

Alice – Infrared Fluorescence Lamp Technical Sheet

Technical Data Sheet

1. Product Overview

Alice is a visible light illumination system specifically designed for infrared fluorescence (IRF) photography. The lamp emits high intensity visible radiation optimized to excite infrared emitting pigments, making it particularly suitable for cultural heritage diagnostics, art examination, and scientific imaging. It represents a compact and cost effective alternative to more complex laboratory illumination systems.

2. Operating Principle

Infrared fluorescence imaging is based on the excitation of specific materials using visible light, followed by the detection of their fluorescence emission in the near infrared range. Alice provides a controlled visible excitation source that efficiently stimulates pigments such as Egyptian blue and other compounds exhibiting infrared luminescence.

3. Technical Specifications

Emission Type	Visible light (blue excitation)
Peak Emission Wavelength	≈ 450 nm
Luminous Flux	≈ 1200 lumens
Spectral Output	Visible only (no IR emission)
Application Mode	Infrared fluorescence excitation
Power Supply 110–240 V AC, 50/60 Hz	
Mounting	Handheld use or standard photo tripod adapter (1/4")

4. Optical Performance

The spectral emission of Alice is concentrated in the blue region of the visible spectrum, providing efficient excitation while avoiding direct infrared output. When combined with an infrared sensitive camera and appropriate visible blocking filter, the system enables clear and high contrast infrared fluorescence documentation.

5. Typical Applications

- Infrared fluorescence (IRF) imaging of artworks
- Detection and mapping of Egyptian blue pigments
- Examination of cadmium pigments and other luminescent materials
- Cultural heritage diagnostics and conservation studies
- Scientific and technical photography

6. Notes on Use

For correct infrared fluorescence imaging, Alice should be used in combination with an infrared sensitive camera system and visible blocking filter on the camera lens. Ambient light should be minimized to avoid contamination of the recorded fluorescence signal.