

# Opalux Develops OpalPrint Polycarbonate

Opalux, based in Toronto, Canada, has developed *OpalPrint Polycarbonate*, enabling high-resolution, colour-shifting portraits to be embedded inside polycarbonate security documents.

This latest development builds on Opalux's expertise in manufacturing tunable photonic crystals for high security printing, and follows the announcement in February of *PC ID-Lock* (see AN, Feb, 2016).

Opalux's CEO Andrew Binkley explained, 'OpalPrint Polycarbonate can deliver high-fidelity, colour-shifting portraits that are compatible with industry standard polycarbonate lamination and personalisation equipment'.

Document security experts agree that OpalPrint Polycarbonate's personalised colour-shift would be 'virtually impossible to counterfeit.' Importantly, Opalux has ensured that this security comes without verification or personalisation bottlenecks.

First, the clear colour-shifting portraits can be rapidly and intuitively checked without tools (covert features can also be incorporated, if desired), and secondly, the personalisation speed is consistent with standard polycarbonate personalisation times.

OpalPrint Polycarbonate has a number of advantages:

- It does not require high equipment costs to implement on a polycarbonate project;
- It can be laminated inside a polycarbonate card using industry standard equipment.
- OpalPrint Polycarbonate and laser markable polycarbonate can be independently personalised with the same laser, even when they overlap in the document, meaning that no separate laser is required;
- It can be customised and modified, depending on customer requirements. For example, it can be made in different colour ranges (including UV and IR ranges) with different brightness levels. It can also be customised to be responsive to different laser wavelengths;
- Its transparency and ultra-thin form factor enable it to be layered on top of other security features and identification information, making efficient use of document real estate.

The video at [www.opalux.com/news/opalprint-polycarbonate/](http://www.opalux.com/news/opalprint-polycarbonate/) illustrates the process for embedding personalised security in polycarbonate documents using OpalPrint Polycarbonate.



Reflection unpatterned OpalPrint Polycarbonate showing a blank OpalPrint patch embedded inside polycarbonate ready for laser personalisation.



Reflection OpalPrint Polycarbonate showing the same patch after laser personalisation through the polycarbonate.

First, a blank patch of OpalPrint Polycarbonate is laminated inside a polycarbonate identification document. Second, following polycarbonate lamination, the embedded OpalPrint Polycarbonate is personalised with a laser to show a user's portrait (or other personalised information). The resulting portrait shows a multi-colour colour-shift upon tilting.

Opalux has the capability to produce OpalPrint Polycarbonate at commercial scales and is interested in partnering with organisations to support further product optimisation and testing.

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