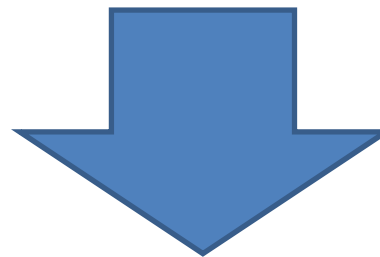
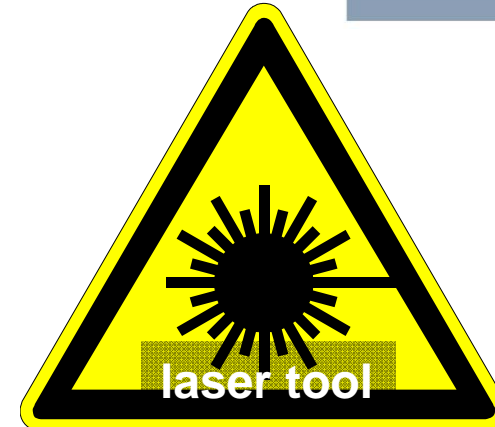

New Glass Products by Laser Technology

- **boraident[®] laserbird** -



MISSION



NEW GLASS PRODUCTS
INNOVATIVE, CUSTOMIZED, PROFITABLE



Advantages

Get more out of your semi-finished products!

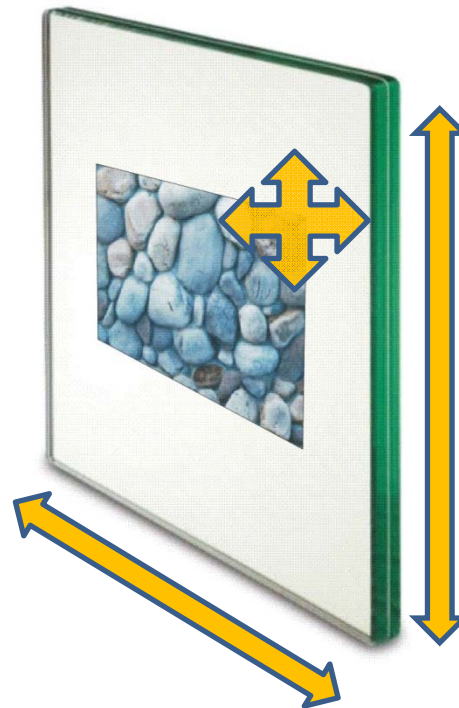
WORLD DEBUT:

- world's first multi-functional laser manufacturing system
- new, customized architectural glass goods from standard semi-products
- innovative App system = production technologies for structuring of coatings and flat glasses



boraident[®] laserbird

App - System



ALARM GLASS

SUN GUARD GLASS

ISOLATION GLASS

BIRD FRIENDLY GLASS

DESIGN GLASS

HEAT GLASS

RADAR GLASS





Advantage and Future

➤ Your Advantages:

- Produce customized and adapted to your market!
- Expand your product portfolio & be a trend-setter
- Existing time-consuming and cost-intensive steps, such as screen printing, can now be performed faster and cheaper for single items

➤ Your Future:

- Develop new products – **boraident** develops with you your customized App!



IQ INNOVATION AWARD
HALLE 2015

boraident® laserbird

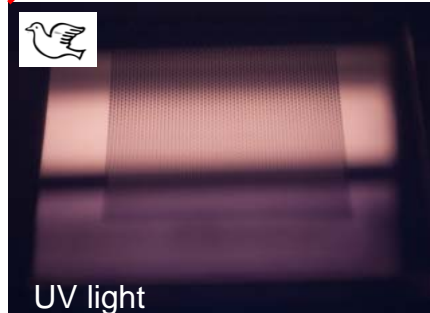
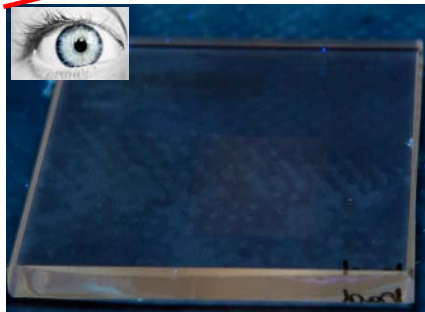
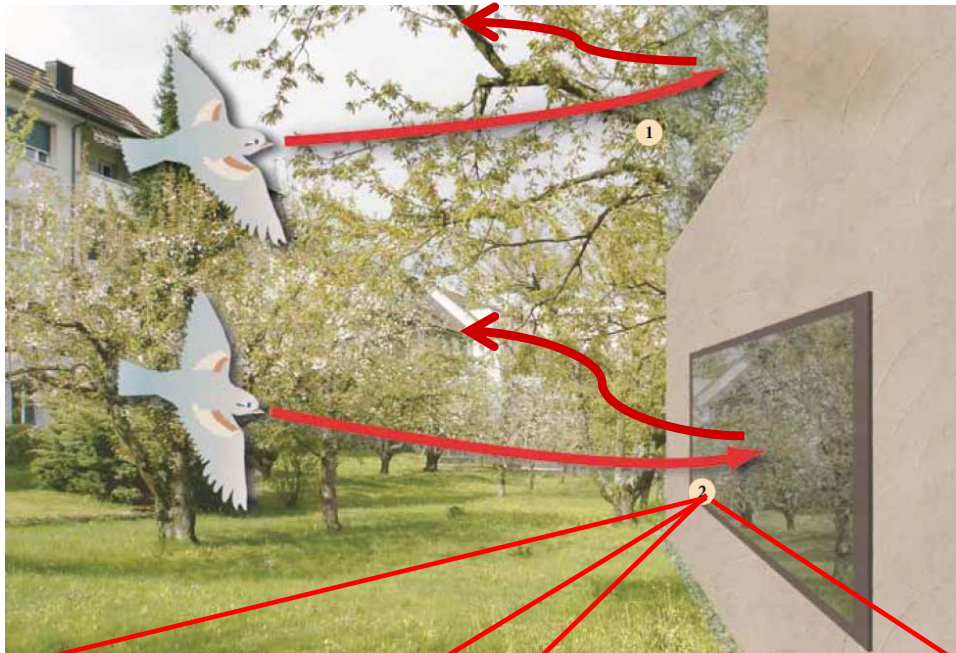
installed at Glaswerke Arnold



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App's

boraident[®] laserbird ORNILux



Bird Friendly Glass:

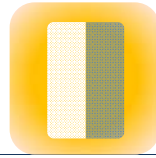
UV structures in arcon bird coating

- possibility of world wide production
- with high energy efficiency
- make a contribution to environmental protection
- with a profitable products



boraident[®] laserbird

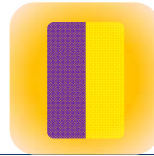
EDGERemove



Edge Deletion:

- Removal of coatings at the edge
- ✓ high optical quality
- ✓ no scratches at the glass surface
- ✓ short delivery times – production on the demand

boraident[®] laserbird MEColor



Decoration of IG Units:

- Colored Decoration at the finished IG unit
- ✓ high optical quality
- ✓ no scratches at the glass surface
- ✓ short process times

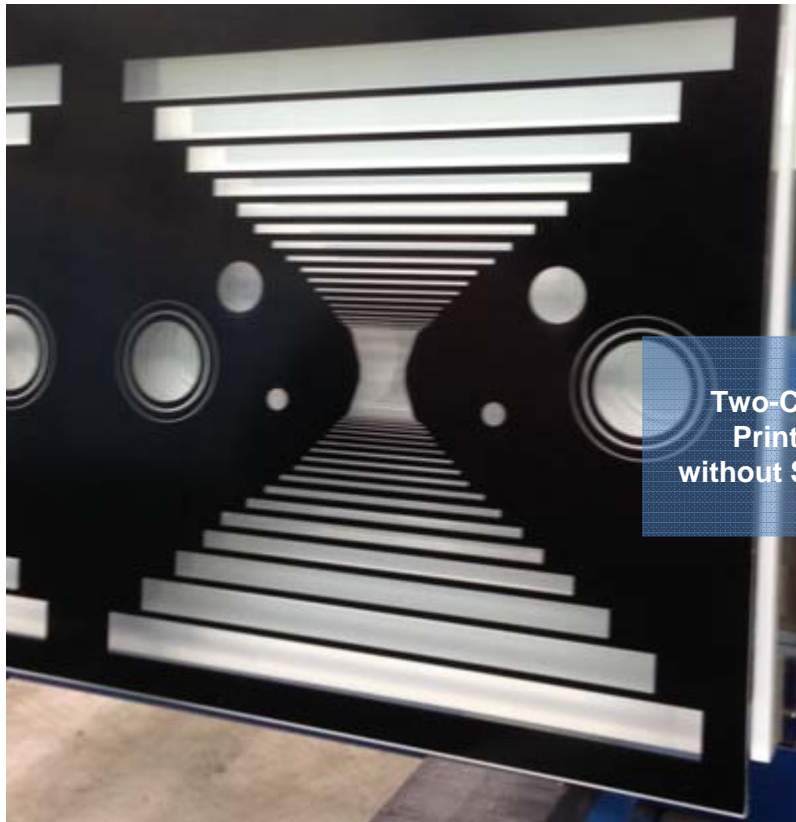
boraident[®] laserbird

SCREENPrint

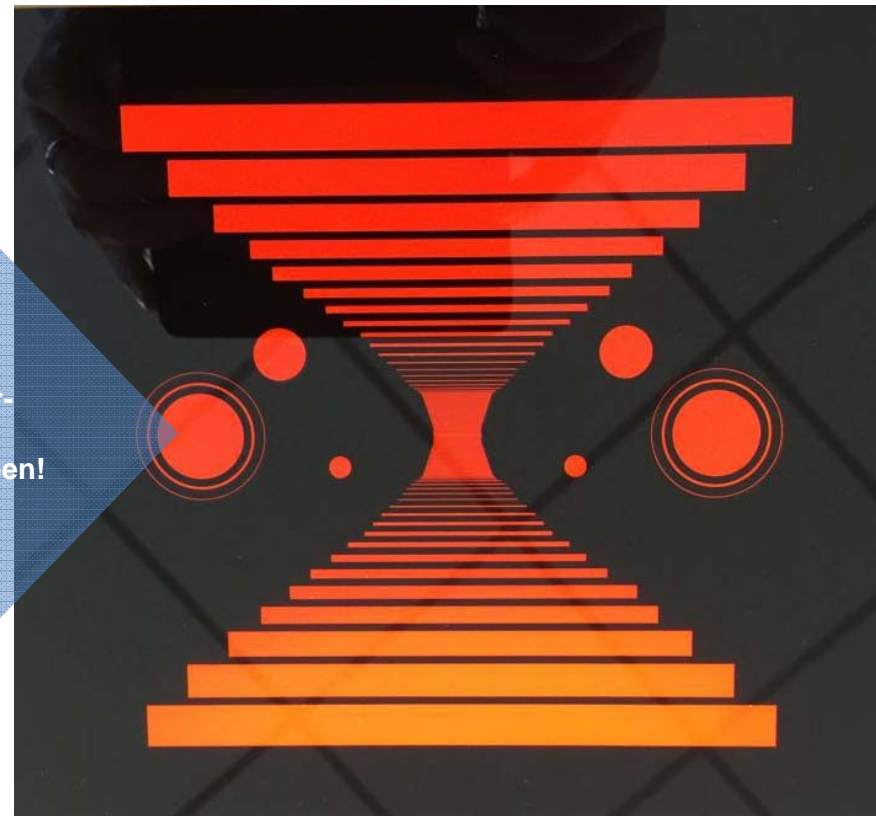


Individual Two Color Printing

- printing without screens

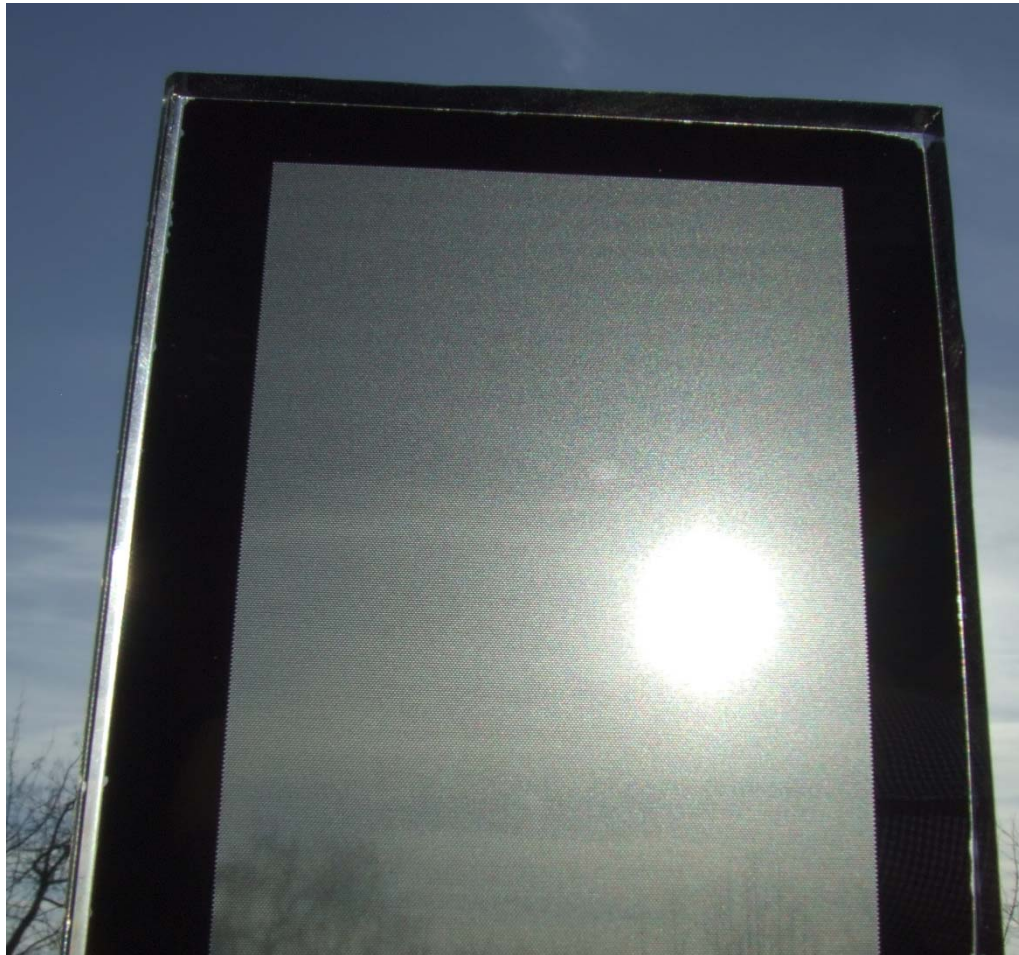


Two-Color-
Printing
without Screen!



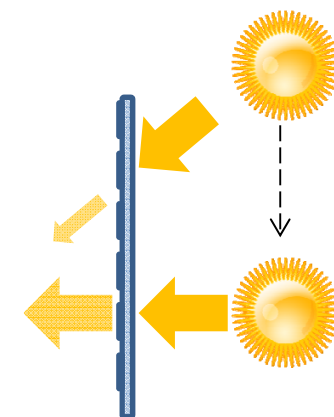
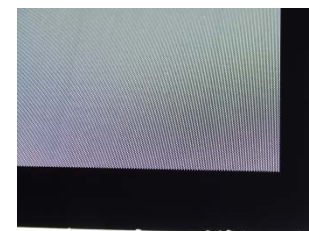
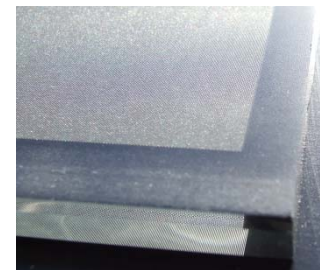
boraident[®] laserbird

BORAShade



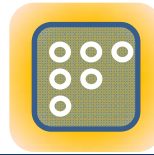
Sun Protection Structures:

- semi transparent shadow structures in color coatings



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MIRRORFree



Step Removal of Mirror:

removal of mirror coating stepwise

- **clear deletion of the coating**
- **matting of the glass surface**



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MIRRORDecor



**Decoration
of Mirror**



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LASERPrint



Laser Print at the Glass Surface:

decor elements printed by laser

- **decoration at building glass with high resolution**
- **possibility for functional structures**

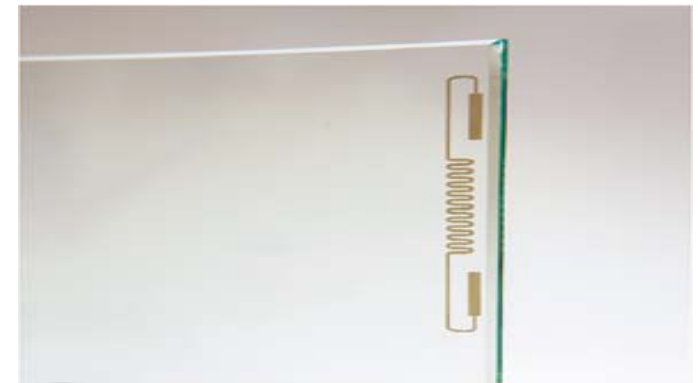


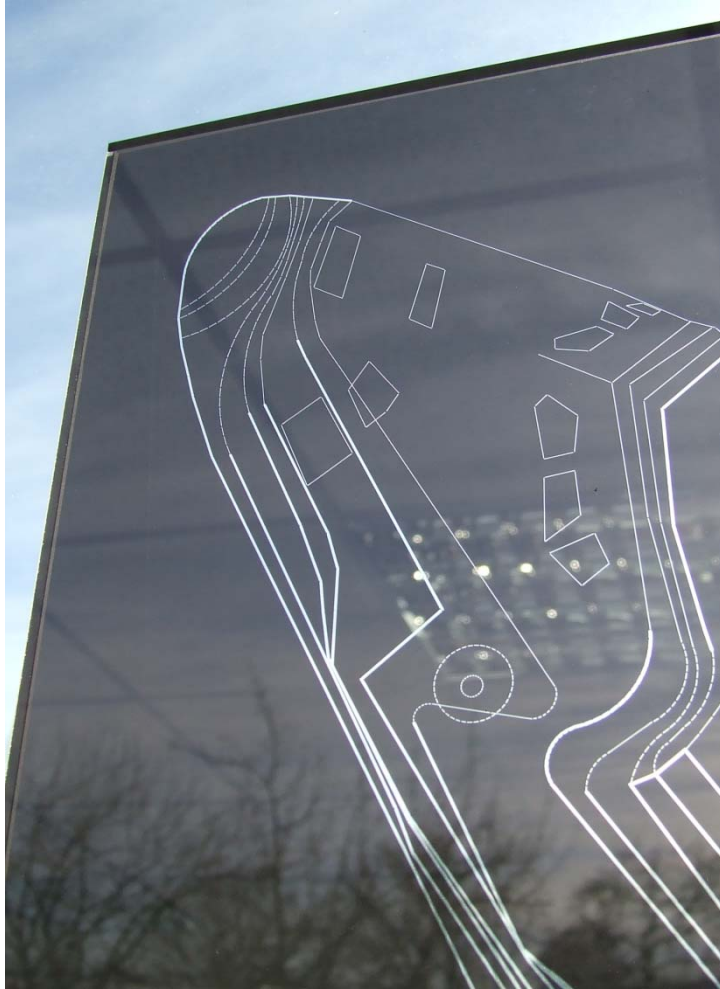
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LASERPrint



Security Alarm Glass:
conductive elements printed by laser





Decor Structures in Cr Coatings:

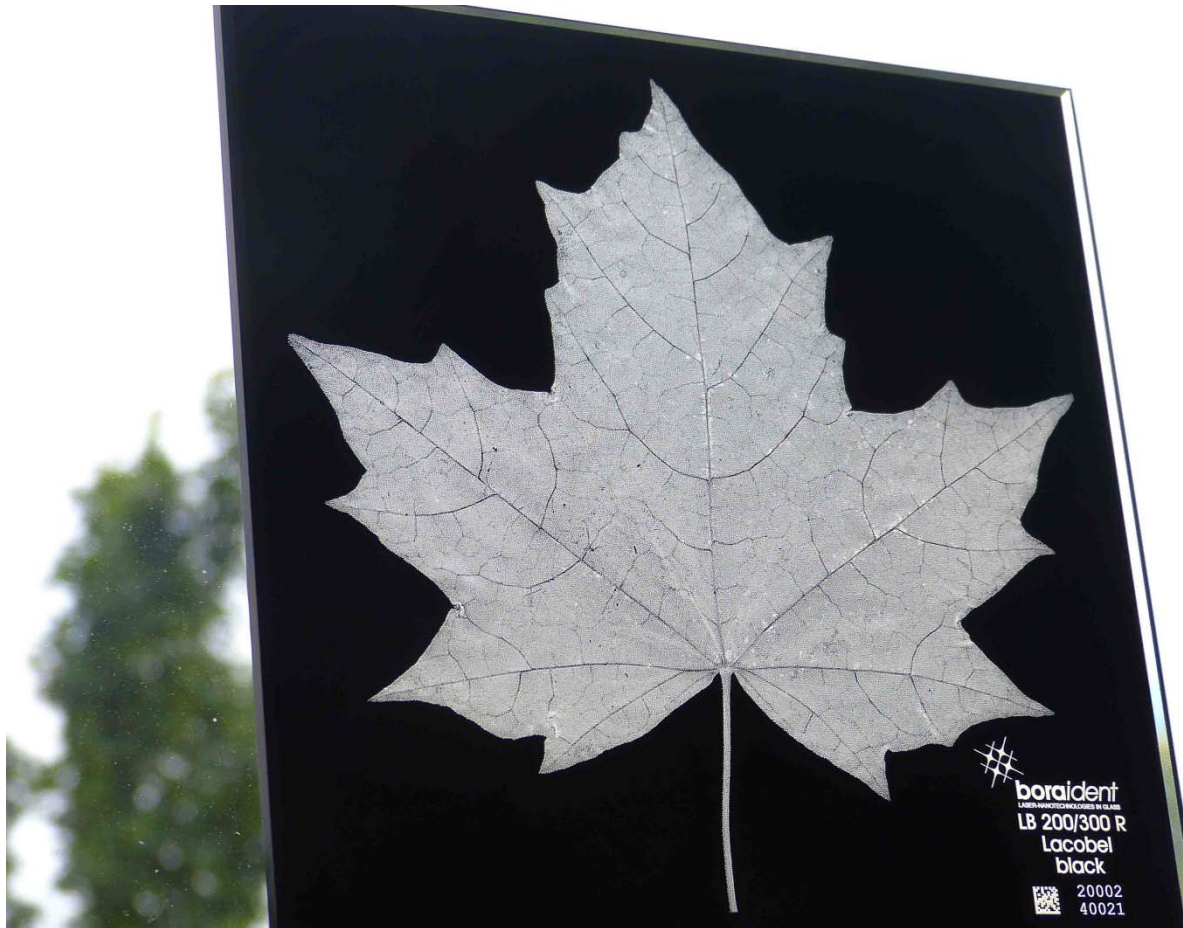
transparent decor structures in chromium coatings

- decor structures
- functional structures



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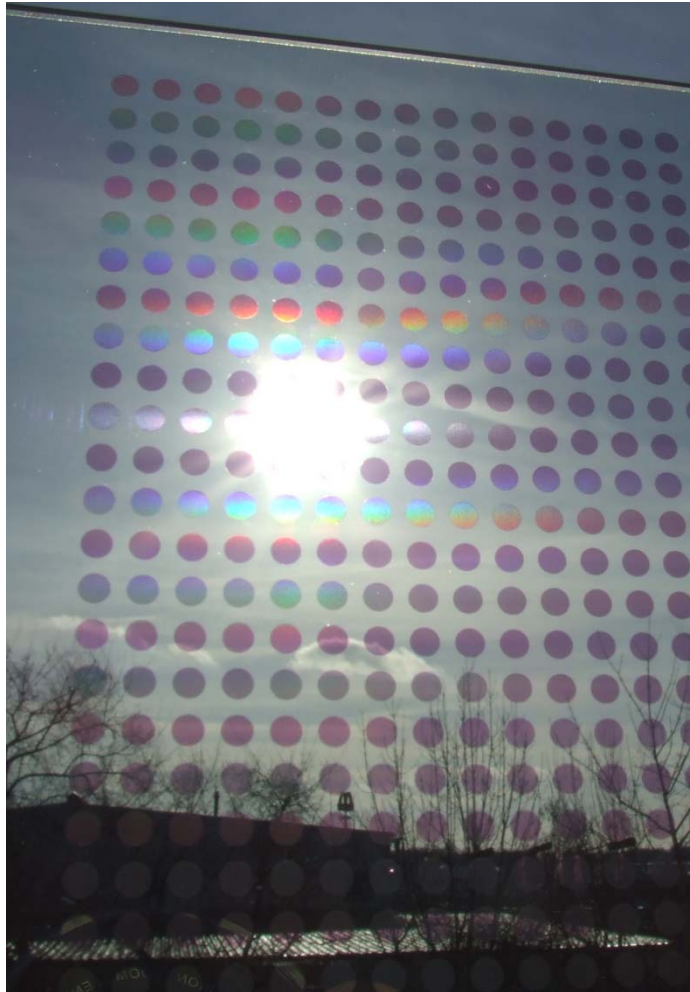
LACOBELDecor



Decor in Lacobel coating:

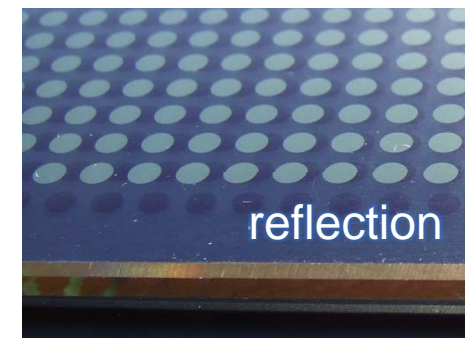
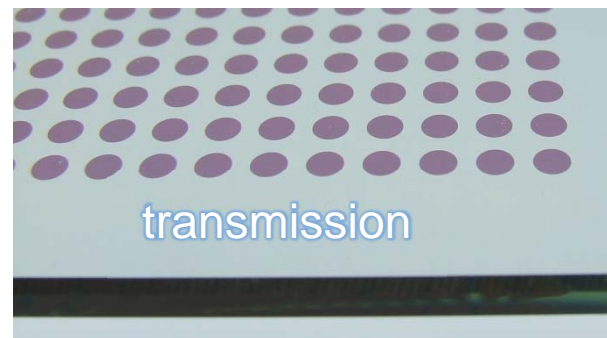
- transparent Decore in Lacobel coating
- transparent or matted coating removal

boraident[®] laserbird MULTIColor



Decore Structures in Coatings:

- semi transparent , colored structures in coatings
- Properties of the Structures:
 - semi transparent
 - high reflective
 - scattering effect
 - high resolution



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MULTIColor



Decore Structures:

- photo-realistic



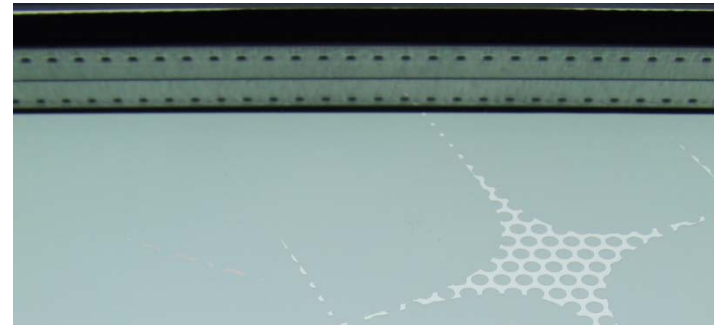
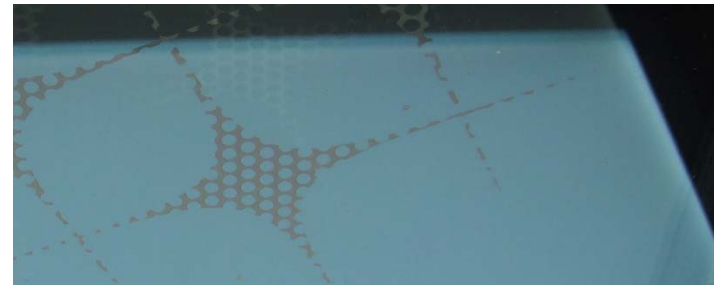
boraident[®] laserbird

LIGHTDecor



Decore Structures :

- decore elements in coatings
- structures based on geometrical elements



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LASERSand



Decore Structures :
decore elements by engraving

- replacement of energy intensive technology by energy efficient laser technology

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ready for glass industry 4.0

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Ready for Glass Industry 4.0

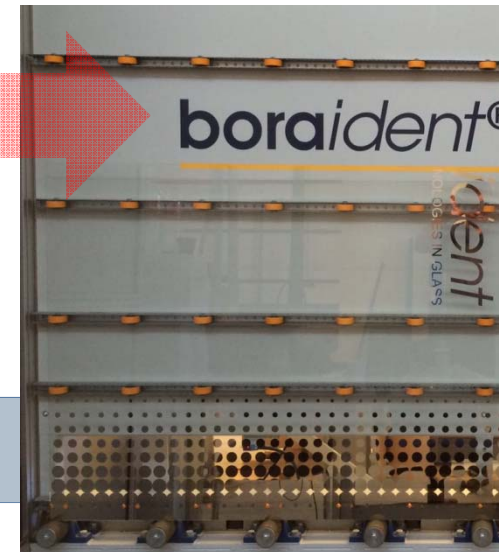


**Product ID
with Data-Matrix-Code:**

- order number
- data
- individual number

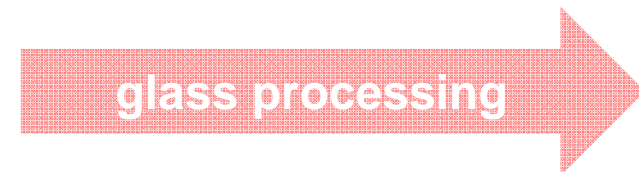
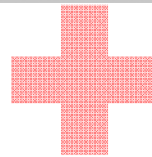
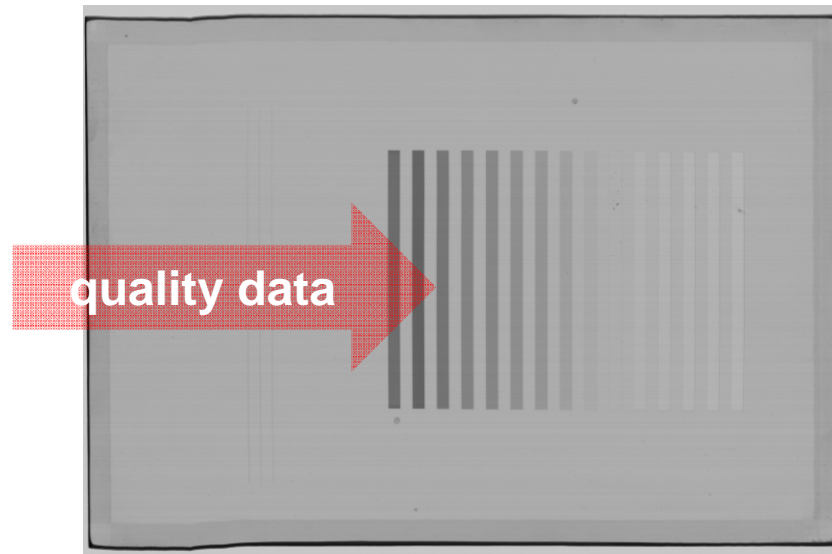


process data



boraident[®] laserbird

Ready for Glass Industry 4.0



Summary



multi functional production equipment:

- **new, individual products**
- **new applications**
- **sustainable by APP-System**
- **design the market**
- **be a trendsetter!**

Thanks for your attention!



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