LASINK™

Protecting polycarbonate ID documents with a highly secure and durable color portrait

With technologies used by fraudsters constantly improving, governments are looking for secure identity documents that authorities and private organizations can immediately and easily authenticate. LASINK™ is a laser engraving technology that generates secure high-quality color portraits on polycarbonate identity documents. Its distinctive linear pattern makes it instantly recognizable.

Color portraits on polycarbonate ID documents

The irreversible personalization of color images inside polycarbonate credential substrates is a challenge.

With standard printing techniques, the color photo needs to be protected by an overlay or a varnish, resulting in compromised document integrity as well as loss of tactile features.

Printing the color photo in one of the polycarbonate layers before the lamination step during manufacturing is a secure solution. However, it makes the issuance process inflexible.

The most secure and flexible technique is the use of a laser that engraves a photo with gray tones into the polycarbonate. But this limits personalization to black and white pictures.

LASINK™

With LASINK™, the color portrait of the document's holder is directly engraved into the polycarbonate structure by a laser during the personalization stage.

LASINK™ color photos have a unique linear pattern that acts as a signature to authenticate the document.

Its recognizable design cannot be imitated with any digital printing technology or forged as the picture is deep in the body and not at the surface of the document. The ID document is impossible to delaminate.

The personalization technique is kept secret and prevents the use of stolen blank documents.

LASINK™ gives flexibility to governments: it can either be used in central or decentralized personalization solutions.

LASINK™ is robust and offers a ten-year lifespan.

Why IDEMIA?

With over three billion identity documents issued worldwide, IDEMIA has an extensive experience in the production of fraud-resistant documents and a comprehensive knowledge of the evolving challenges in terms of fraud.

IDEMIA has been a trusted partner of governments for over 40 years.

Estonia, Latvia, Morocco, Andorra, Burkina Faso and Costa Rica have chosen LASINK™ to secure their ID cards, passports or driver's licenses.

Benefits

Fraud-resistant

LASINK™ is resistant to all types of frauds. It is nearly impossible to reproduce the picture or to forge it. It also prevents the reuse of stolen blank documents as it is a proprietary personalization technique.

Easy-to-authenticate

LASINK™ matrix makes its authentication easy. It is recognizable with the naked eye, a dedicated filter or by using a magnifying glass. It can also be authenticated by a scanner making its verification possible by non-experts in document inspection.

Durable

LASINK™ color portraits are deeply laser-engraved into the polycarbonate substrate, guaranteeing a ten-year durability and resistance to abrasion even under the most demanding tests.

IDEMIA

How it works

LASINK™ matrix

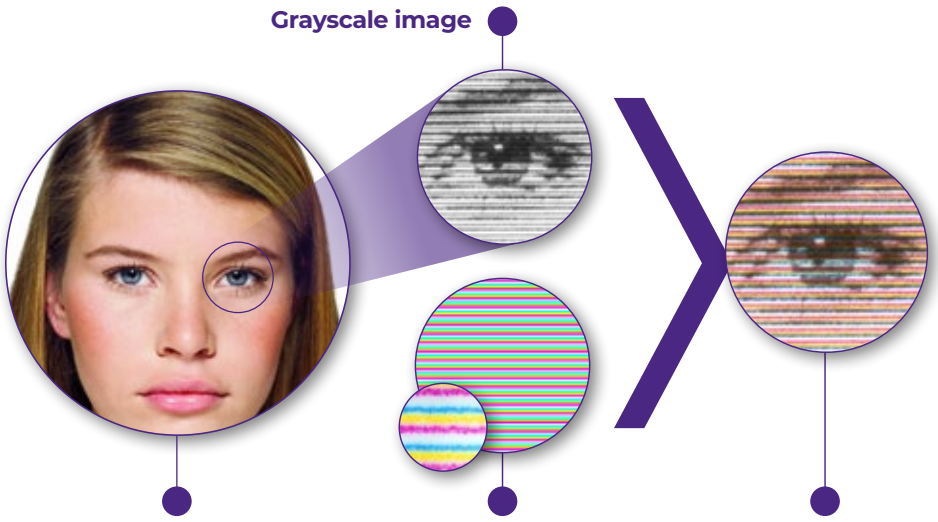
A LASINK™ matrix, made up of a succession of four colors — cyan, magenta, yellow, and white — is printed on a layer of the polycarbonate structure during the manufacturing of blank documents. The security printing technique used to obtain these fine lines, avoiding the overlap of the four primary colors, is used in the production of state-of-the-art security documents.

At personalization stage, the color picture of the ID document's holder is translated into a grayscale high-resolution specific pattern via a secret algorithm. During laser-engraving, the gray dots will be perfectly positioned above and below the primary colors of the LASINK™ matrix, revealing the color portrait.

IDEMIA can provide you with laser-engraving equipment customized for LASINK™ or recommend you LASINK™ qualified laser technology.

LASINK

Hard to reproduce



Easy to authenticate

Level 1

- Naked eye

Level 2:

- Decoding lens
- Magnifying glass
- OMA*
  - with scanners
  - with smartphones

Level 3:

- PUF (Physical Unclonable Function) with very high resolution scanner

* Optical Machine Authentication

Cutting-edge technology

- LASINK™ colored matrix is printed using the state-of-the-art technology used by governments to print banknotes.
- The photo is processed through a secret algorithm developed by IDEMIA that enables accurate laser engraving.
- The grayscale laser engraving is perfectly registered to the colored matrix, thus allowing color revealing.