

Key-hole holograms from IQ Structures bring new visual experience

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Innovation awarded by The Best Origination prize by International Hologram Manufacturers Association

IQ Structures, a Czech research and production company, introduced a new element of optical anti-counterfeit protection. Key-hole hologram imitates the visual experience of physical interstice, including all of its optical features. Key-hole hologram thus enables to place a hologram on space smaller than this hologram. It is essential for creating counterfeiting resistant narrow stripes and threads. The user can see hologram as “through the key-hole”.

IQ Structures’ banknote stripe that was awarded the best origination prize in Excellence in holography award organised by International Hologram Manufacturers Association (IHMA) was based on key-hole hologram. IQ Structures reached victories in this award in three consecutive years.

“Key-hole hologram is a milestone in searching for the holy grail in anti-counterfeit protection. It is an element, which can be identified immediately by common users and which are extremely difficult to imitate,” says Petr Franc, the divisional director for Security in IQ Structures. “We often help to integrate different security elements into single units. But we also develop entirely new products. To create innovation, such as a key-hole hologram, we need inhouse mathematic algorithms and unique combination of mastering technologies. Trustworthy imitation close to the impossible.”

Robert Dvorak, business development manager in the same division, adds: “We are going to introduce extensive offering of banknote protection soon. We can offer experience from financial industry as well as a unique combination of technologies and anti-counterfeit protection measures. Key-hole holograms play an essential role in this banknote offering.

Key-hole holograms are useful also for ID cards if you understand how to integrate them into comprehensive protection. Actually, it can be applied on almost everything but we must keep eye on balance between sophistication, costs and protected value.”

Key-hole hologram is a specific diffraction structure created with a combination of mastering tools, including e-beam and laser.

