

## *Lambert Intensifier II18*



### *Low Light Level TV Camera Attachment*

The Lambert Intensifier **II18** is an intensifying unit that has been designed to be coupled to a standard monochrome video camera with 1/2-inch image sensor (CCD). The unit increases the sensitivity of the camera and enables the detection of images at a light level of 10-5lux (using a f/1.4 lens). The spectral sensitivity can be matched to the application within the range from 170 to 900nm.

The Lambert Intensifier **II18** is equipped with a Generation II Image Intensifier that features bright, high definition images over a wide range of light levels by adjustable gain control.

The high quality relay lens transfers the intensified image to the image sensor of the attached camera very efficiently and without losses in resolution.

On both sides of the attachment, a C-mount is provided which enables universal use.



**Applications**

The Lambert Intensifier II18, is used as an optical preamplifier when coupled to a standard black and white 1/2" videocamera. The II18 has a C-mount at the input allowing the connection to a standard video lens or to a microscope with C-mount adapter. The output of the unit is connected to a standard C-mount camera. The II18 plus camera combination is a monochrome camera for very low light levels, that can be used in several applications such as:

- fluorescence microscopy
- astronomy
- surveillance at night

The gain of the intensifier can be varied manually and offers application over a wide range of light levels.

**Technical data**

- Input format: 1 inch (16 mm diag.)
- Magnification: 0,5x
- Matching camera: 1/2 inch format
- Sensitivity: 10<sup>-5</sup> lx (with B/W CCD camera)
- Resolution: 500 TV lines
- Input Voltage: 12 VDC
- Lens-mount: C-mount, adjustable
- Camera-mount: C-mount, adjustable

**Image Intensifier Tube**

- Type: Super Generation II MCP wafer
- Input diameter: 18 mm
- Input window: quartz/glass
- Photocathode: S20/S25broad/Super S25
- Cathode sensitivity: 600 µA/lm (Super S25)
- Gain: 7000 cd/m<sup>2</sup>.lx
- Output diameter: 18 mm
- Output window: fiber optics
- Resolution: 55 lp/mm
- Magnification: 1,0 x
- Phosphor: P20/P43/P46
- Decay time: P20: 6,5 ms  
(to 10 %) P43: 1,5 ms  
P46: 500 ns

**Relay optics**

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

**Field of view**

The field of view is determined by the user selected optics and the format of 12.8 x 9.6 mm at the input side of the unit.

**Dimensions and weight**

- Weight: 425 g

