

# Detekt®

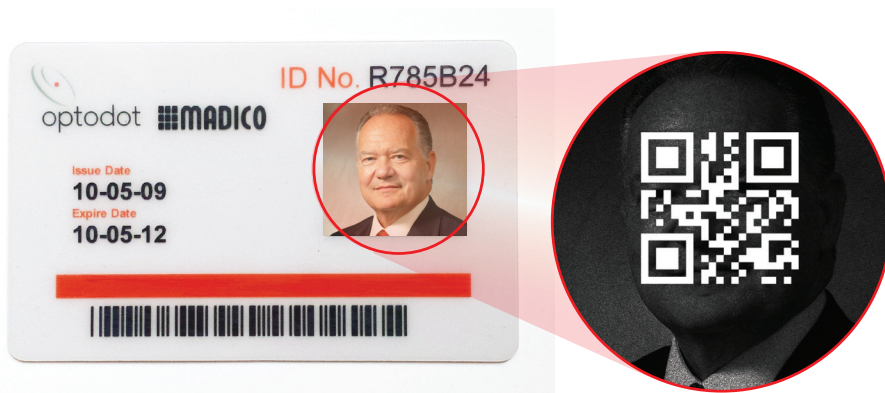
Secure your bottom line.

## The Problem

As crime, fraud and terrorism become a growing international concern, it is important to adopt new security features that will make it impossible to engage in illegal activity with counterfeit documents.

## The Solution

Detekt® is a unique laminate material designed to be incorporated into cards, labels, documents, along with other such applications as an embedded security feature. Detekt® optical film and laser writing technology creates unique security markings that cannot be counterfeited and provide instant authentication, eliminating human error. This technology offers never-before-seen markings for markets that constantly require new security features that are increasingly difficult to counterfeit. Utilizing SIRE® Technology, the material features a very specific signature in the infrared and is laser-encodable.



## The Technology

The key to Detekt® is its technology: SIRE® Secure Infrared Encoding. The Technology enables laser imaging of the infrared (IR) optical layer, creating a high contrast IR readable response for "go / no go" authentication. Versatile in design, SIRE® allows for creativity in application and optimal security in its utilization. The unique nature of the IR readable laser markings, combined with our complex IR layer, offers you an extremely high level of covert and forensic security protection.

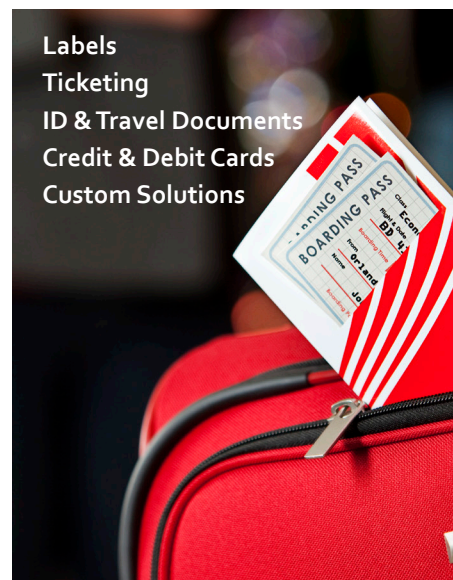


## Who is Madico?

An award-winning organization, Madico is one of the world's leading manufacturers of laminating and coating solutions. We provide high performance, complex, multilayer films engineered for your precise application needs.

## Detekt® can be integrated into:

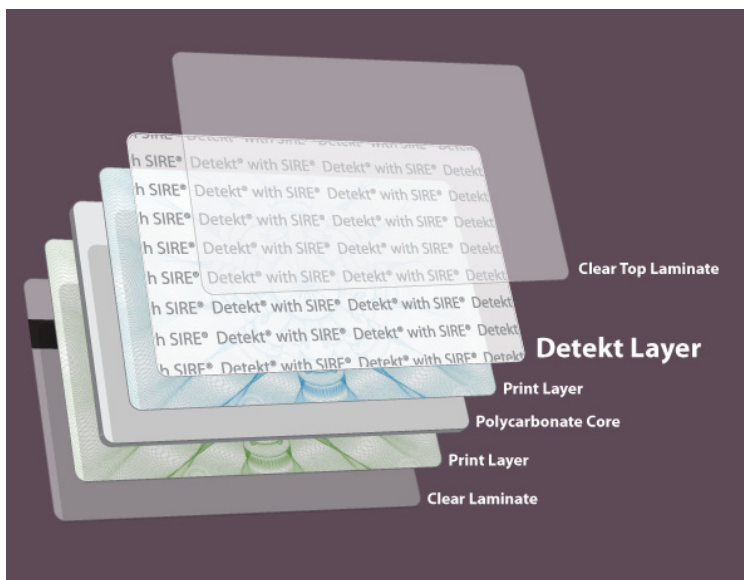
Labels  
Ticketing  
ID & Travel Documents  
Credit & Debit Cards  
Custom Solutions



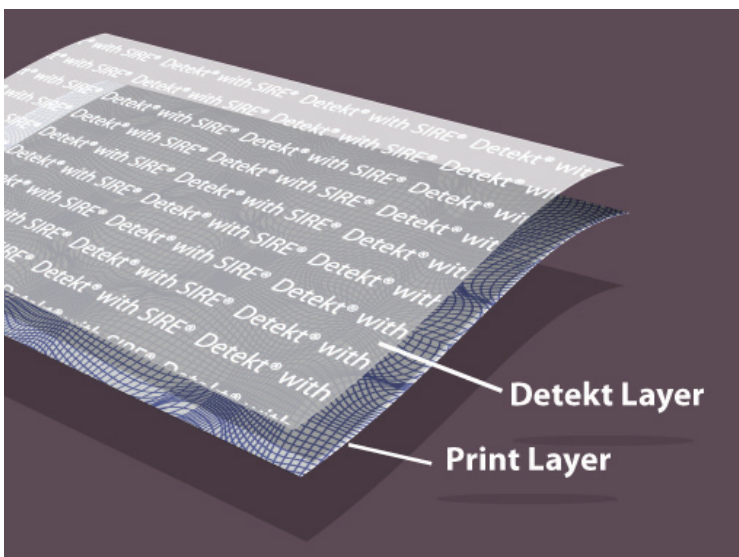
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**MADICO®**  
SPECIALTY FILMS

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Pre-laminate Integration



Over-laminate Integration

## Personalization

When it comes to security, the ability to personalize a solution is incredibly important for the success of any issuer. Detekt® gives the issuer an additional level of security in order to protect its users and itself against those forces looking to invade its customer's valuable data. Detekt is designed to be laser imaged allowing for the embedding of 1D and 2D barcodes, hidden logos or images, IR watermarking, and other features which provide the greater security.

## Detekt Integration

Detekt can be added as an additional layer of security into cards, documents, labels, etc. It can be integrated as an overlay or inlay and works with various card constructions; including PET/PVC composite cards, all-PET applications, and Polycarbonate cards or documents.

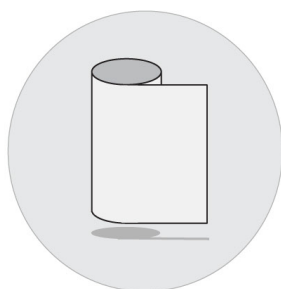
## Materials & Capabilities

### Laser Writing

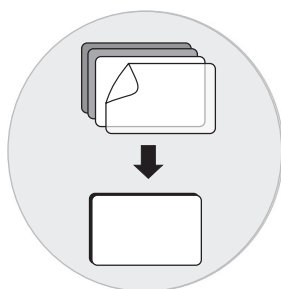
The wide IR blocking spectrum from 700-1400 nm provides greater flexibility when choosing the right laser writer and reader hardware. Typical wavelengths for IR laser imaging are 780-1065 nm. Detekt works well on high power 10 to 25 watt YAG lasers but could also be used with much lower power lasers such as 1 watt diode lasers. Resolution and data storage is only limited by the diameter of the laser beam.

### Reader Authentication:

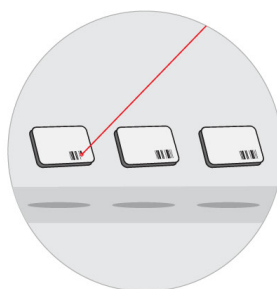
- IR images or marks can be viewed with an IR-readable camera
- 1D and 2D barcodes can be decoded using IR-readable scanners
- Typical wavelengths for IR reading are at 780 nm and 850 nm



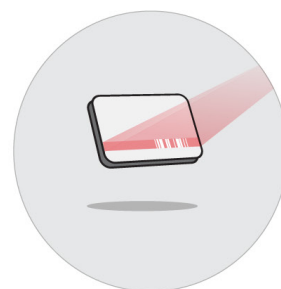
Raw Detekt Material



Detekt integrated into security item



Security Item laser imaged



Laser Image authenticated by IR Readers