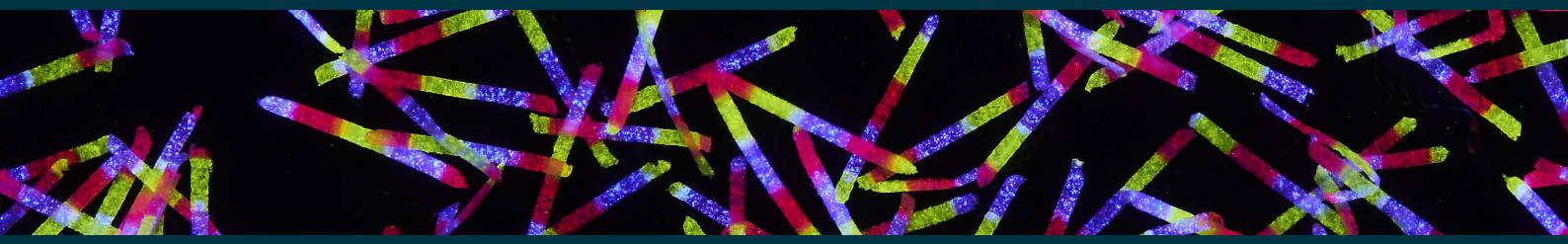
Security Fibres for Passports



Orbit Fibres™

security fibres ltd

As international travel grows and the population of the world increases, the requirement for passports continues to evolve.

Despite growth in digital identity, the machine-readable passport remains the principal travel and identity document and is predicted to remain so for the foreseeable future. Consequently, forgery, counterfeiting and the tampering of passports continue to be a threat.

The functionality of the passport is paramount. A passport needs to be durable (lasting 10 years) and resistant to changing environmental conditions such as heat, humidity and cold. The security features associated with any passport must be stable and verifiable at any time during its use.

Passports must conform to stringent ICAO standards and be quick and easy to authenticate by border personnel, as well as readily verifiable anywhere in the world.

To secure and verify an individual's identity, the passport design, paper manufacture, print, personalisation, and booklet manufacture must incorporate security features and provide resistance to tampering.

ICAO guidelines provide a design and manufacturing template to ensure examiners can quickly identify the document as genuine in a wide range of environments, including where ambient lighting conditions may not be ideal.

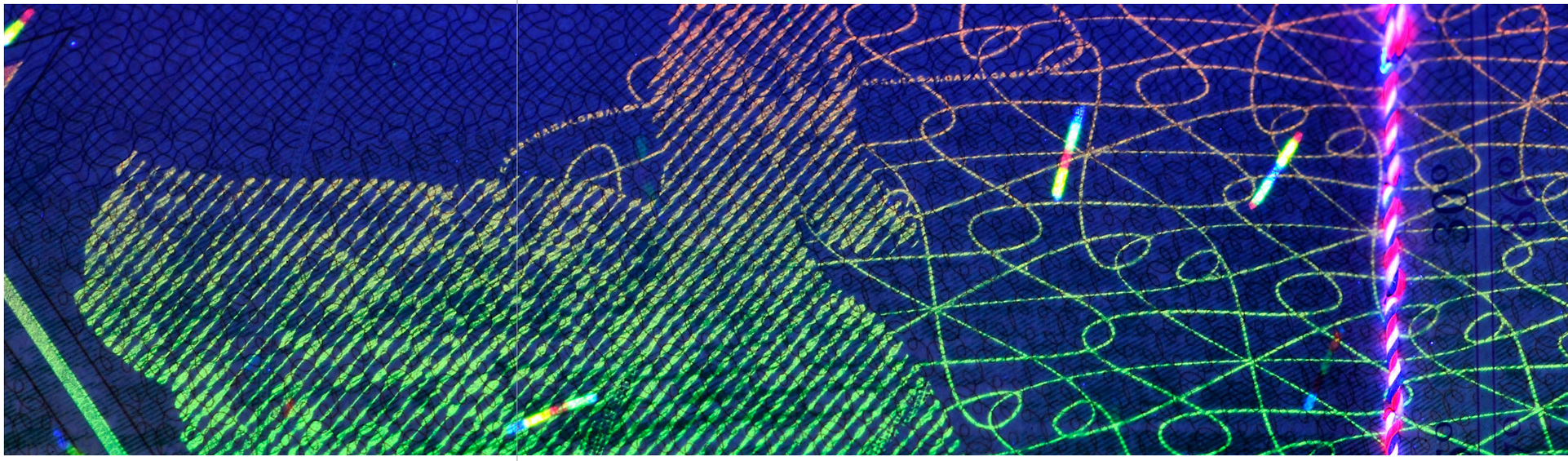
Optical security features should therefore be easy to verify, but difficult to forge or counterfeit.

There are ***three levels of security***

Level 1 : overt
examples include security threads, watermarks, optically variable features and visible fibres.

Level 2 : semi-covert
using basic verifiers such as UV lamps – examples include security print, UV fibres and sewing threads.

Level 3: forensic
requiring specialist readers of processes to detect – examples include taggants, spectroscopic fibres and anti-copy print.



Security Fibres for Passports

The regulations and guidelines set out in ICAO standards cover the inclusion of security fibres into passport paper.

Orbit Fibres™ have been developed exclusively for passports.

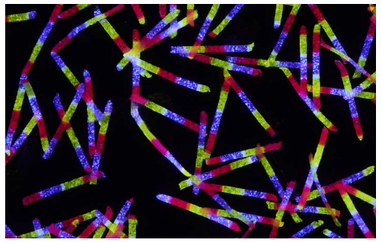
Orbit Fibres™ are randomly distributed throughout the security paper substrate so no two pages will be the same, making imitation by printing very difficult. In addition, the fibres are incorporated and bonded firmly into the material of the paper, eliminating shedding, as well as permitting them to be distinctly viewed from both sides of the paper.

Orbit Fibres™

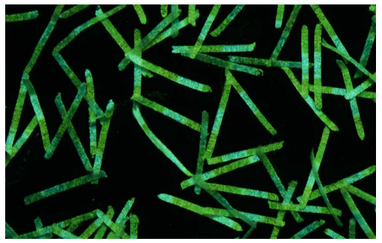
Orbit Fibres™ can comprise a range of visible and/or invisible colours in bands along each fibre, registered cut, which can be read under standard UV light, making them easy to identify. Additional bi-fluorescence can be included as a covert feature.

Fibre colours can be coordinated with the national identity and the colours of the national flag, as well as the printed colours of the passport

In addition, the colours and UV features of Orbit Fibres™ can be coordinated with other security features in the passport, such as paper security threads and passport booklet sewing thread. Collaboration with the passport manufacturer provides an opportunity to include security fibres that mimic exactly the visible and UV colours of associated paper security threads and of the passport book stitching thread. Thus, with a simple UV light an examiner can verify in one action that all three features are present and correct without having to refer to tables of security features. This is particularly valuable at international border checks where passports from many countries are processed.



Orbit Fibres™ – 365nm long wave UV



Orbit Fibres™ – 254nm short wave UV

- Colour-coordinated with national identity, flag and passport
- Fibres coordinated with booklet stitching thread and paper security thread
- Complies with ICAO passport standards
- Random fibre distribution makes fibres difficult to imitate by printing
- Easy to verify in a range of environments
- Easy to authenticate for border and inspection staff
- Read under standard UV light

Anti-Stokes

UV Fluorescent

Register Cut

Multi-Colour

Bi-Fluorescent

Micro-Print

IR Visible

Machine Detectable

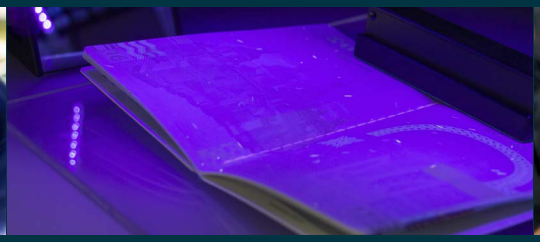
Photochromic

Security Fibres Ltd

Security Fibres is a trusted partner to commercial security printers, state printing works, paper makers, governments and commercial organisations.

Our products help our clients stay ahead of the counterfeiter and are found in banknotes, passports, tax stamps, lottery tickets and other security paper grades across the world.

We have a long history of research and development supported by our extensive patent portfolio. With over forty years' experience producing security components for use in paper, we have an enviable client base and have earned their loyalty and trust through our integrity, discretion and reputation for innovation and quality.



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