

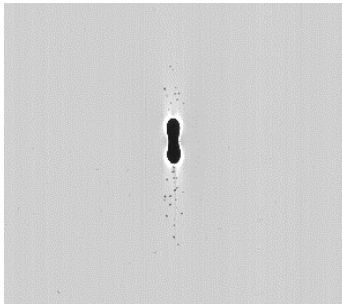
## LineScanner – functional range

version 2018-02



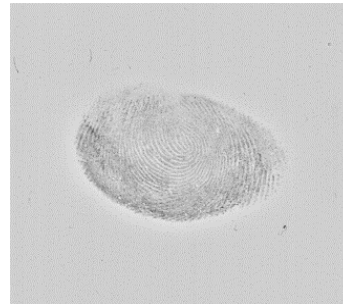
## 1 Functional range of LineScanner

Overview of all available LineScanner possibilities. Detailed description can be found within the according LineScanner product description. Some functions are based on special hardware and software elements.



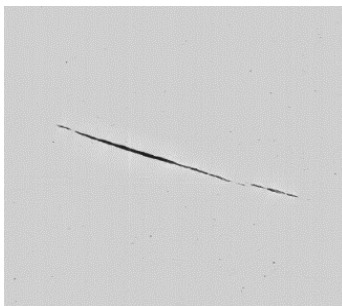
### Inclusions

inclusions and bubbles  
diameter measurement  
quality software package



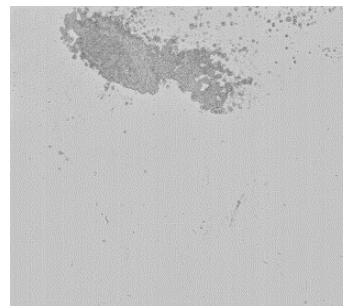
### Finger prints

finger prints and any  
other visible distortion;  
measurement of area  
quality software package



### Scratches

scratch detection, ASTM  
3 or higher;  
measurement of length  
quality software package



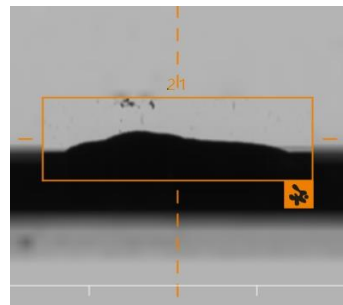
### Coating defects

coating voids and any  
other visible distortion;  
measurement of area  
quality software package



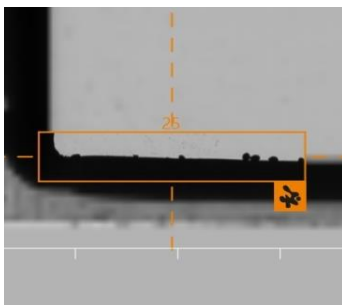
### Others

insects and other  
imperfections within the  
air space  
quality software package



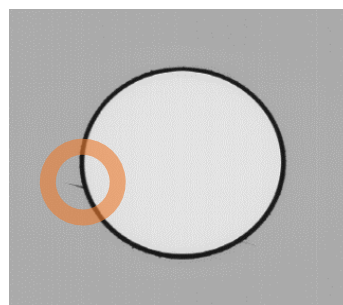
### Butyl defects

Miss-alignment of butyl  
strings or bumps  
quality software package



### particles in air space

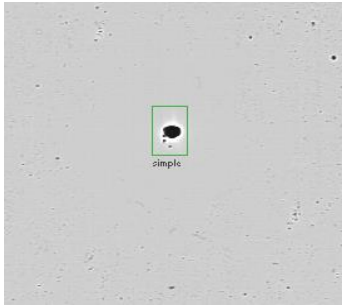
even smallest particles  
placed on whatever edge  
will be detected  
quality software package



### Cracks

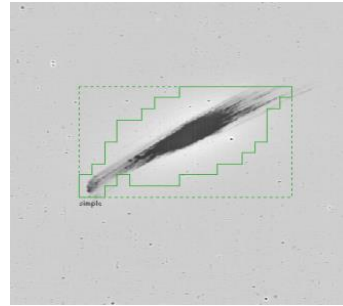
Cracks and edge defects  
on drill holes  
quality software package

**LINESCANNER FUNCTIONAL RANGE**



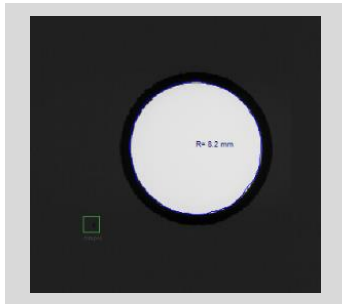
**Inclusions**

inclusions and bubbles  
diameter measurement  
quality software package



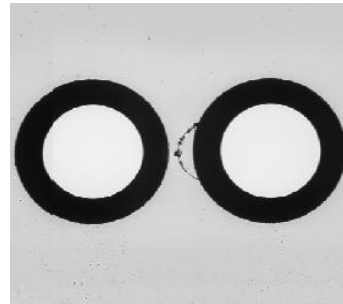
**Dirt**

finger prints and any  
other visible distortion;  
measurement of area  
quality software package



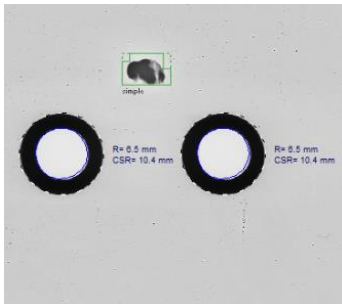
**Drill hole diameter**

check inner and outer  
diameter of drill holes  
countersink  
dimension software  
package



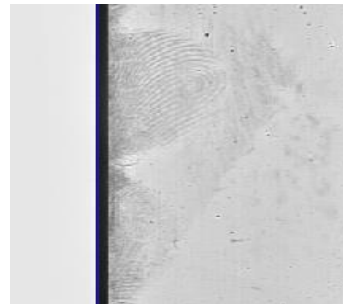
**Drill hole**

defects near drill hole  
position and diameter  
distance between holes  
dimension software  
package



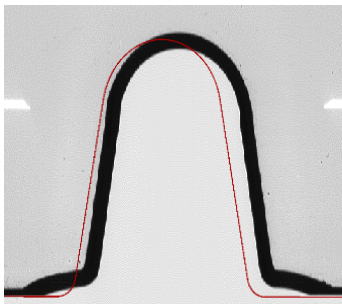
**Drill hole**

defects near drill hole  
position and diameter  
distance between holes  
dimension software  
package



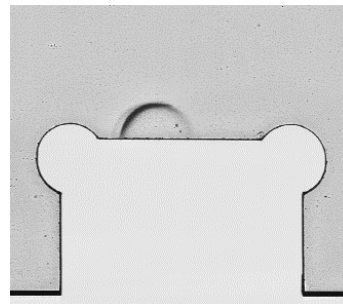
**Dirt**

finger prints and any  
other visible distortion;  
measurement of area  
quality software package



**Cut out position**

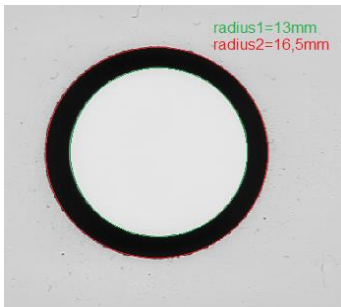
check cut out position  
as well as cut out details  
dimension software  
package



**any defect – high  
resolution**

detection wherever  
placed in highest  
resolution; defect and  
dimension at the same  
time  
quality software package

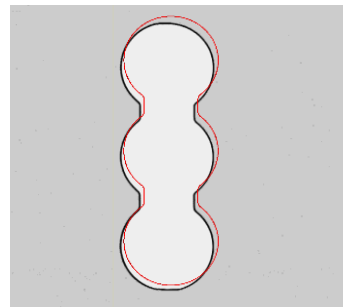
**LINE SCANNER FUNCTIONAL RANGE**



**Drill hole diameter**

check inner and outer diameter of drill holes countersink

dimension software package



**Cut out**

verification of cut out position

dimension software package



**Drill hole position**

check position and inner and outer diameter of drill holes countersink

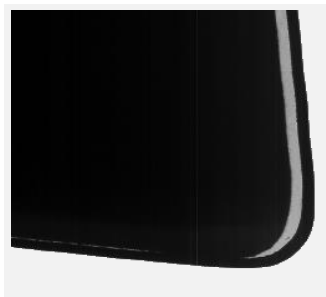
dimension software package



**IG unit**

check frame offset and position as well as grid placement

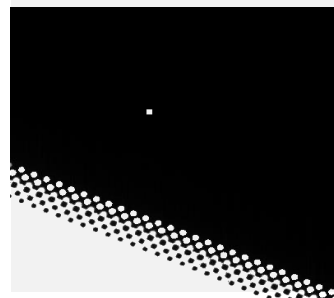
dimension software package



**Screen print position**

check offset of screenprint

dimension software package



**Pin holes**

check for lacks within screenprinted areas

quality software package



**Screen print defects**

defects along the edge of lites with screenprint

quality software package

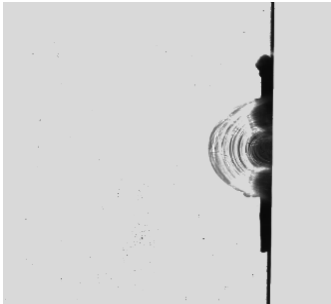


**Edge defects**

edge chip detection; missing grinding or overgrinding

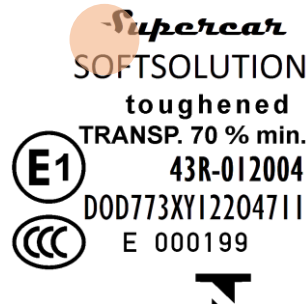
quality software package

LINE SCANNER FUNCTIONAL RANGE



Edge chips

edge chip detection  
quality software package



Logo quality control

missing parts of logo print  
logo standard/advanced software package



Logo quality control

bright or weak ink detection  
logo standard/advanced software package



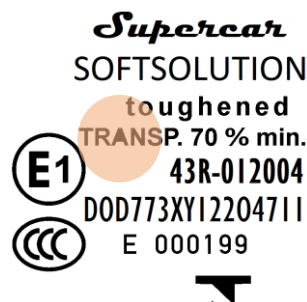
Logo quality control

logo position and angle of placement  
logo standard/advanced software package



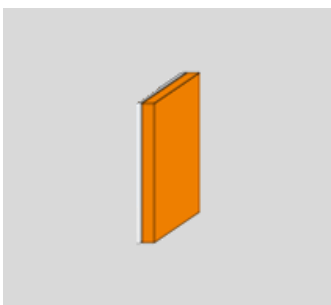
Drill hole position

drill hole position and diameter check  
dimension software package



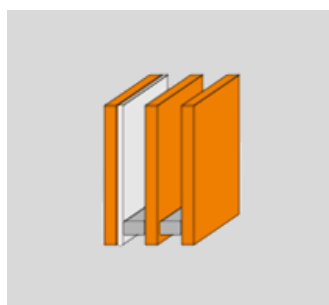
Logo quality control

filled letter detection  
logo standard/advanced software package



Glass thickness

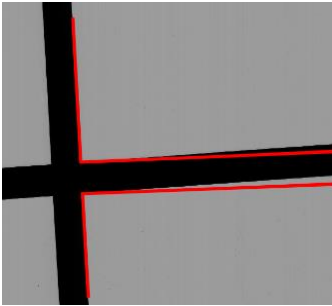
check for correct glass thickness and side of coating  
GSS sensor



IG build up

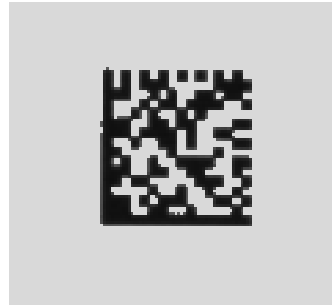
detection of element assembling on IG units  
GSS sensor

**LINESCANNER FUNCTIONAL RANGE**



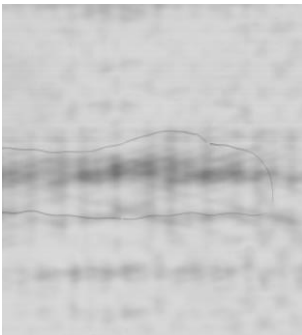
**Grid alignment**

check the grid alignment even without a transfer file  
dimension software package



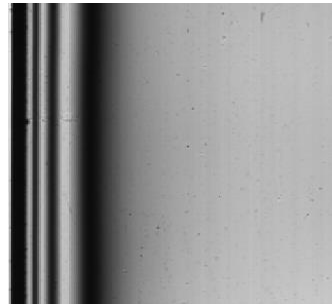
**DMC code**

recognition of DMC code and interpretation of it  
DMC software package



**White haze**

has a strong effect on light delay  
anisotropy software package



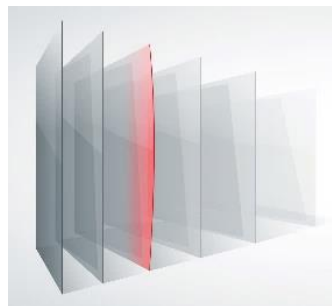
**Edge stress**

edge stress calculation along entire edges  
mPa and std. deviation  
anisotropy software package



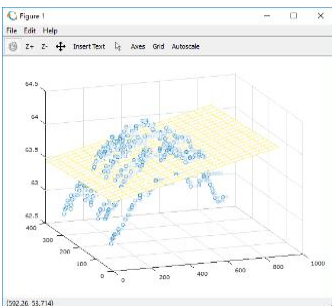
**Tempering level**

distinguish between heat-strengthened or fully tempered? edge stress  
anisotropy software package



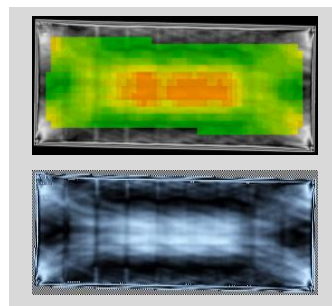
**Bending check**

measures local and overall bending of glass (only on vertical LineScanner)  
GSS advanced sensor



**Bending check**

measures local and overall bending of glass (only on vertical LineScanner)  
GSS advanced sensor



**Anisotropy**

visualization of strain differences and detailed measurements in nanometer  
anisotropy software package