Orbotech Jetext™

Advanced IC Packaging Production Solution for Package Marking

Marking the Future of Advanced Packaging

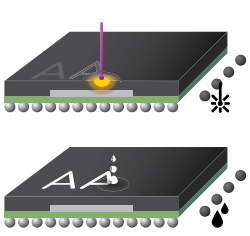
The manufacture of sleek, high-performance electronic devices continuously pushes the advanced packaging industry toward the incorporation of smaller form factors and thinner packages, some as minute as a few hundred microns in height. With the continually growing importance of package miniaturization, inkjet printing is emerging as a preferred process alternative to laser ablation for marking devices for traceability purposes.

Improving Yield, Eliminating Damage

The utilization of inkjet technology to replace traditional engraving techniques for miniaturized package marking offers multiple benefits including:

- A proven, non-contact deposition method
- Eliminates the attendant risks of heat damage to dies and components that are typical of laser engraving
- Raster-based printing provides faster and clearer results over conventional laser marking with no throughput decline regardless of feature complexity
- Provides better flexibility in design and CAM
- Improved contrast for easy readability

Due to its inherently risk-free application and highly-accurate marking capabilities, inkjet marking is trending strongly among major manufacturers of next-generation, ultra-thin semiconductor memory packages.

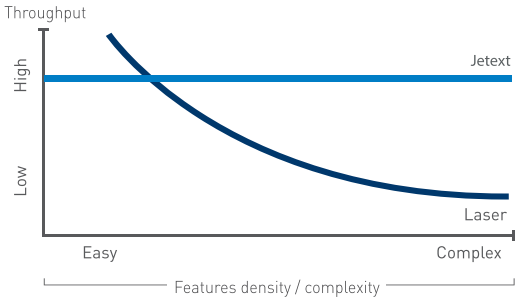


Orbotech Jetext for Marking

Powered by DotStream Pro™ Technology, the CAM-guided Orbotech Jetext offers a smarter and safer CAM-ready alternative to laser for legends and 2D barcode marking by eliminating the risk of damage from heat or contact.

This innovative ink deposition control system enables highly accurate pattern alignment and high-speed, fine-feature printing that ensures precise, uniform material deposition on the most challenging uneven surfaces. New and flexible inks are enabling the marking on package substrates that otherwise are unable to handle the thermal stress generated by laser ablation. High registration accuracy (±35 µm) supports high-contrast printing of small character sizes across a large range of font type.

- Sets the industry standard for printing quality and accuracy
- Unique alignment modules
- Supports strip and JEDEC formats
- Support multiple ink types on different substrates



With Orbotech Jetext, raster-based printing throughput depends only on substrate size and not on the number of features or their complexity

Technologies **DotStream Pro™ Technology**

Specifications

Maximum Printing Area	12” x 16” (304.8mm x 406.4mm)
Minimum/Maximum Strip Thickness	4-256mils (0.1mm - 6.5mm)
Minimum/Maximum Resolution	600 - 2400 dpi
Minimum Line	2.9mil (75µm)
Minimum Text Height	11.8mil (0.3mm)
Registration Accuracy (FTG)	±1.4mil (±35µm)
Maximum Distance PH/Substrate	Up to 60mil (1.5 mm)
Alignment	User selectable registration points; Partial scaling
Strip/Panel Attachment	Standard: Strips handling vacuum + clamps Optional: Customizations for carriers, JEDEC, panels
Software	Software RIP – integration to CAM, Gerber RS-274X input, push-to-print, multi-language
Inkjet Fluids	Multiple fluids from leading material suppliers
Dimensions W x D x H*	39.4” X 45.3” X 88.2” (1000mm x 1150mm x 2240mm)
Weight	1984lbs (900kg)
Automation	Automation-ready with 3rd party integration

* Height including system status tower light

KLA SUPPORT
Maintaining system productivity is an integral part of KLA’s yield optimization solution. Efforts in this area include system maintenance, global supply chain management, cost reduction and obsolescence mitigation, system relocation, performance and productivity enhancements, and certified tool resale.

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