

VerifIR

Verification process through IR fluorescence



Reliable verification process
by one click

Thinking in systems

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Verification under UV light

There has always been a strong need to combine the simplicity of the application of a second level security device (a fluorescent offset ink e.g.) with the high security of a third (laboratory) level device. Our patent pending VerifIR system provides exactly this.

Earlier developed devices (like our RADIR) determined the presence of certain IR fluorescent materials only. This fact strongly limited the number of possible applications.

VerifIR system

The VerifIR system contains two elements:

- ink
- controller

INK

First step is placing multiplicity of infrared fluorescent materials in strictly controlled amounts into a printing ink. This provides complicated emission spectrum. This spectrum is then processed with the help of a sophisticated mathematical algorithm in order to calculate a value which **remains constant** regardless of the tolerances of the coverage during the printing process. Determination of this constant value allows successful identification of a certain ink. Virtually any printing process is possible to apply except for those using inks of low viscosity. Inks containing carbon black are also excluded.

The battery operated controller processes the emission spectrum of the print and calculates the constant value mentioned above. This constant value is then compared to the one that has been determined during the initial setting of the device and contained in its memory. If the two values match within the pre-defined range the controller gives a positive answer (a beep sound and a green light). The negative answer is another beep sound and red light.

The controller itself is very handy; it is shaped very much like a conventional remote controller for the sake of ease of use. But of course, the inner content is much-much more sophisticated.

MOST IMPORTANT PHYSICAL PARAMETERS:	
Dimensions	150 × 35 × 20 mm
Weight	120 grams approx.
Working capacity	8 hours (depending on use)

Features

Stability of measurement

The main advantage of this verification method lies in the constant value calculating method. Nor like simply measuring fluorescent intensity, this method is independent on the variations of the thickness of the applied ink layer (consequently, independent on the quantity of the fluorescent materials) that is characteristic to printing processes. The verification process is also much less influenced by variations in the measuring environment including ambient radiation, skill of the operator, level of the battery etc. This stability that is based on the measuring principle make the device suitable to use conveniently outdoor and indoor as well.

Customer specific system

The great number of different possible inks gives the opportunity of providing a **customer-specific ink-controller system**. The ink to be supplied to a certain customer contains the security materials and all other components in **strictly the same, specific composition in each shipment**. The previously shipped controller has been set to give positive answer to this composition only.

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