

Signature effects for IDs and passports



nanoDOVID® High-security technology based on nanostructures

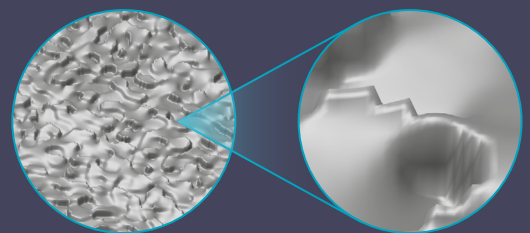
nanoDOVID® uses nano-engineered optical structures calculated point by point with advanced mathematical algorithms, providing the highest level of anti-counterfeiting protection for identity documents.

Patented technology, proven in the market.

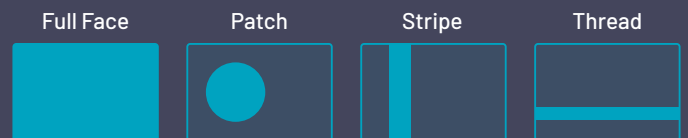
Authentication:

overt, covert, forensic
and digital using a smartphone.

nanoDOVID® can be applied in various formats, such as full face, patch, stripe, and thread.



CGH
Aperiodic structure



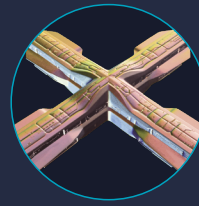
EFFECTS CATEGORIZATION	Category	Level	Effects	
	Higher	1	Pearl Bas-relief	
	Deeper		Deep Space	
			Deep Flop	
			Deep Rotation	
	Hidden	2	Ghost	
Smaller	3	Nanograf		
Robotic	4	Robotic ID		

IDs and passports signature effects description

Higher

Pearl Bas-relief

- 3D object as a sculpture
- Rising above the plane
- No haptic response (feels flat)
- Chromatic with pastel colors
- Visible under all lighting conditions



Color (for transparent areas)

White (for metallic areas)

Deeper

Deep Space

Color/White

- Wireframe (3D object outline)
- Hovering above or below the plane
- Different depth levels
- Tilt the card around the vertical and horizontal axis to observe the object

Color

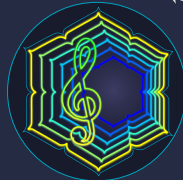
- 3D space appears when the card is tilted around the vertical axis
- Color changes when the card is tilted around the horizontal axis

White

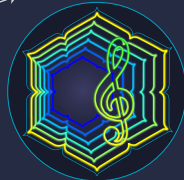
- 3D space appears when the card is tilted around the horizontal and vertical axis



single parallax



Left tilt



Right tilt



Left tilt



Right tilt

full parallax

Deep Flop

Color/White

- Flipping wireframes (3D object outlines)
- Hovering above or below the plane
- Different depth levels
- Two flipping objects interchange when the card is tilted around the horizontal axis

Color

- 3D space appears when the card is tilted around the vertical axis
- Color changes when the card is tilted around the horizontal axis

White

- 3D space appears when the card is tilted around the horizontal and vertical axis



Down tilt



Up tilt



Down tilt



Up tilt

Deep Rotation

Color/White

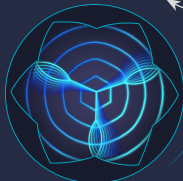
- Rotating wireframe object (object outline)
- Tilt the card around the vertical and horizontal axis to observe the object

Color

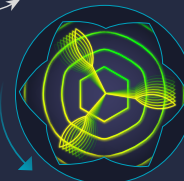
- Object rotates when the card is tilted around the vertical axis
- Color changes when the card is tilted around the horizontal axis

White

- Object rotates when the card is tilted around the horizontal axis
- 3D space appears when the card is tilted around the horizontal and vertical axis



Left tilt



Right tilt



Down tilt

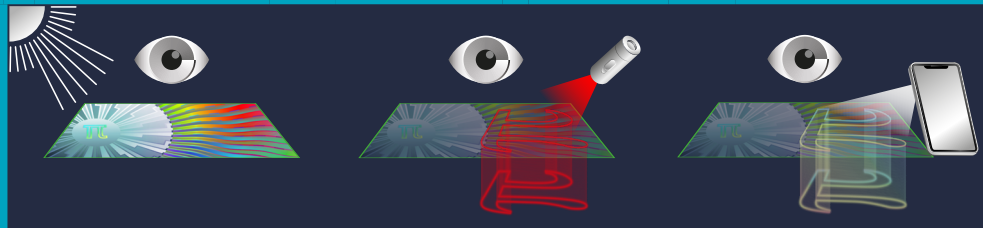


Up tilt

Hidden

Ghost

- Objects visible when lit by red light or a smartphone torch from the right side
- 3D objects, letters, or symbols
- Hovering deep below the plane



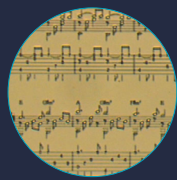
Smaller

Nanograf

- Grayscale image at the nano or micro scale
- Bitmap structure with a resolution of 254,000 DPI
- Visible under a magnifying lens - contains finer details only visible with a forensic microscope



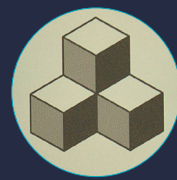
50 μm



20 μm



10 μm



80 μm



80 μm

Robotic

Robotic ID

- Machine-readable effect
- Recognition of 3D object transformations
- Authenticated by smartphone using the IQ Check application



Down tilt



Up tilt