Spectral luminescent magnifiers Regula 4077; 4177

The magnifier is intended for advanced authenticity verification of passports, ID cards, and other travel documents, visa stamps and seals, including but not limited to entry permits, banknotes, driving licenses, vehicle registration certificates and other vehicle related documents, signatures and handwriting fragments, revenue and special stamps, securities and other documents with security features.

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Regula 4177 is a compact USB device designed in a plastic body in the form of a computer mouse. The product power supply, control, displaying and processing images are carried out via a PC and Regula Forensic Studio software.

The magnifier can be used as a separate authenticity verification device or together with a light table Regula 4167, an optical module Regula 4178, information reference systems.

Functionality

- Obtaining and processing of images
- **Examinations on different levels**
  - **protection of the document basis**
    - security fibers, planchetes, security threads, holograms, foil stamping, pole feature, transparent vanish coating, etc.
  - **printing methods**
    - *intaglio*: texts, guiloche frames, rosettes and vignettes, microprinting, latent images and moire patterns, signs for the visually impaired, blind embossing, colour shifting ink, including OVI with embossing and latent images, etc.
    - *letterpress*: serial numbers, texts, barcodes, etc.
    - *offset printing* including Orlov and rainbow printing: texts, microprinting, moire patterns, background and anti-copy patterns, etc.
    - *screen printing*: security features with optically variable effects, etc.
    - perforation
  - **physico-chemical protection**
    - anti-Stokes luminescence
    - UV luminescence
    - IR luminescence
  - **complex security features**
    - security features with IR-metameric ink
    - special polymer coating of security laminates
    - metallized coating
    - laser engraving
- **Additional examination of**
  - ragments of document images depending on the degree of absorption or reflection of IR light
  - document alterations such as erasure, etching etc.
  - traces of signature forgery
  - extraneous lines (do not originally belong to the examined object) that are performed with IR opaque inks
  - blurred, crossed out entries, texts and images
  - document mechanical defects such as cuts, tears, folds, etc.

Application

- Border control and immigration services
- Customs authorities
- Law-enforcement agencies
- Forensic laboratories
- Financial institutions
- Other agencies and organizations authorized to check documents

Delivery set

- Regula Forensic Studio software for displaying video, device control, storing and processing of images

Light sources			Model	
			4077, 4077-5	4177, 4177-5
White	incident		+	+
	oblique		+	+
Ultraviolet incident 365 nm			+	+
Infrared, nm	incident	870	+	+
		940	+	+
	oblique	880	+	+
	high-intensity	980	—	+
High-intensity incident green 530 nm			+	+

Imaging parameters		Model	
		4077, 4177	4077-5, 4177-5
Sensor type		CMOS, 3,1 MP	CMOS, 5 MP
Dynamic range, dB		61	70
Resolution, ppi		4 700	5 900
Colour model		RGB	
Colour depth, bit		24	
Frame size, pixels	Basic mode	1024×768	1296×972
	HD	1280×720	1280×720
	Full HD	1920×1080	1920×1080
	Full Frame	2048×1536	2592×1944
Field of view, mm		11,1×8,1	10,5×7,8
Magnification, times, max		4	
Magnification for a 21 inch monitor, times		35–110	37–114

Camera filters:

- IR low-pass with threshold, nm — 700
- IR high-pass with threshold, nm — 660

Connection interface — USB 2.0

OS — Microsoft Windows XP (SP3), Windows Vista, Windows 7, Windows 8

Dimensions (length×width×height), mm, not more than — 94×62×52

Weight, kg, not more than — 0,2

Power supply voltage, V — 5

Power consumption, W, not more than — 2,5

White top light 1x

White top light 3x

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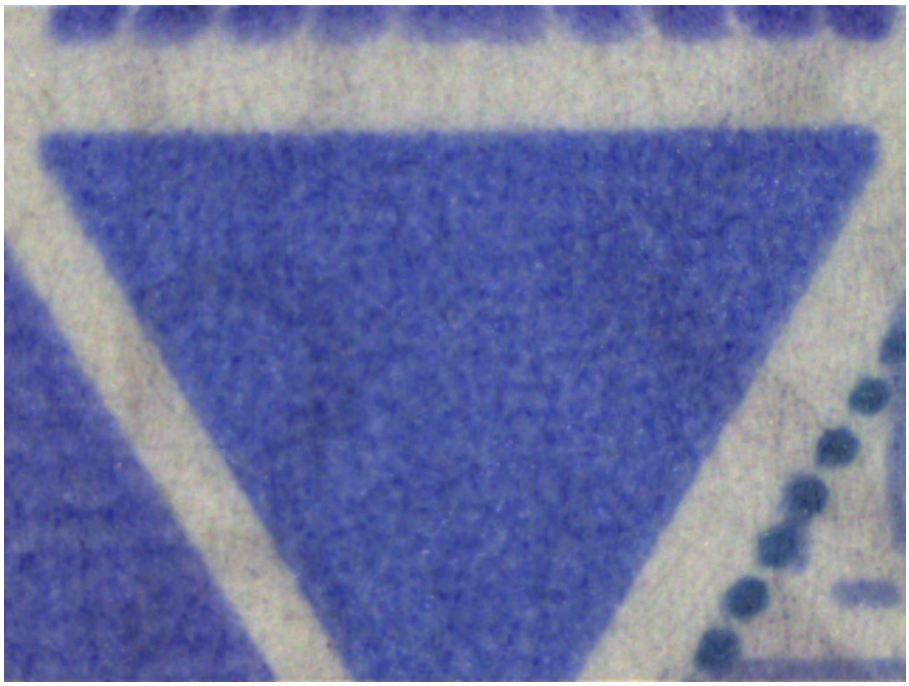

White top light 5x

White oblique light 1x

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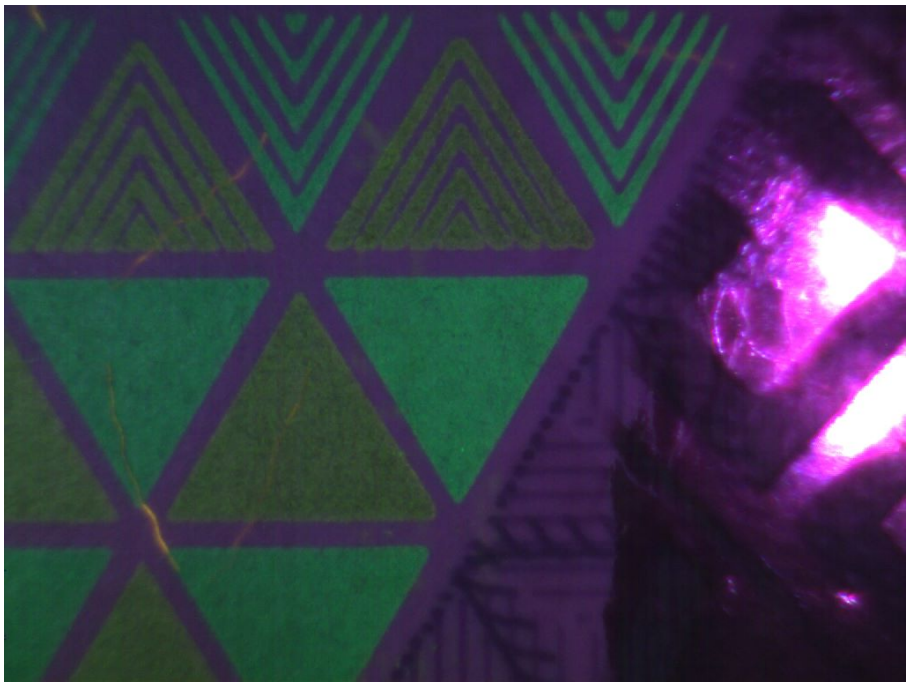
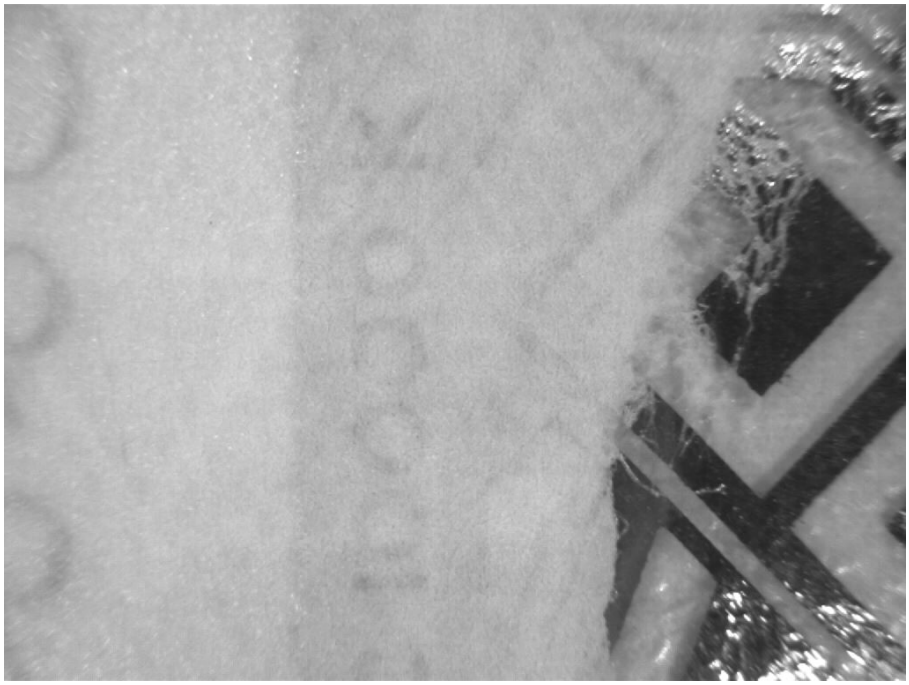


Ultraviolet top light (365 nm) 1x



Infrared top light (870 nm) 1x

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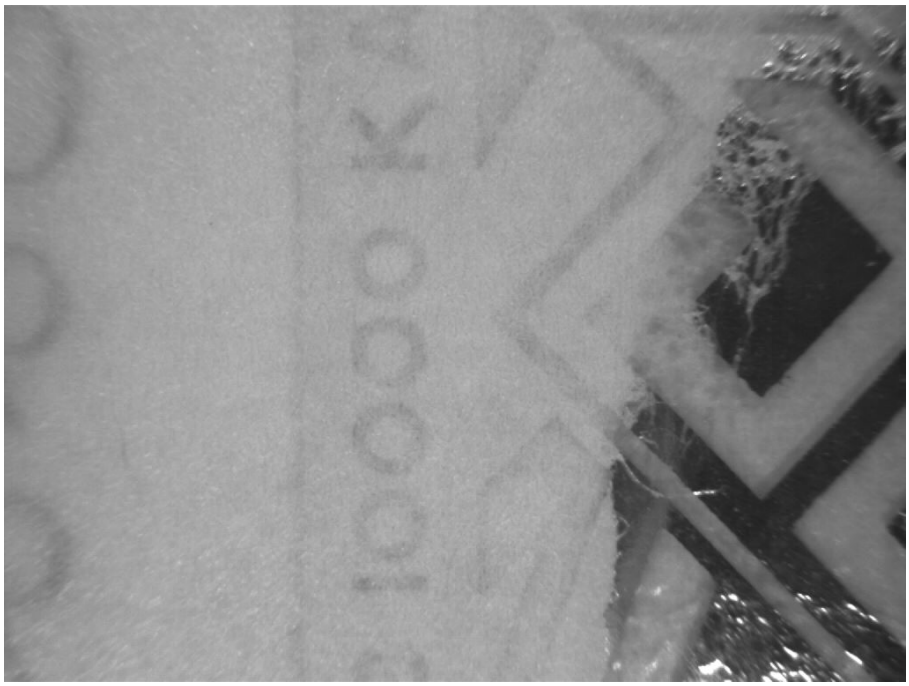
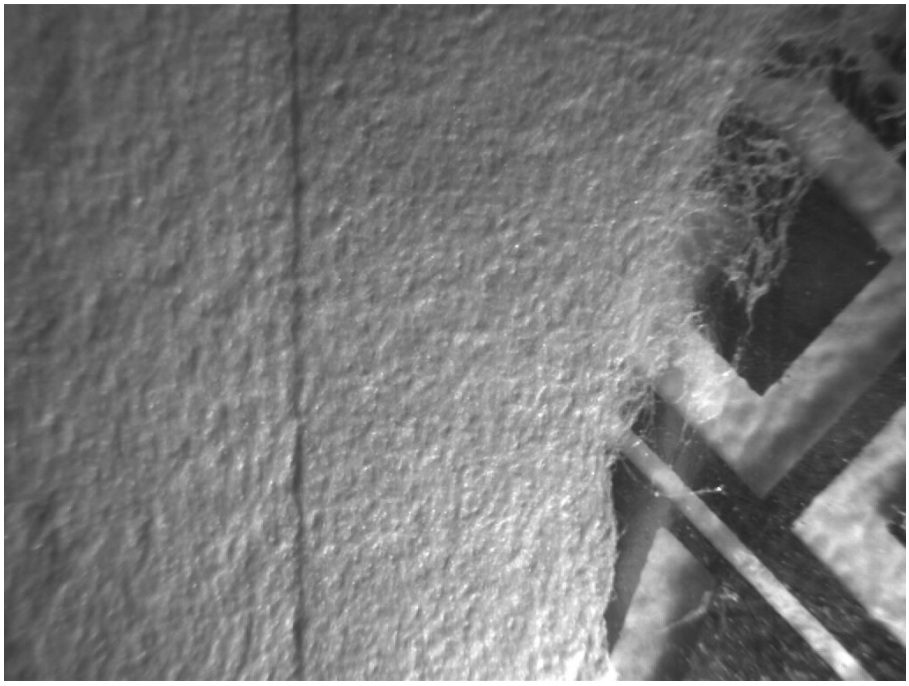


Infrared top light (940 nm) 1x



Infrared oblique light (880 nm) 1x

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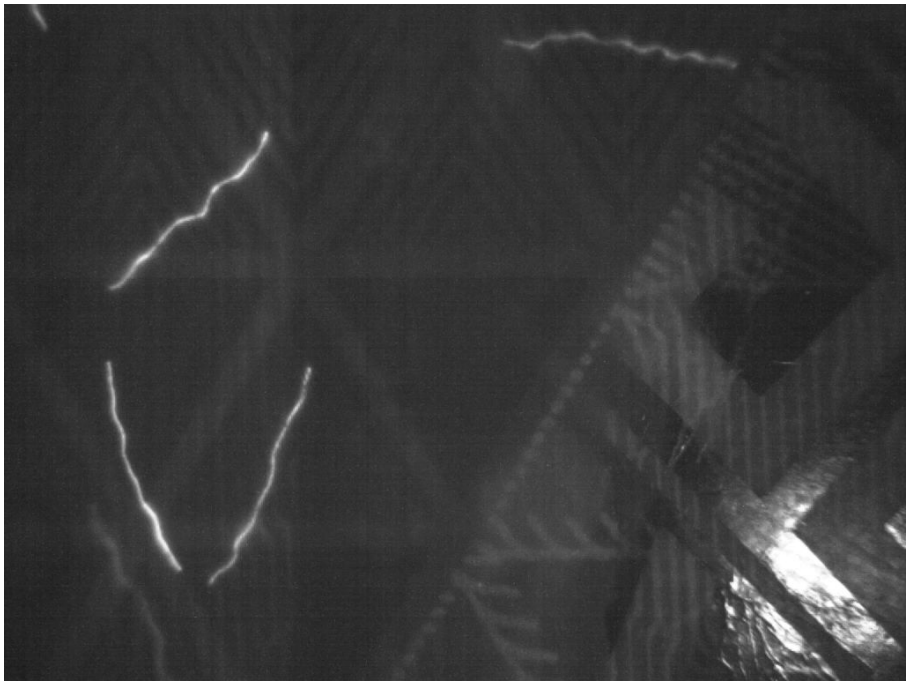
High-intensity Infrared light (980 nm) 1x



High-intensity top green (530 nm) 1x

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