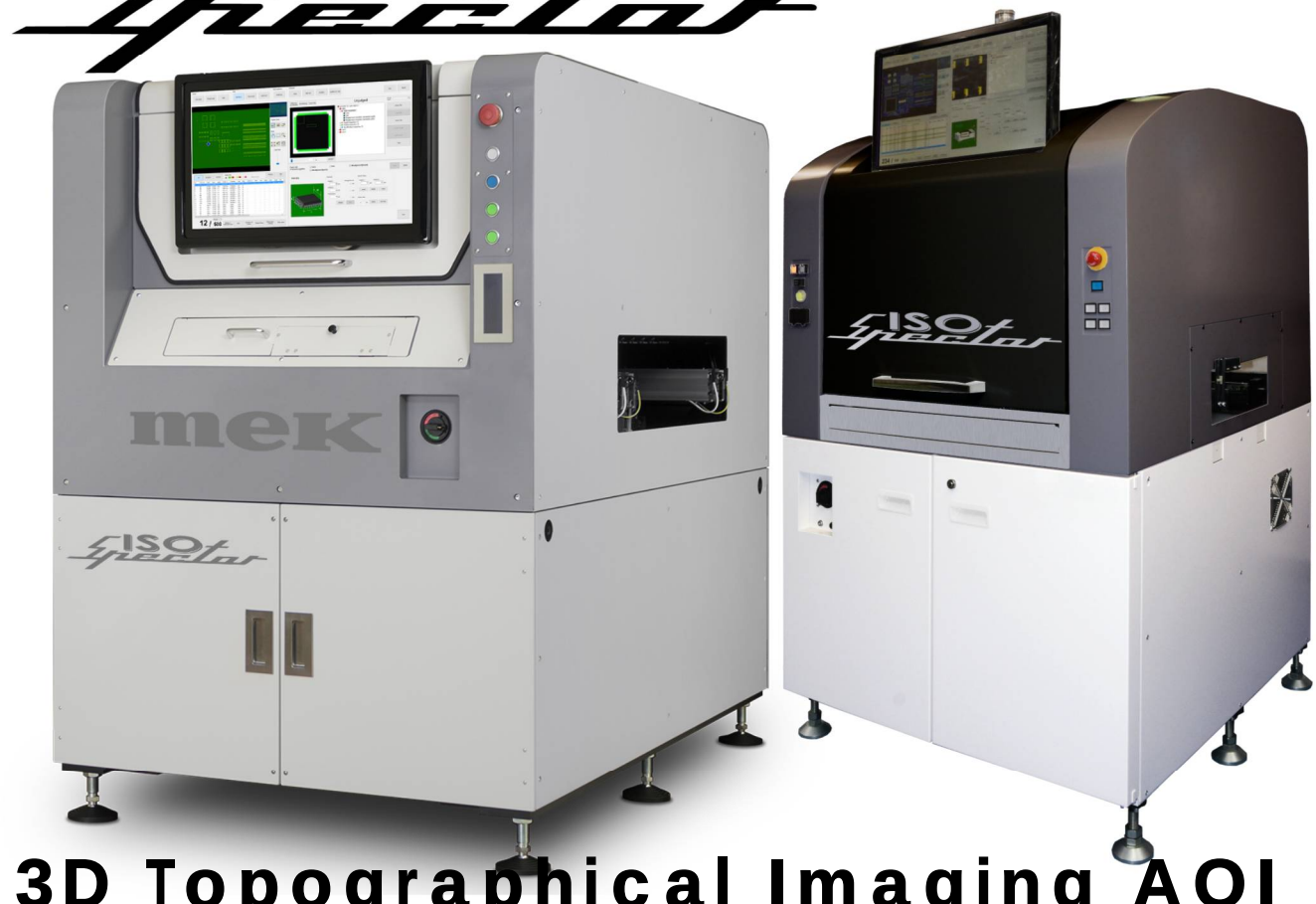
ISOspector

SL330, SL510



3D Topographical Imaging AOI

√ Automatic Full profile 2D and 3D AOI	*100% 3D inspection of PCBA .*
√ 2D and 3D simultaneous inspection (using patented sensor technology)	*Full colour 3D inspection coverage Powerful inspection algorithms .*
√ Flexible Close to vertical dual (front & rear), high energy lasers	*Shadow and blind spot reduction. Short wavelength Laser for high Z pixel quality.*
√ High speed 12M (4096 x 3072) CMOS capturing sensor with optical fiber interface	*State of the art image capture, High speed interface.*
√ High end RGB LED light dome	*Superior image quality and analysis.*
√ High vibration resistance 1/4000 Sec shutter speed	*Not effected by vibrations from other production processes.*
√ Telecentric 18/9um (normal speed scan/high resolution scan) standard lens resolution. Optional 12/6um lens resolution	*Switchable resolution 18 or 9 um on the fly. High resolution capable of 0201 as standard or optionally Super High resolution 12/6um for 03015 and 008004.*
√ Z-Axis for warp compensation	*Dynamic compensation of PCB warp, for accurate height measurement.*
√ Offline Programming/Debug Station	*Reliable offline programming, Minimal line down time.*
√ Massive 30 mm component height measurement	*Unrivaled range of height measurement.*

because inspection matters

mek®
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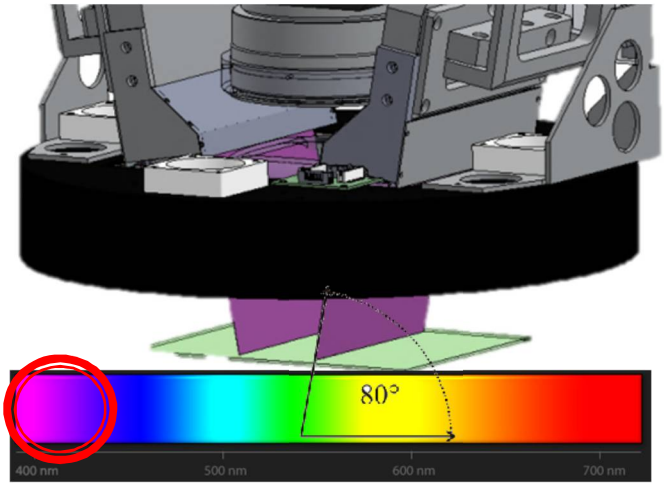
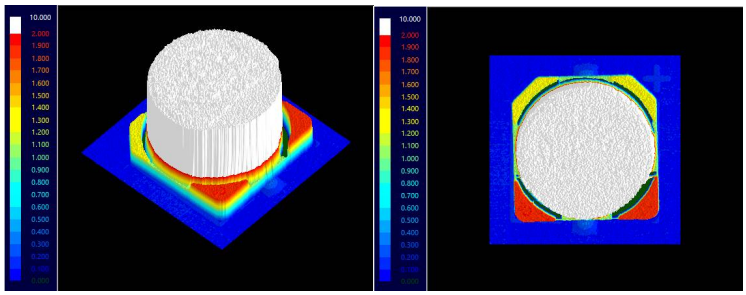
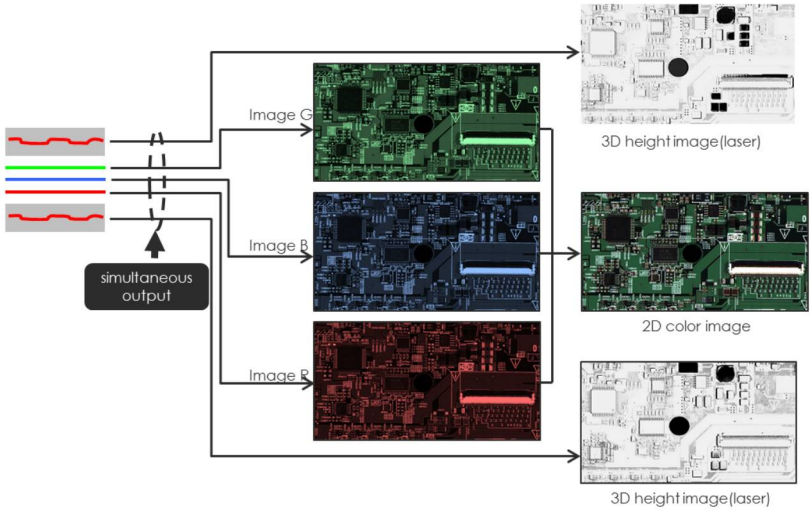
SL330, SL510

Hardware and Software Features



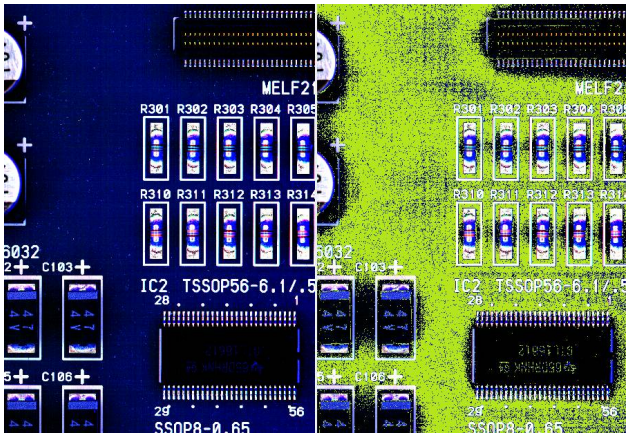
Revolutionary 3D imaging
Violet, high intensity, telecentric and dual laser projections under an 80 degrees projection angle allow shadow-free height measurements up to 40mm's tall with improved reflection properties that minimize unwanted false measurements.





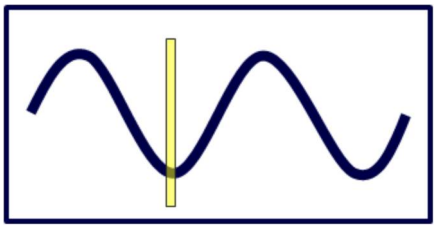
Simultaneous 3D and 2D Image Capture
Complete image capture in one scan. Providing high image acquisition speed and a very detailed image of the components and the PCB using patented sensor technology.

Colour Extraction of Zero Reference
True colour 2D imaging allows intelligent zero-referencing. This determines which heights surrounding the component are measured and used for accurate component height measurement.

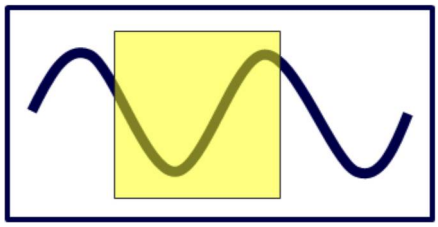


Immunity for floor vibrations
Because of the high intensity laser projections, the shutter speed of the camera is very high resulting in always-sharp image acquisitions. Floor vibrations, for example caused by an operating P&P machine, has a typical amplitude of 40µm~30µm and a typical frequency of 20Hz ~30Hz. Other ambient white light projection systems have a much slower shutter speed.

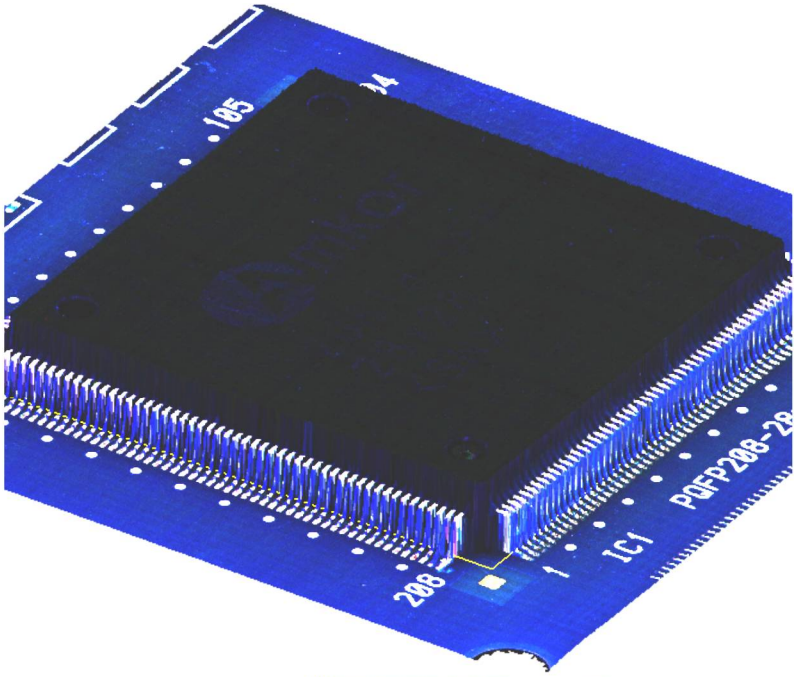
ISO-Spector laser projection shutter speed against typical floor vibration amplitude and frequency



Typical white light projection shutter speed against typical floor vibration amplitude and frequency

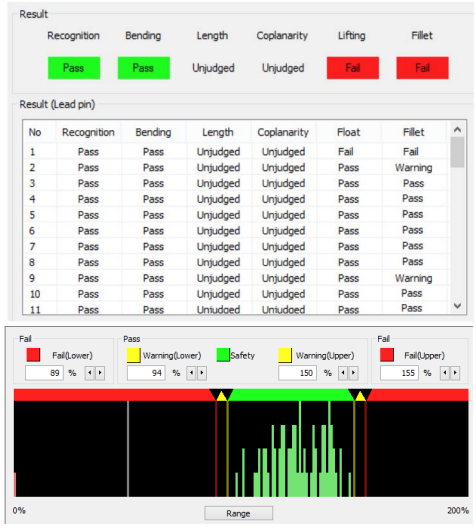


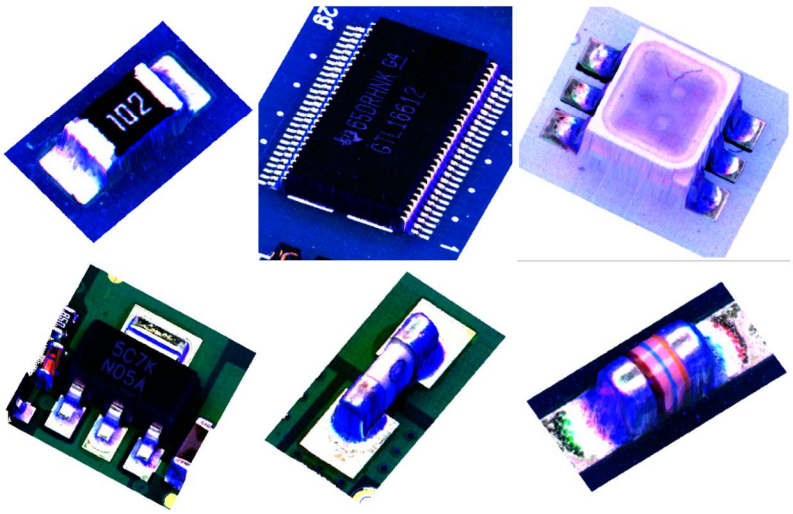
ISOspector SL330, SL510



Extensive IC/QFP gullwing lead & solder measurement

Every and each lead is measured to recognize the exact position then find all types of defects like bending, correct length, coplanarity, lifting and the solder joint volume





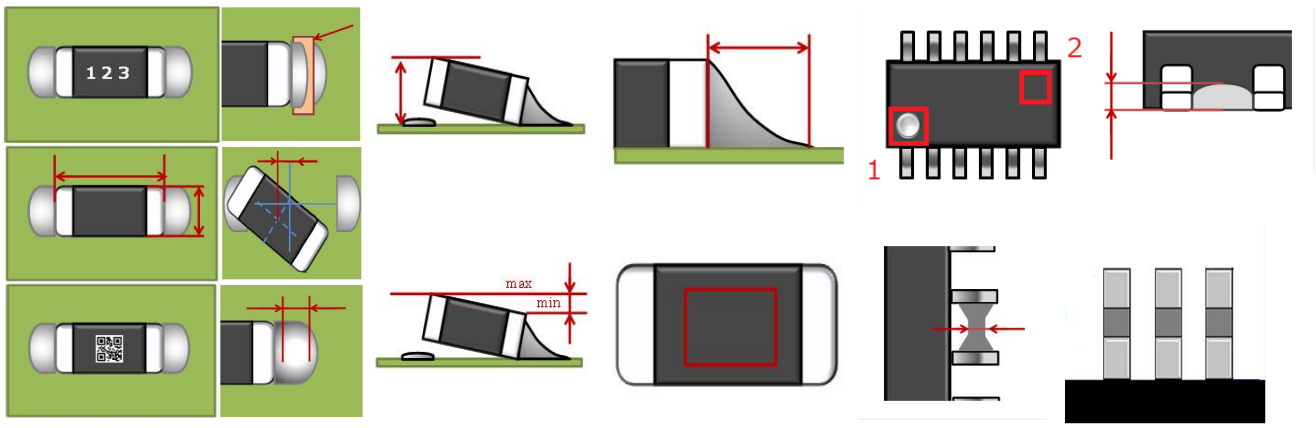
Accurate measurement on all surfaces

Black, white, dark, light or any color PCB has no influence on the settings or accuracy. Same applies to shapes: any shape including cylindrical and shiny component surfaces are measured accurately and without limitations.

Every imaginable measurement type capability

Component body: Presence/absence, absolute position, misalignment, correct height, rotation/skewing, coplanarity, front and back check, head in pillow, tombstone, polarity, text

Component Solder: Volume, height comparison, cross-section, solder slope length, brightness, bridges



ISO Spector

Specifications	ISO Spector SL330	ISO Spector SL510
Maximum PCB Size	330x250mm (13.8" x 9.8")	510x460mm (20.1" x 18.1")
Characteristics		
Product type	Topographical 3D Automatic optical inspection and measurement	
In-line	Inline SMEMA 2.0	
Movement type	Camera X,Y,Z	
PCB movement	Stationary	
PCB fixation	Top Clamping, Pin based PCB support	
Parts inspection	Presence, Polarity, Offset, OCV, Soldering	
3D capture	Short wavelength (Blue/Violet) high angle Lasers	
2D capture	RGB high intensity LED	
Camera type	12MP (4096 x 3072) Fibre interface	
Camera Field Of View/Resolution	74mm wide 18/9µm, Optional 49 mm 12/6µm	
Lens	High Resolution custom Telecentric	
Lighting system	Triple LED rings: Red, Green, Blue	
Specifications		
Minimum inspection component size	0201" (18/9µm resolution) 008004"(12/6µm resolution)	
Positioning accuracy	Enclosed glass scales ±10µm X,Y,Z	
Component clearance (top)	+40mm (1.6")	
Component clearance (bottom)	-36mm (-1.4") With backup pins –40mm (1.6") without	
Minimum PCB Size	50x50mm (1.9" x 1.9")	
Warp compensation	±2 mm (± 0.080")	
Z axis stroke	56mm Range +48mm –8mm (2.2" Range +1.9" –0.3")	
Inspection capacity typical	18µm 3600mm²sec High speed. 9µm 1800mm²sec High Resolution.	
Power	100-240 Vac / 1.5 kVa single phase	
Interfacing		
Control PC type (not included)	Dell Workstation Windows 8.1 Pro	
Control interface	Custom control card	
Data interface	Fibre optic GigE Vision	
General		
Operating temperature	15-35°C (60-95 F)	
Operating humidity	15-85 % RH	
External size	W1000x D1000 x H2000 mm (39.4" x 39.4" x 77.8")	W1400x D1300 x H2000 mm (55.1" x 51.2" x 77.8")
Weight	400kg (882lbs)	550kg (1212lbs)

Represented/Distributed by:

Mek Americas LLC
5550 Painted Mirage Rd., STE 320
Las Vegas, NV 89149 USA
T +1 702 818 1706
info@marantz-electronics.com,
www.marantz-electronics.com

mek® marantz electronics ltd
Marantz Electronics, Ltd.
4th floor, Hi-Tech Center, YBP, Hodogaya-ku
Yokohama-city, Kanagawa, 240-0005 Japan

Mek Europe BV
Polluxstraat 2b
5047 RB Tilburg, Netherlands
T +31 40 7114111
info@mek-europe.com,
www.mek-europe.com

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