

Contactless Passport e-Cover



LAMINATED COVER OPTIONS FOR CONTACTLESS e-PASSPORT BOOKLETS

- **Resilient** - withstands daily handling and exposure
- **Durable** - provides advanced document resiliency
- **Compliant** - exceeds applicable ISO and ICAO standards

HID Global Contactless Passport e-Cover sheets help safeguard immigration documents and governmental agencies against fraud and counterfeiting. These inlayed covers are optimized to ensure compatibility with the most widely used passport booklet assembly machines, and they can be used with a broad range of glues. e-Covers are sized to meet standard manufacturing dimensions according to customer specifications.

Each e-Cover inner layer is constructed from a tear-proof synthetic that easily adheres to all types of security papers, providing exceptional protection for the embedded electronic chip and antenna. All e-Cover products exceed ISO and ICAO electromagnetic, physical and mechanical requirements and all standard cover material types are available.

Contactless Passport e-Cover sheets are available with a variety of integrated circuits to match customer requirements. Innovative HID wire technologies allow encasement in highly durable

and flexible ceFLEX™ laminated layers, enabling electronic chips and antennas to withstand the rigors of 10 years of use while providing a barrier to attempts at alteration.

HID Contactless Passport e-Cover solutions are available in three configurations. The e-Cover Standard version includes a Type A¹ module encased in a single ceFLEX layer. The Enhanced e-Cover includes a Type A¹ module encased in multiple layers providing additional protection for the electronic components. And the Enhanced Thin e-Cover provides the additional data security of a Type B² module in a thinner yet rugged layer of ceFLEX material.

1 Type A Module: 320 microns
2 Type B Module: 250 microns

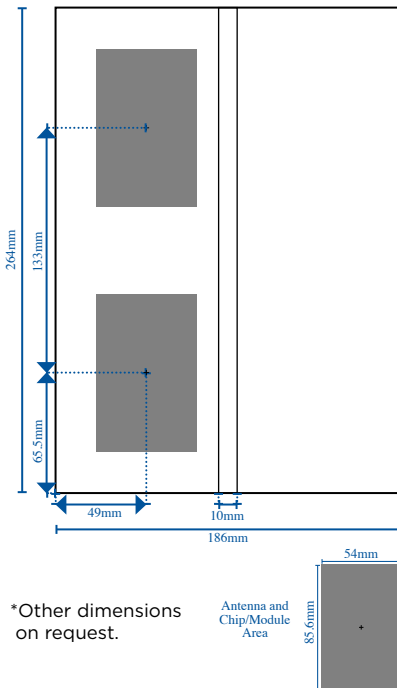
TECHNOLOGY HIGHLIGHTS:

- Compliant with the electromagnetic, physical and mechanical requirements of ISO 14443, ISO 10373 and with ICAO 9303
- ceFLEX inlay material increases document life
- Performance-tested for durability, and exceed ISO/IEC 10373 and ICAO 9303 standards
- Available with the widest selection of contactless integrated circuits up to EAL5+



SPECIFICATIONS

	Contactless Passport e-Cover		
	Standard	Enhanced	Enhanced Thin
PHYSICAL			
Format	2-up inlay matching all passport manufacturing equipment; 1-up and 3-up formats also available		
Material	Teslin/cover composite		
ceFLEX™	Single layer	Multi layer	Single 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 with module type A, plus cover thickness	445 µm with module type A, plus cover thickness	330 µm with module type B, plus cover thickness
Dual-Sided Module Coverage	No	Yes	Yes
Adhesion	Security paper: very good using standard cold glues		
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		



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