

Contactless e-Passport Inlay



LAMINATED STANDARD AND ENHANCED INLAYS FOR e-PASSPORT COVER PAGES

- **Secure** - proven, tamper-resistant design
- **Resilient** - withstands daily handling and exposure
- **Reliable** - optimum chip performance with the highest level of electronic document protection
- **Compliant** - exceeds all relevant ISO and ICAO standards

HID Global Contactless e-Passport Inlay sheets withstand long-term use by even the most frequent travelers. These inlays adhere securely to protect document electronics up to 10 years and provide exceptional tamper resistance.

Innovative transfer technology seals copper wire antennas to modules in HID Global e-Passport inlays. Then a layer of HID's patented ceFLEX™ is added. Durable and flexible, the ceFLEX material allows the electronic chip and antenna to withstand the rigors of daily use while providing a barrier to alteration attempts.

The ideal e-passport solution, these laminated inlays are easily customized with unique antenna designs and are provided in any format for easy integration into

passports via standard machines and processes. HID Contactless e-Passport Inlays resist tearing and easily adhere to any cover material or security paper with a wide range of glue options. Synthetic materials ensure long life by resisting cracking and deterioration.

The HID Standard Inlay version is ISO and ICAO-compliant, and provides excellent, cost-effective document protection. The HID Enhanced Inlay version employs multiple layers of ceFLEX, providing additional protection for the module and superior chemical and environmental resistance.

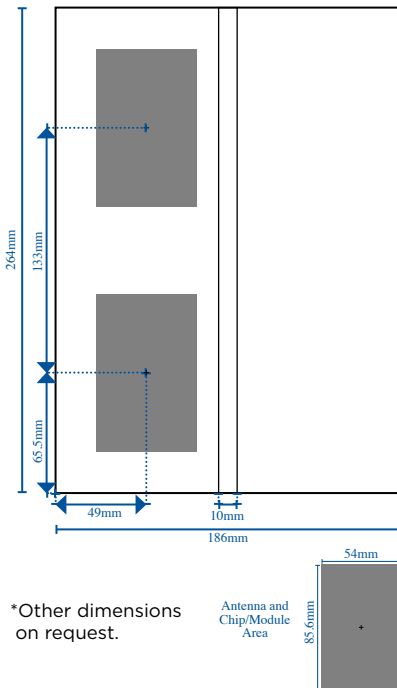
TECHNOLOGY HIGHLIGHTS:

- Tear-resistant synthetic materials are suitable for use with most glues
- Integrates with all standard passport production equipment
- Available with the widest selection of contactless integrated circuits up to EAL5+
- ceFLEX inlay material increases document life



SPECIFICATIONS

		Contactless e-Passport Inlay	
		Standard	Enhanced
PHYSICAL			
Format	2-up inlay matches all passport manufacturing equipment; 1-up and 3-up formats also available		
Material	Teslin		
ceFLEX™	Single layer	Multi layer	
Dimension	Sized to customer specification Hinge: 0.24 to 0.47 in ± 0.02 in (6 to 12 mm ± 0.5 mm)		
Thickness	395 µm	445 µm	
Dual-Sided Module Coverage	No	Yes	
Adhesion	Security paper: very good using standard cold glues Cover page: very good using standard cold glues and hot melt		
ELECTRONIC			
Operating Frequency	13.56 MHz, ISO/EIC 14443		
Chip Type	Choice of contactless ICs from leading chip suppliers up to EAL 5+		
Operating System	ICAO conforming OS according to customer preference		
Antenna	Standard ID1; ISO standard 7810; custom antennas upon request		
Certifications	ICAO conforming OS according to customer preference ISO 9001:2008 certifications for the manufacturing sites Common Criteria EAL5+ for chip Common Criteria EAL4+ for operating system ROHS conformity 2002/95/EG		
CHEMICAL AND MECHANICAL RESISTANCE			
Processing Conditions	Adheres with most water based glues and hot melt up to 302° F (150°C); parameters may vary based on conditions during lamination		
Book Bend Stress	350 N/r = 150 mm / 5 sec, ICAO		
Dynamic Bending Stress	1000 cycles, ICAO 9303		
Dynamic Torsion Stress	500 cycles, ICAO 9303		
Impact Test	25 cycles each side; 250 g at 320 mm height, per HID Global test standards (exceeding ICAO)		
Chemical Resistance	Exceeds ICAO 9303		
UV Exposure	Exceeds ICAO 9303		
X-Ray Exposure	Exceeds ICAO 9303		
Delamination Strength	90° peel test, ISO/IEC 7810-8.8		
THERMAL			
Storage Condition	+50° to +86° F (+10° to +30° C); 40% to 60% relative humidity, in original HID package		
Thermal Cycling	100 cycles at -31° to +176° F (-35° to +80° C), ICAO		



North America: +1 949 732 2000
 Toll Free: 1 800 237 7769
 Europe, Middle East, Africa: +49 6123 791 0
 Asia Pacific: +852 3160 9800
 Latin America: +52 477 779 1492

hidglobal.com

ASSA ABLOY

An ASSA ABLOY Group brand