

NEW

Lambert Instruments Modulated Intensifier II18MD For Fluorescence Lifetime Imaging



The Lambert Intensifier **II18MD** is a modulated image intensifier that is used for Fluorescence Lifetime Imaging Microscopy (FLIM) in the frequency domain. The product is designed for users who wish to apply the highest quality detector as part of their set-up for lifetime imaging.

The II18MD is mounted on the camera port of a wide field fluorescence microscope while the output image of the intensifier is optically coupled to a monochrome camera.

The II18MD is provided with control unit containing the high voltage power supply and RF amplifier. The control unit has a low voltage input to receive the external modulation signal to be amplified and biased with a variable DC cathode voltage. Adjusting the MCP voltage controls the intensifier gain. To prevent damaging the intensifier an overload protection circuit switches off the intensifier when the light output becomes too high.

To build a complete set-up for lifetime imaging, a compatible modulation signal generator, modulated light source and dedicated image processing software are available from Lambert Instruments.

Application:

- Protein interaction studies using GFP, CFP and YFP fusion constructs. Interaction is accompanied by direct energy transfer from donor to acceptor molecule (FRET) and is detected by a decrease in fluorescence lifetime of the donor molecule in the lifetime image.

INFORMATION



Technical data

Modulation range	: 10 - 120 MHz
Cathode DC-voltage range	: -160V to + 20V
Gain adjust range	: >100x
Input diameter	: 18mm
Magnification	: 0.5x
Matching camera	: 1/2 or 2/3 inch format
Resolution	: 50 lp/mm
Input Voltage	: 230V/50Hz typical, others on request
Microscope/Lens-mount	: C-mount, adjustable
Camera-mount	: C-mount, adjustable
Control of cathode and MCP voltage	
Digital control	: via USB and Windows control program



Image Intensifier Tube

Type	: 18mm Generation II
Input diameter	: 18 mm
Input window	: glass
Photocathode	: SuperS25
Cathode sensitivity	
@ 2850K (μA/lm)	: 400- 450
@ 500nm (mA/W)	: 25 - 30
@ 600nm (mA/W)	: 30 - 35
@ 700nm (mA/W)	: 35 - 40
@ 800nm (mA/W)	: 30 - 35
Gain	: 5000 cd/m ² /lx
Output diameter	: 18 mm
Output window	: fiber optics
Resolution	: 72 lp/mm
Magnification	: 1,0 x
Phosphor	: P43

Relay optics

High quality optical system consisting of 10 elements.	
Magnification	: 0.5x
Back focal distance	: 8 mm

Dimensions and weight

Control Unit	: 365x165x320 (mm)
Total Weight	: approx. 10 kg

