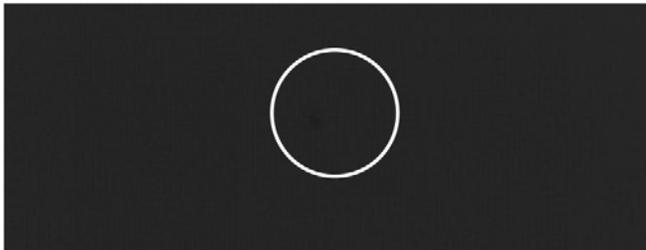


## Rudolph Technologies Announces New Clearfind Technology for Advanced Packaging Inspection

*Clearfind technology sees organic defects that often escape detection with conventional white-light inspection technologies*

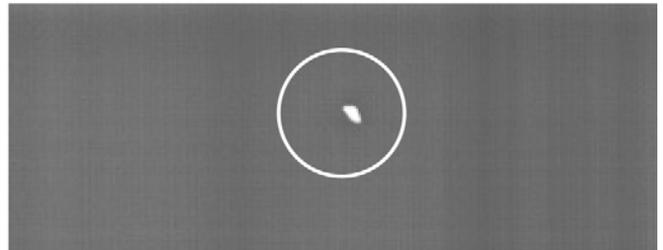
**Wilmington, Mass.** (July 11, 2016)—Rudolph Technologies, Inc. (NYSE: RTEC) today unveiled its new patented Clearfind™ technology, which can detect organic defects that are difficult or impossible to see with conventional white-light imaging techniques. Organic contaminants are often the root cause of field failures, which occur after the material has been exposed to operating conditions for extended periods. Rudolph has been actively collaborating with several key customers to fully understand their inspection challenges and how the new technology addresses them, and plans to incorporate Clearfind technology in its upcoming defect inspection systems for advanced packaging applications.

### Conventional



Easy to detect low contrast defect

### Clearfind™



“As advanced packaging processes become more complex, process windows are shrinking and manufacturers are seeking better methods for control and inspection that balance the need for high throughput against the ‘escape’ of true defects and the ‘false positive’ detection of nuisance defects,” said Mike Goodrich, vice president and general manager of Rudolph’s Process Control Group. “Organic defects, in particular, have become more troublesome as die interconnects shrink and there is less surface area for good adhesion. Clearfind technology will help our customers see these defects earlier in the process, permitting faster action to mitigate the root cause and reducing the amount of product in jeopardy.”

Goodrich continued, "Using laser illumination we are able to clearly identify residue defects that typical white-light optics would miss. In addition to optimizing the wavelength of the illumination to enhance detection, we have specifically designed the mechanics of the system to accommodate the high warpage found in advanced packaging applications."

Clearfind technology highlights organic residues on bumps and bond pads or at the bottoms of vias so that they are easy to detect. On metals, it eliminates the high-contrast graininess seen under conventional illumination, resulting in an obvious defect signal against a featureless background. This same graininess in conventional imaging can also cause false positives, which are especially costly at this stage of the process where the sunk cost of unnecessarily rejected good product is high. Finally, Clearfind technology readily detects shorts and opens in metal lines when inspected with an underlying organic layer. Rudolph believes these capabilities will significantly increase its customer's ability to detect process and manufacturing related issues earlier in the process resulting in significant yield, which equates to millions of dollars in savings, especially for processes utilizing known-good die. Rudolph's customers see this as a critical technology to improve quality for their customers in order to avoid the high costs of replacement and penalties.

For more information about the new Clearfind technology, please visit Rudolph at SEMICON® West, booth 6543, in the North Hall, or go to the Rudolph Technologies website:

[www.rudolphtech.com/clearfind](http://www.rudolphtech.com/clearfind).

### **About Rudolph Technologies**

Rudolph Technologies, Inc. is a leader in the design, development, manufacture and support of defect inspection, lithography, process control metrology, and process control software used by semiconductor and advanced packaging device manufacturers worldwide. Rudolph delivers comprehensive solutions throughout the fab with its families of proprietary products that provide critical yield-enhancing information, enabling microelectronic device manufacturers to drive down costs and time to market of their devices. Headquartered in Wilmington, Massachusetts, Rudolph supports its customers with a worldwide sales and service organization. Additional information can be found on the Company's website at [www.rudolphtech.com](http://www.rudolphtech.com).

### **Safe Harbor Statement**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the "Act") which include the benefit to customers of Rudolph's products, Rudolph's ability to successfully innovate, develop new technologies and products and deliver products and services consistent with our customers' demands and expectations as well as other matters that are not purely historical data. Rudolph wishes to take advantage of the "safe harbor" provided for by the Act and cautions that actual results may differ materially from those projected as a result of various factors, including risks and uncertainties, many of which are beyond Rudolph's control. Such factors include, but are not limited to, the company's offered design enhancements may not necessarily translate into significant revenue and the challenges presented by the new product development and marketing. Additional information and considerations regarding the risks faced by Rudolph are available in Rudolph's Form 10-K report for the year ended December 31, 2015 and other filings with the Securities and

Exchange Commission. As the forward-looking statements are based on Rudolph's current expectations, the company cannot guarantee any related future results, levels of activity, performance or achievements. Rudolph does not assume any obligation to update the forward-looking information contained in this press release.

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