State-of-the-art color personalization technologies for polycarbonate IDs

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Agenda

Color photo and laser engraving

New approaches

Two color personalization technologies

Challenges & solution

Let’s watch it!
1972

First digital color photograph published

30 years of laser engraved IDs
Governments and citizens want IDs with color pictures
Traditional color printing techniques

Inkjet or dye-sublimation

Dye-sublimation

(Re-)Transfer

Techniques based on laser technology examples: LASINK, Sealys Color

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<th>2016</th>
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<th>2019</th>
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<tr>
<td>Cameroon</td>
<td>Burkina Faso</td>
<td>Costa Rica</td>
<td>Andorra</td>
<td>Estonia</td>
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<td>National eID</td>
<td>Driver's License</td>
<td>National ID</td>
<td>Electronic Passport</td>
<td>National eID</td>
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Challenge for color picture on polycarbonate IDs

Security, durability, color quality and cost hinders satisfying results.
The goal: offer color personalization while enhancing security
POLYCORE®: no blank documents produced for outmost security

>70 MILLION documents issued since 2010
CLIP ID®: new solution for flexible personalization processes

5 MILLION annual volume and counting
CLIP ID® technology:
Laser Protected Image (LPI) as the basis
How to ensure ink abrasion resistance and adhesion while maintaining maximum security and process flexibility?

How to protect the ink on the surface technically?

How to avoid costly protection mechanisms for the color photo?
The solution:

Increase the „penetration depth“

of the ink

If you prepare the card surface with lenticular structure similar to MLI / CLI,

the ink is dripping into the lenticular structure to bond with the body.
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