O.C on March 19<sup>th</sup>, 2019. Scot Benson, President and Chief Operating Officer, and Joe D'Ambrisi, Senior Vice President, accompanied Harry Yang, General Manager - Taiwan, cut the ribbon to officially open the new facility. Several important customers, tier one manufacturers, and industry representatives joined the company's top management for the historic moment. The advanced technology and application center will house sales, technical service, customer service, and office personnel alongside the laboratory staff.

Harry Yang described the new facility and its impact, "With MacDermid Alpha Taiwan's unique role as a chemical and materials supplier to all steps of the electronics manufacturing supply chain, this US\$ 4 million investment to build a highly optimized technical center is the next step in a long journey to our goals. With these new capabilities, we can foster not only local, but also cross-strait development of advanced printed circuit board and IC substrate manufacturing processes. Additionally, the facility enables study of MacDermid Alpha's assembly materials, semiconductor packaging processes, and wafer interconnection in a way that optimizes every material within an electronic device."

The first floor of the applications development technology center houses an advanced IC substrate and metallization process pilot line which features equipment specific for ultra-fine line processing. The second floor houses our wafer level packaging applications laboratory with capabilities for the testing of solder ball, micro solder spheres, reflow metrology, and a fully functional tool for wafer level tin bumping. Production-scale wet processing equipment lines are located on the third floor, along with a complete chemical analysis laboratory containing high-precision instruments for comprehensive customer service. Following the company's emphasis on innovation and service, the facility will host training of regional MacDermid Alpha Taiwan technical service staff, conduct in-depth product development and pilot studies, and leverage the advanced equipment available on-site and at our customers in the area. Engineer training and project planning will be conducted on the fourth floor R&D training center.

Harry Yang continues, "We really hope that through these investments and new capabilities, we can assist regional companies achieve their goals and allow new growth opportunities in Taiwan's electronics industry as a whole."

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