

# iSpector



**JDz 350L**



**JDz 650L**

## AOI system

- √ Automatic Optical Inspection of PCB assemblies
- √ Inspects:
  - Components: missing, type, polarity, offset, text, colours etc
  - Soldering: Post Reflow, Post Wave, Selective, Manual
- √ Flexible classification and MES integration Scenarios via SQL or XML (option)
- √ Online self training and installation via iMentor
- √ RGB angular lighting system with 3D Meniscus Profiler
- √ Low Noise Large CCD 24 bit Colour Camera High Speed USB3 Vision interface
- √ Programmable from library or Golden Components
- √ Prototype mode for 1st off inspection
- √ High Speed inspection

*Test your PCB's optically and replace manual inspection*

*Full inspection coverage at an entry level price. Powerful algorithms to achieve an optimal balance between defect detection and false reject levels in shortest time*

*Integrate AOI efficiently in your existing operations and factory IT systems*

*Comprehensive and easy to use online training suite*

*Reliable solder joint and slope analysis*

*Capture card free design. 1.5x faster than Camera Link*

*Be flexible; from manual to full library programming depending on your product*

*Program in minutes to verify your production line is set-up correctly before starting full production*

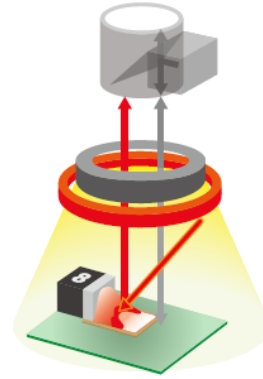
*30% faster than previous generation of iSpector*

# iSpector

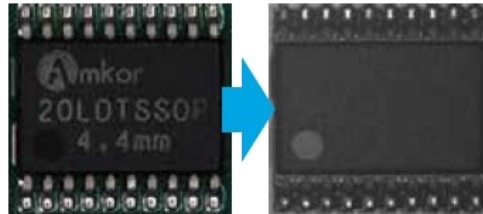
The latest generation Mek iSpector inline AOI is designed as an entry-level system for customers with low volume, high mix production requiring high-quality AOI with a low price tag.

iSpector is able to inspect component bodies and solder joints by use of DOAL, main and side LED light sources from three different angles, creating a meniscus profiling light pattern.

Using our Colour Histogram analysis provides accurate and reliable inspection results, with low false calls.



**Solder fillet: Side red LED + Diffuse-On Axis LED**

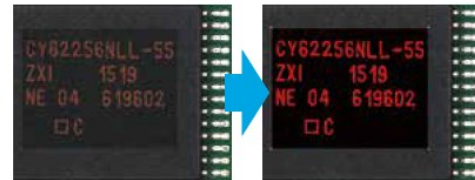


**IC polarity: Diffuse-On Axis LED**

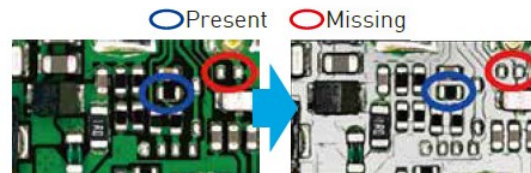
Providing a rapid and repeatable inspection process, at an affordable cost, the entry-level AOI system combines high performance and the lowest cost of ownership.

It is fast to install with the help of the iMentor online training and is exceptionally easy to program.

iSpector is a lead screw and servo drive AOI system. Designed to be the ultimate in value for money, the AOI utilizes software which has been continuously developed and proven for over 20 years.



**Text of laser printing: Side lighting**

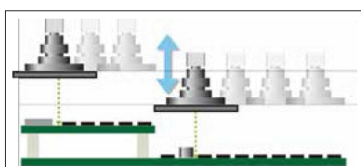
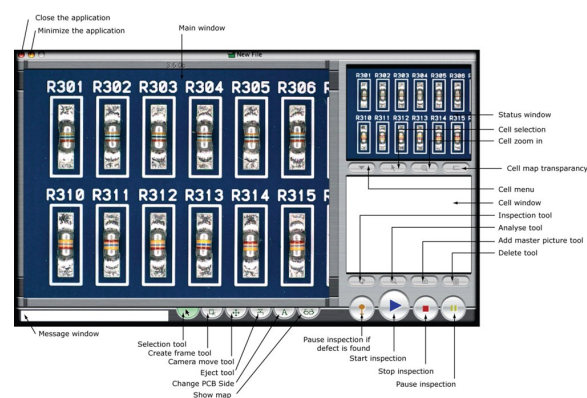


**Detect dark colored component: Main lighting + Diffuse-On Axis LED**

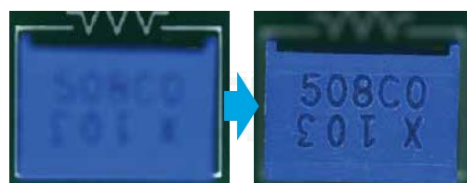
## Clean and Simple Interface

With powerful features. Full programming capabilities, Solder inspection, Component presence/absence, Polarity and Value.

Import NC Data from your pick and place system or most popular CAD/CAM software. Utilize our extensive custom Libraries to provide fast programming times and reliable results with low false fails.



**Stroke 30mm(+28mm. -2mm)**



**Normal focus**

**After adjusting the height of Z axis**

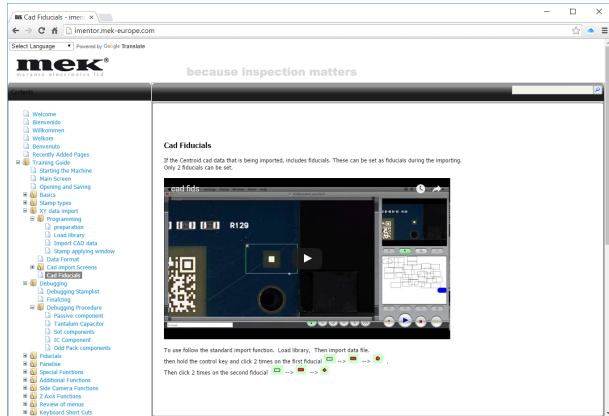
Z axis allows the inspection of taller components and hybrid PCBs

# iSpector



## imentor

**iMentor** is MEK's extensive and exclusive online training system that covers all aspects of the MEK AOI software. iMentor offers instruction on basic to advanced operation including easy to follow videos. It is frequently updated to cover new features in the latest software.



Instructions on how to install updates , make backups and special application notes.

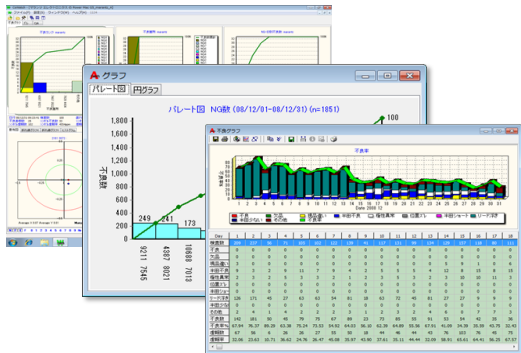
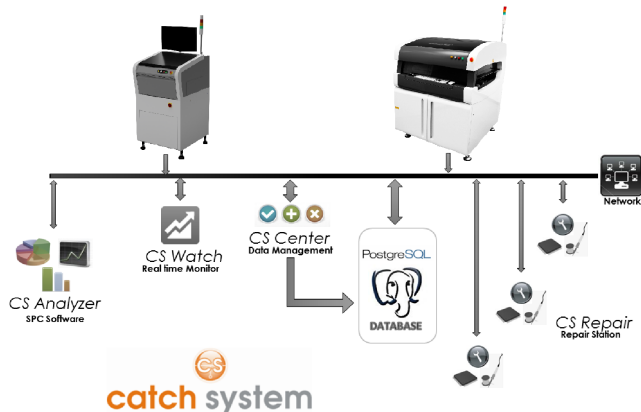
Latest software releases and Inspection library updates. Searchable topics. Also available in multiple languages.

A unique Login is provided for each customer, as well as access to our user forum.

Optional on site training is also available.

Optional Catch System for process control.

The **Catch system** comprises **CSCenter** data collection and remote monitoring, **CSRepair** Offline defect review and repair software, and **CSAnalyzer** SPC and trend analysis. **PostgreSQL** enterprise grade database storage. Catch is a fully scalable solution from single AOI stations to 40 plus machines



Inspection can be tracked and recorded. Assigned to Barcodes read from the PCB's during inspection on the AOI.

Base formats include Datamatrix, QRcode, Code 128 and Code 39. Multiple barcodes are allowed per panel.



Optional Offline programming and Debug. **OLT22X** uses images captured from the AOI to create full AOI programs and can also be used in conjunction with the AOI to do live offline programming debug.

The offline programming software simulates the machine and can therefore perform almost all the same functions during programming that are available on the AOI system.



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marantz electronics ltd

because inspection matters



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Desktop Series Specifications	iSpector JDz 350L	iSpector JDz 650L
Maximum PCB Size	350x250mm (13.77" x 9.84")	650x520 (25.6" x 20.4)
Characteristics		
Product type	Automatic Optical Inspector	
In-line/Off-line	InLine	
Movement type	Camera X, Y	
PCB movement	Static Conveyor	
PCB fixation	North South Clamping, PCB Edge lift	
Parts inspection	Presence, Polarity, Offset, OCV, Soldering	
Distinction principle	Synthetic Imaging, Spectral Analysis, Greyscale limits	
Distinction parameters	Brightness, Hue, Saturation via Filters	
Camera type	4.8 MP CCD digital with USB 3 Vision	
Camera Field Of View/Resolution	36.0 x 30 (1.42" x 1.18") 15µm	
Lens	High Resolution Telecentric lens	
Lighting system	Triple LED :White Main ,Red Side, DOAL White	
Specifications		
Minimum inspection component size	0201" (15µm resolution)	
Positioning accuracy	Pixel related Feedback Loop	
Component clearance (top/bottom)	+40mm (1.6")/-30mm (-2.2") (optionally +60/-30 mm extended top clearance)	
Movement speed	720mm/s	
Inspection capacity typical	2500cps/min 4.45 FOV/sec	
Mains	100-240 Vac / 150W	
Interfacing		
Control PC type (not included)	Apple Mac Mini or iMac	
Control / Imaging interface	USB / USB 3.0 Vision	
Programming Interface	CSV Centroid file (Placement file)	
Repair/Monitor/SPC System/MES-interface	Mek Catch System (Windows 7/8/10) (option)	
3rd party Interfacing (MES-if) & Data Storage	Enterprise SQL DB/XML Files/Socket (Catch System Option)	
General		
Operating temperature	15-30 degr C	
Operating humidity	15-80 % RH	
External size	W 698 x D 600 x H 1298 mm (W 27.5" x D 23.6" x H 51.1")	W 1070 x D 1167 x 1328 mm (W 42.1" x D 46" x 52.3")
Weight	210 kg (463 lbs)	240 kg (529 lbs)

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