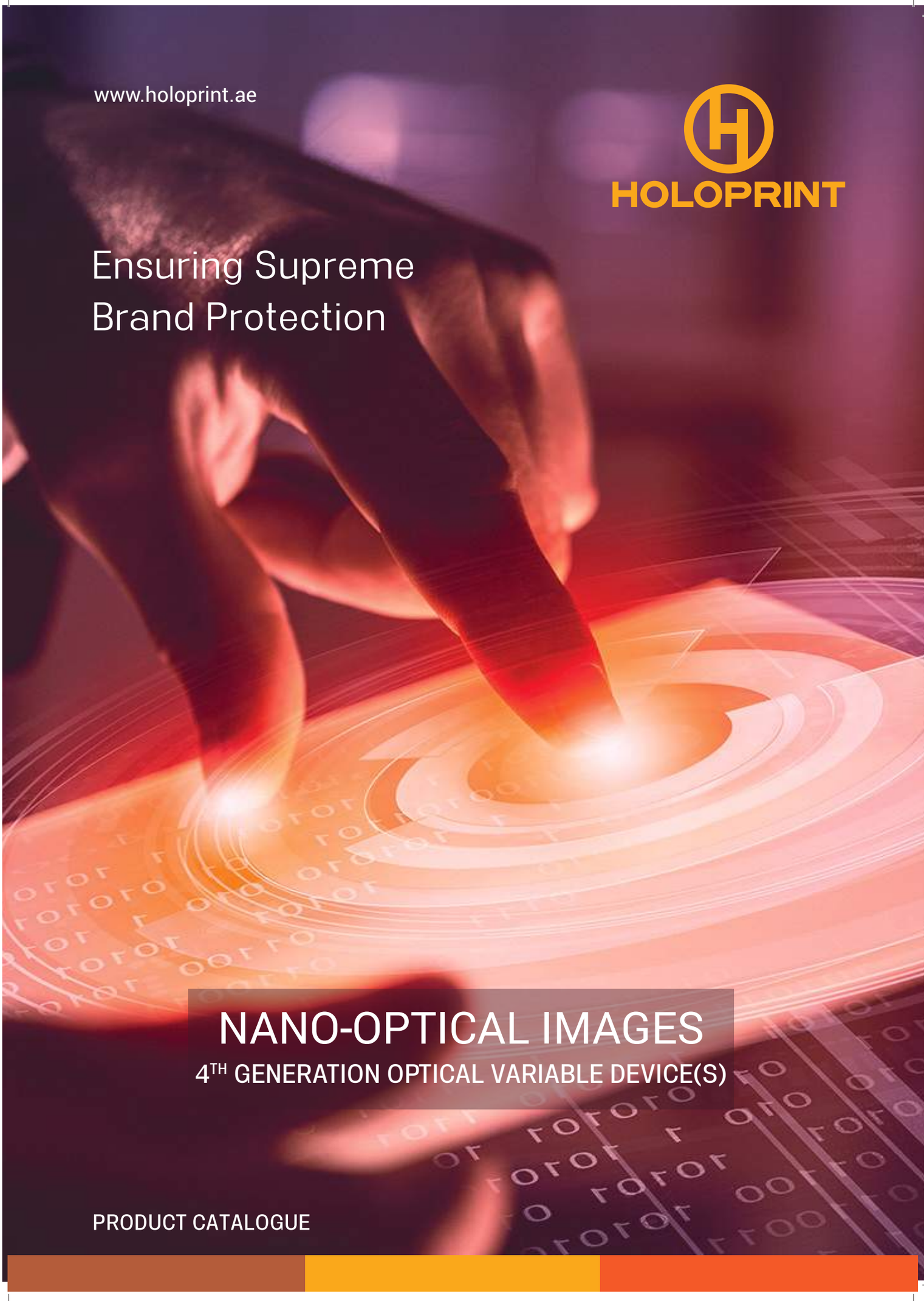


www.holoprint.ae

HOLOPRINT

Ensuring Supreme
Brand Protection

NANO-OPTICAL IMAGES

4TH GENERATION OPTICAL VARIABLE DEVICE(S)

PRODUCT CATALOGUE

Authenticating Brands Across the Globe

HOLOPRINT

With us, brands and their consumers feel secured.

Holoprint Security Solutions is the first manufacturing plant for holographic products in the Middle East. From its location in Dubai, UAE, it offers cutting-edge holographic security solutions to some of the leading brands in the region and exports its services to more than 40 countries.

Holoprint is a unique organisation built on Indian values, and motivated by a professional global vision. Established in the UAE in 2015, Holoprint Security Solutions is empowered by decades of experience in delivering exemplary holographic solutions to customers from all domains and industries.

Technology

Combination of latest technologies with decades of innovation to develop unparalleled authentication, anti-counterfeiting and anti-tampering solutions.

Infrastructure

Four fully integrated and modern manufacturing facilities, some of the largest in the world.

Equipped with state-of-the-art laboratory to promote innovation and R&D.

Quality Assurance

Professional quality team for stringent product testing against pre-defined industry parameters.

Advanced process control systems ensure zero defects from design, development to application.

Experience

Experience in developing some of the most robust security parameters in the world.

3-tier security system at all manufacturing locations for confidentiality of information.

Authentication - Technologies and Categorisation

According to ISO, there are various number of authentication technologies available in the market, although all these technologies are applied in the three main areas of:

Anti-Counterfeiting | Anti-Tampering | Track and Trace

All these technologies can be categorised as either overt, covert, forensic or digital.

OVERT TECHNOLOGIES

All devices built into labels, documents and packaging which are visible to the user and shows dynamic visual effects fall under this category. These are meant for fast and easy on the spot visual authentication.

COVERT TECHNOLOGIES

Apart from requiring a special reader or detector to be able to verify their presence and validity, it also requires trained professionals. These include ultraviolet and infrared inks, micro text, unique synthetic tagging etc.

FORENSIC TECHNOLOGIES

Forensic technologies, being covert, are not readily recognisable and require special tools for detection and validation. These must often be taken to a laboratory with specialised equipment for validation.

DIGITAL TECHNOLOGIES

Digital technologies may be either overt or covert, but all require an electronic means for detection and validation. These are mostly associated with RFID tags or with serialised numbers that can be compared to a remote database.

Nano Optical Images

Nano-Optical Imaging system is the most secure and technologically advanced imaging system and is also referred as 4th Generation OVD(s). Products using Nano-optical images are made using excellent 3D Microstructures on Direct Writing lithography technology. The structures of these products are written as small as 305nm in the photoresist layer.

These types of anti-counterfeiting products allow the creation of 4095 levels of greyscale or pure binary mode and allow for 3D optical structures, surface structures as well as mask projects. Real-time laser controlled autofocus and laser intensity control ensure high-quality imaging during the entire exposure process.

Nano-optical images meet all OVDs requirements for resolution, flexibility and performance. This technique makes it possible for arbitrary topology creation while the extreme resolution of Nano-meter scale allows utilization of the recent development of digital holography.

This advanced technology is capable to control the light field (amplitude and phase of the light) as well as its polarization. Sub-micron structures with specific 3D profiles can produce unique optical effects such as 3D visualization, motion, colour selectivity and many more complicated security features.

User Industries:


FMCG


Automobile


Lubricants


Pharmaceutical


Apparel & Fashion


Education


Liquor


Agro


Banking

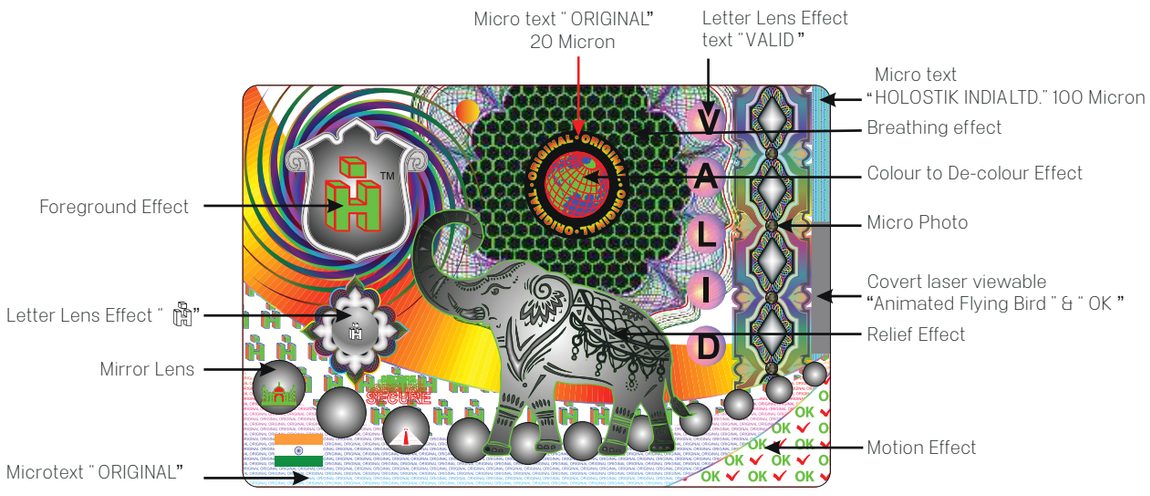

Government


Personal Care


Electronic

Nano Optical Images

75 mm X 50 mm



Nano Optical Images

Security Nano-optical imaging system

These are optically recorded features whose originals are synthesized using computer-synthesized flat Nano-optical elements. This origination technology is used to create security features for visual and instrument control that would be impossible to imitate using other optical origination techniques.

Pure White Hologram

Unlike rainbow colour appearing in the previous generation of OVDs, using these images we are able to control the colour and offer white colour in the OVDs which makes it highly secured. The white colour can be mixed with rainbow colour to form a single or multiple image/images making it highly complicated for anyone to even make a lookalike.

Sparkle effect

White metalic effect

Channel effect

Mirror lens

A glass look circumference to make the appearance more distinct. It also enhances the security and aesthetic look of an VD.

Mirror lens with 3D

Mirror lens

Rainbow lens

Nano Optical Images

Colour to de-colour effect

The asymmetrical shape of the micro-relief recorded at Nano level resolution in depth allows switching effect to be created that can be seen when an object is turned at 180 degrees. In the normal position, a colourful and a contrast image is visible, whereas a grey coloured and no contrast image appears when an object is turned by 180 degrees.

Colour to de-colour effect

Breathing effect

This special effect shows shrinking to expanding movement or zoom-in or zoom-out effect when the OVDs is titled at different angles.

Breathing effect

Four-point covert laser viewable (CLR)

The asymmetrical micro-relief forms different images at once. This is an image that cannot be seen with a naked eye. The image can be visualized using a diode laser or a specially designed compact reader. The feature requires very high accuracy of micro-relief fabrication and reproduction, the asymmetrical multi-level shape of the micro-relief which is recorded at extremely small Nanometers resolution in depth, so the feature forms different covert images at diffraction orders, which can be verified by the compact reader.

Four-point covert laser viewable (CLR)

Motion effect

The images/text/symbols are recorded in such a way that it appears to be moving both horizontally and vertically on changing the viewing angle of the OVDs. This effect is achieved through rigorous calculation of the microstructure.

Motion effect

Letter Lens Effect

The observer sees at a point source inside the lens, which is a flat optical element, a letter or a symbol, which moves when the view angle of the optical element is changed. When the observer inclines the optical element, full parallax motion effect is observed, the symbol or letter, both can shift.

Letter lens effect

Nano Optical Images

Shaped lens

This is a very complex feature which cannot be achieved through standard conventional originations techniques. It can only be achieved using highly complex calculation through Nano-optical imaging system wherein the mirror lens effect can be given in different shapes or formations.

Shaped lens

Micro Structure

In this, image or text is being formed using customised image or text. The structure can be seen only under 100x or more magnification.

Micro structure

Nano text/Nano images

An image or text can be given in Nano size of 5 microns and above.

Nano text

Nano images

Relief effect

This is a special effect which is achieved through regress calculation of 3D microstructure. The images produced using this effect do not depend on the parameters of the light source.

Relief effect

Relief switch effect

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Integrated Security Solutions To Meet Your Brand Protection Needs

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