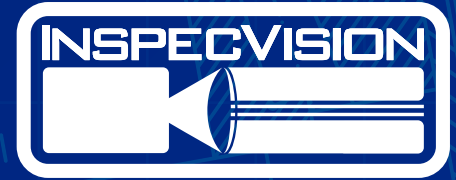


AREA OF INTEREST (AOI) Option for Planar 2D



Planar is the world's fastest 2D measurement and reverse engineering system.

Designed specifically for quick, accurate first article inspection, quality reporting and reverse engineering, Planar is ideal for shop floor use, requires minimal operator input and is proven to increase production throughput across a wide range of applications including:

- Flat and folded/formed sheet metal components
- Gaskets and seals
- Laminations
- O-Rings
- Paper acetate and electronic drawings
- Other opaque and semi-transparent flat materials

With the standard Planar 2D, parts are placed on a backlit glass surface. Lights below the part create a silhouette of the part which is then imaged by the camera to measure the parts profile. Surface features are not visible to the camera when the back light is used.

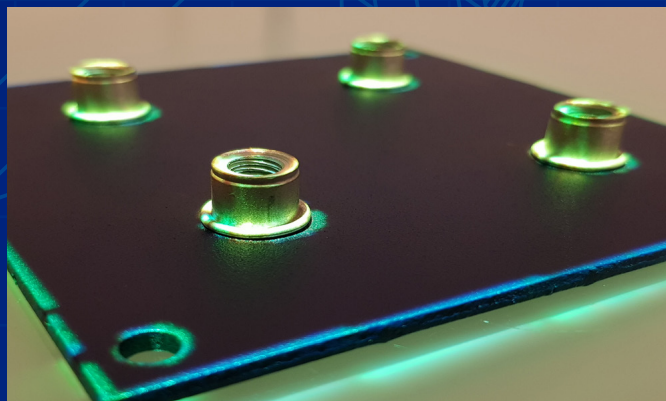


Figure 2: Area of Interest (AOI) functionality for the Planar 2D

Area of Interest (AOI) Technology

The AOI option uses lights above the table to illuminate surface features, which can then be imaged and measured.

- If the surface feature has no 3D shape but is created by texture on the part then we need only illuminate the feature.
- If the feature has no texture but has a 3D shape then the lights can be used to cast shadows which create a well contrasted edge which can then be imaged and measured.
- The system can even leverage the existing backlight to see inside the part and inspect the content of translucent assemblies.

Integration with Standard Planar 2D

Measurements from the standard Planar 2D and AOI option can be seamlessly integrated into the same inspection programme and inspection report.

As with the standard 2D system part profile, dimensions and tolerances can be imported from the CAD file to facilitate automatic or semi-automatic generation of an inspection program.

A typical AOI measuring sequence only adds a few seconds to the overall inspection and measurement time.

Further integration with the Planar 2D's SurfScan option allows measurement of the height of the surface features and projection of the inspection results onto the part using augmented reality.



Applications

AOI can be used for a wide range of applications including:

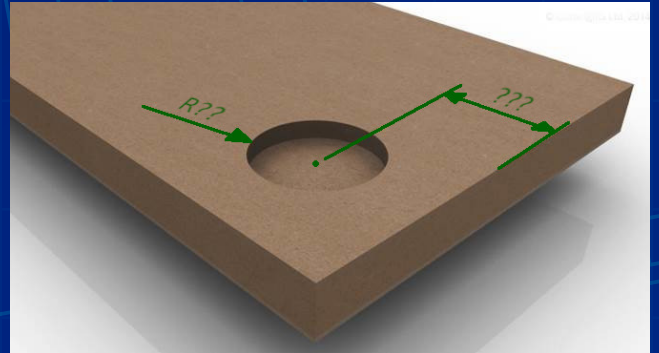
Metal Parts

- Countersinks
- Chamfers
- Pins /Pemms
- Channels
- Printed or etched information
- Scratch detection
- Integrate with SurfScan to check height, depth and cross-section of visible features.



Wooden Flat Pack Parts

- Inspect the profile, blind holes, holes and side features on parts for flat pack furniture.
- Integrate with SurfScan to check height, depth and cross-section of visible features.



Printed Parts

- Inspect printed material
- Inspect printed material hidden behind a translucent protective cover.
- Inspect both the carrier back and protective front in addition to internal contents

Gaskets

- Inspection of surface features such as location, width and presence of silicon beading,
- Location, quality and presence of the transition edge between two materials such as metal and fibre or plastic.
- Integrate with SurfScan to check height, depth and cross-section of visible features.

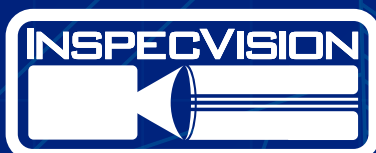


Electronics

- Inspect the PCB profile
- Inspect the internal and surface tracking, depending on overlap and translucency.
- Inspect rubber heat map profile and internal elements.

Plastic Parts

- Inspect the profile and internal shape features which are visible from above
- Integrate with SurfScan to check height, depth and cross-section of visible features



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