



ELECTRONIA



e-PASSPORT

*F*orged and fraudulent identity documents are a real risk. Crimes involving forged documents are well recognized and therefore the fight against them has to be a continuous process. Following its long-term development and production experience with high-security ID cards and smart cards, Electronia introduces a revolutionary passport product, EIPass, which contains a full plastic data page and a contactless chip to meet the highest requirements in security and durability.

Being conscious of the ever-increasing risk of counterfeiting of security sensitive documents, EIPass uses laser engravable polycarbonate plastic, which meets the most stringent demands set on a tamperproof identity document. Furthermore, laser-engraving is a cost effective way to personalize passports.

Polycarbonate combined with laser-engraving

EIPass uses laser-engraving for the visual personalization of all ID documents made of polycarbonate, also the passport data page. Unlike other techniques, no extra material, like toners, inks, or foils are added during personalization. In laser-engraving the image formation takes place inside the data page, i.e. the sensitive data

does not reside between vulnerable laminated overlays. Laser-engraving alters the structure of the polycarbonate (PC) plastic. When a laser beam hits PC molecules they decompose into tiny carbon particles in the substrate. These particles form the black color. All personal information including photograph, signature, alphanumeric data and machine-readable lines as well as bar codes are securely laser engraved in personalization.

EIPass also makes it possible to laser-engrave logos as well as any typeface. Even micro-features can be introduced. Also, use of Changeable Laser Image (CLI™) in the construction of the data page together with laser-engraving, further enhances the passports security. CLI is a strong security item, which can be personalized, for example, with a photo. Moreover, laser engraving is ideal for Machine Readable Passports (MRP) and for Optical Character Recognition (OCR).

Several security characteristics

The polycarbonate data page is the best choice for passports as it has exceptional security characteristics. It is very durable and has long lifetime, and the material can withstand the most severe environmental conditions.



Secure and durable polycarbonate passport booklet with a contactless chip for biometric authentication.

The passport itself contains the most sophisticated security-printed features available today: fine line guilloche printing with rainbow colors, intaglio printing with latent images, micro-texts and optically variable UV visible and fugitive inks, as well as modern infrared inks. Surface embossing of the data page is a high-security feature, because along with its visibility, it can also be felt by fingertips. Embossing formed both up and down from the surface is also highly tamper-proof.

Embossing can also be made in the form of micro-text. Combined embossing and laser-engraving constitute an unmatched security feature. A hologram, a Kinegram™ or similar security elements can also be included as an additional security item.

Contactless biometric chip

In addition to the high visual security technology, Electronia has also a long experience of smart card operating system development. That knowledge has now been utilized to incorporate a new contactless biometric chip, which meets all ICAO and other international standards. The chip is placed inside the polycarbonate data page where it is best protected against breakage as well as tampering.

Easy personalization

The polycarbonate passports can be personalized with a variety of existing laser-engraving machines from leading vendors. Electronia can deliver a complete passport booklet, or simply the polycarbonate data page with the embedded chip and with the other selected features. The combination of polycarbonate plastic, laser engraving, contactless biometric chip and Electronia's personalization services and know-how is available for you to create your ultimate passport.

Technical Specifications

FORMAT:

- Conformant to ICAO Doc 9303 Part 1 (ISO 7501-1)
- Size 88 (+-0,75)mm*125 (+-0,75)mm
- 34 pages or according to agreement

MATERIALS:

- **Data page:**
laser-engravable polycarbonate with sleeve made of a flexible material
- **Visa pages:**
Security paper with watermark, security thread, fibers and reagents
- **Cover:**
Environmentally durable plastic with security paper inside including security fibers

DESIGN:

Basic design and specific elements (base security printing, emblems, coat of arms, logos etc) to be provided by the client. Electronia reserves the right to adjust the received artwork design to be applicable to the printing and manufacturing of polycarbonate data page and security paper.

PRINTING:

A selection of different security printing alternatives:

Data page:

- 6 - 9 colors (inclusive UV and OVI) on the front side
- 3 - 5 colors (inclusive UV and OVI) on the reverse side

Visa pages:

- 6 - 9 colors (inclusive UV and OVI)

Cover:

- Foil embossing
- UV printing

Cover inside:

- 6 - 9 colors (inclusive UV and OVI)
- Conformant to EU and other international security requirements

PRINTED SECURITY FEATURES:

A selection of different alternatives:

- guilloche bottom print
- invisible fluorescent printing
- Intaglio printing
- rainbow printing
- micro-printing
- UV rainbow printing

OPTIONAL DATA PAGE SECURITY FEATURES PRINTING:

- positive and negative embossing
- laser-engravable Changeable Laser Image (CLI)
- Optically Variable Device (OVD): hologram/Kinegram or the like
- security overlay: hologram/Kinegram™ or equivalent
- shadow image: MicroPerf™
- Multi-color UV thread with strengthened endings

OPTIONAL CONTACTLESS BIOMETRIC CHIP:

- Conformant to ICAO specifications

OPTIONAL MACHINE READABILITY:

- ICAO Doc 9303 Part 1
- OCR-B
- Barcodes

DURABILITY:

- Tested and conformant to high requirements

WARRANTY:

- Warranty for plastic, printing and visual personalization: 10 years