

# INDUSTRY

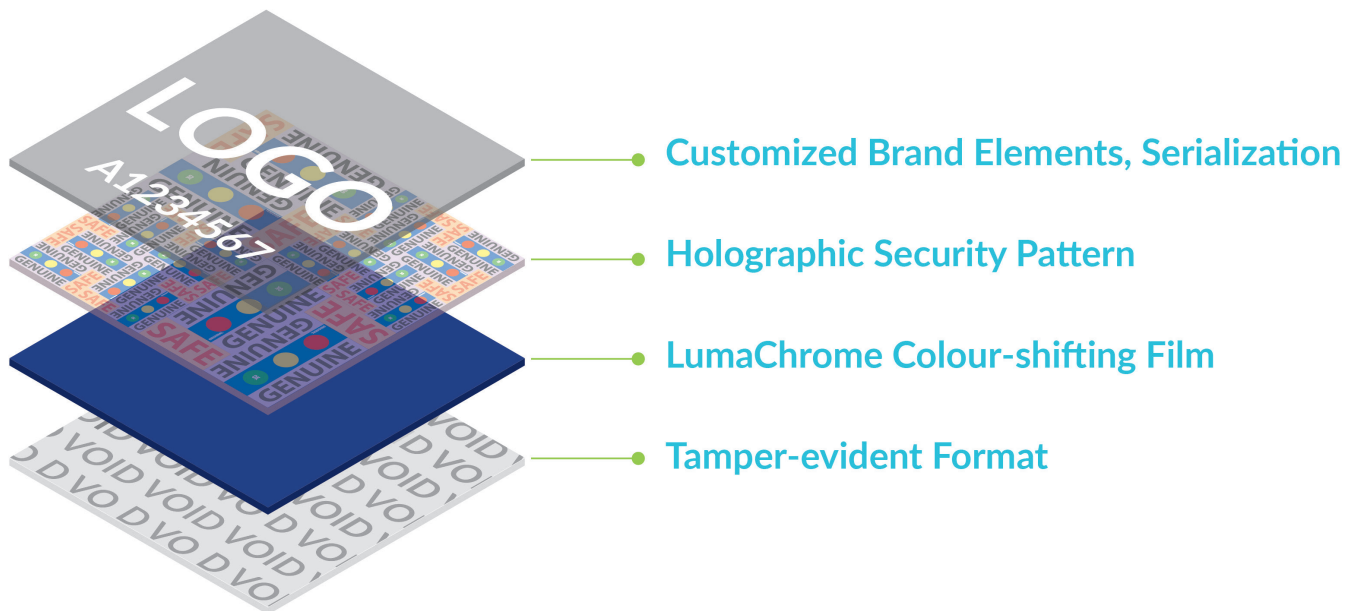
## **INSIGHT**

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## **4 layers of security with LumaChrome Holographic**

# LumaChrome Holographic Colour-shifting film for advanced brand protection

LumaChrome Holographic offers quick, intuitive two-factor visual authentication. Nanotech's colour shifting LumaChrome technology is combined with an embossed holographic security pattern to deliver advanced brand protection. The crisp colour transition and holographic image-switch effects are immediately visible when the viewing angle is changed. Combined, these unique effects are simple to recognize, difficult to replicate, and incredibly effective from considerable distance, multiple angles, and variable lighting conditions. This first-of-its kind product is available in a tamper-evident security film format that is broadly supported and durable across a wide range of material substrates and application processes.



# Key Advantages



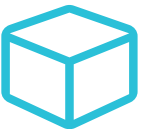
## Secure

4-layered security film offering the benefits of a secure hologram, colour-shifting film, and a tamper evident layer all in one. Cannot be captured or duplicated with comparable quality using other technology.



## Extensive Usage Options

Ideal for multi-product applications as it can be cut into a range of sizes and shapes. LumaChrome Holographic can be applied to a variety of high-performance / high strength adhesive bonds.



## Distinctive Multi-image Switch

A crisp, clear multi-image switch with elements that turn on-off



## Innovative

The combination of colour-shift technology with holographic optical effects delivers a unique, rare brand protection solution that is extremely hard to counterfeit.



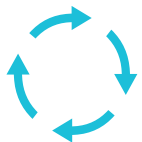
## Easy to use

Quick, intuitive authentication by users through a colour shift and holographic validation effects.



## Cost Effective

Off-the-shelf, seamless design negates the need to pay for custom designs and expensive originations.



## Brand Protection Life Cycle

LumaChrome Holographic will deliver trusted anti-counterfeit protection for years to come and extends the life cycle of your brand protection programs.



## Durable

Virtually no degradation over the lifetime of the substrate with easy conversion into multiple application formats.

# How does it work?

LumaChrome Holographic offers simple yet powerful authentication through an observed change in colour from one angle to another. The effect is very easy to demonstrate - The perceived change in hue and chroma of the feature can be varied by finetuning the thickness of one or multiple layers of the filter. Very bright and highly saturated colours can be attained in this manner as can controlling the individual layer thicknesses to obtain specific brightness levels and chroma values.

TILT IN ANY DIRECTION TO AUTHENTICATE 

CENTRE VIEW



'SAFE' switches to 'VALID'  
'GENUINE' switches to 'SECURE'

Nano and microtext ranging from 0.07mm to 0.2mm



ON TILT



Colour shifts from navy to violet  
Holographic words and circles will diffract at different angles

**COLOUR SHIFT OPTIONS AVAILABLE:**



**VISUAL DESIGN FEATURES:**

Colour Switch	✓
On / Off Capability with Multi-Image Switch	✓
Overprinting of Text and Logos	✓
Laser Etching	✓
Intaglio Printing	✓

**SECURITY OPTIONS:**

QR Codes	✓
Serialization	✓
Tamper Evident	✓
Microtext	✓
UV Inks	✓

To support the high volume production of LumaChrome Holographic, Nanotech utilizes two large roll-to-roll optical thin film deposition coaters in its high secure production facility. With the ability to operate up to four separate deposition zones simultaneously, Nanotech has the unique ability produce highly customizable films, very cost effectively. Operating each coater at peak output, we have the capacity to achieve more than 250,000 m2 of film a month. Film and labels are available in multiple formats and can be used for brand protection, anti-counterfeiting, and smart packaging in multiple industries like pharmaceuticals, cannabis, retail membership and gift cards, electronics, imaging supplies and more. Feel free to contact us for our latest sample kit or to set up a meeting and discuss your brand protection needs.

**LumaChrome Holographic**  
Holographic Colour-shifting film  
for advanced brand protection

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THIS IS A GENUINE GRAPHICS CARD  
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