

NEW

Lambert Instruments Gatable Intensifier II18G(D)



Gatable Low Light Level TV Camera Attachment

The Lambert Intensifier **II18G** is a gated version of the standard II18. The gating option of the **II18G** offers the possibility to use the intensifier as an ultra fast Electro-optical shutter with minimum exposure times down to 50ns. With this gating option the input light range is extended significantly and it offers unique options for time resolved experiments.

The **II18G** 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 down to a light level of 10-5lux (using a f/1.4 lens). The **II18G** is equipped with a Generation II Image Intensifier that features bright, high definition images over a wide range of light levels by adjustable gain and gating control. The spectral sensitivity can be matched to the application within the range from 170 to 900nm.

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.

A version with an additional PC interface unit is available under the designation **II18GD**. (see for a description of the interface unit the separate datasheet)

Applications of the **II18G** are:

- Time resolved measurements
- High speed photography
- Day and night surveillance



Technical data

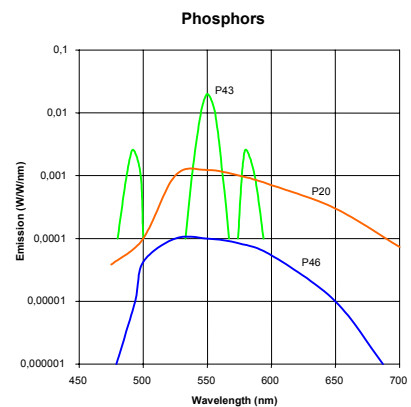
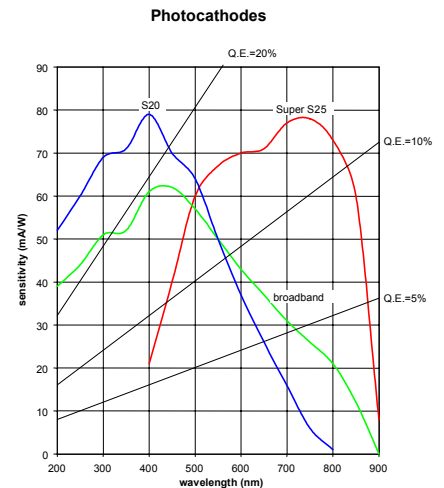
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|-----------------|--------------------------------------|
| Input format | : 1 inch (16 mm diag.) |
| Magnification | : 0,5x |
| Matching camera | : ½ inch format |
| Sensitivity | : 10^{-5} lx (with B/W CCD camera) |
| Resolution | : 500 TV lines |
| Input Voltage | : 12 VDC |
| Lens-mount | : C-mount, adjustable |
| Camera-mount | : C-mount, adjustable |

Gating Properties

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|-------------------------------------|--------------------------------------------------------|
| Gating modes (switch selectable) | : 1. follow TTL input 2. always on 3. always off |
| Gate range | : 50/100ns - ∞ |
| Max. repetition rate | : 1/10kHz |
| Trigger input | : TTL |
| Propagation delay | : 35/100ns |

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 μ A/lm (Super S25) |
| Gain | : 7000 cd/m ² .lx |
| Output diameter | : 18 mm |
| Output window | : fiber optics |
| Resolution | : 55 lp/mm |
| Magnification | : 1,0 x |
| Phosphor | : P20/P43/P46 |
| Decay time (to 10 %) | : P20: 6,5 ms 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 : 600 g

