

TRiCATT

Time-Resolved Intensified Camera Attachment



The TRiCATT is designed for use with a regular camera.

It increases the sensitivity of your camera and enables low-light imaging with a regular camera. The TRiCATT can be configured with a wide range of image intensifiers. Our experienced engineers will help you pick the right image intensifier for your application.

Compact Design

For an easy fit within your imaging or spectroscopy setup, with a sturdy super-compact version available for the 18mm intensifier.

In situ Focus Adjustment

An outer-body focus ring adjusts the internal relay optics, allowing the focus of the intensifier output onto the sensor to be changed without altering total length.

High-sensitivity Intensifiers

You can choose from a wide variety of high-sensitivity image intensifiers to match the spectral needs of your application.

Ultra-short Exposures

The gated image intensifier enables exposure times down to 3 ns. At such short exposure times, motion blur is eliminated completely to ensure sharp images.

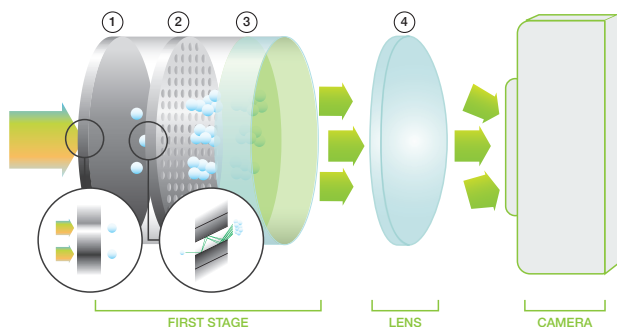
Cycled Bursts

Adjust for changing light levels by cycling through three different gate widths and optionally combine this with the burst mode to optimize the dynamic range.

Overexposure Protection

User-definable anode current limitation.

Intensifier working principle

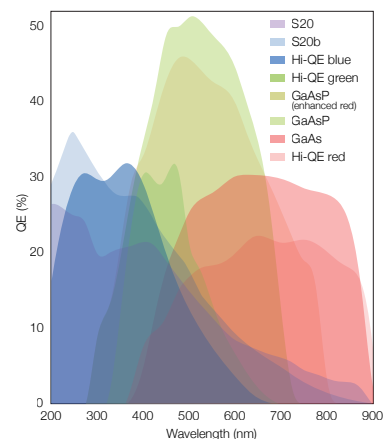


On the photocathode (1) photons get converted into electrons. These are accelerated in an electric field towards the Multi Channel Plate (MCP) (2) and hit the channel walls. Depending on the voltage across the channel, multiple electrons are generated by secondary emission. This cloud of electrons gets accelerated towards the anode screen (3), where the electrons are converted back into photons by the phosphor layer, and these photons are guided by a fiber-optic faceplate. The relay lens (4) transfers the image from the back of the intensifier onto the mounted camera.

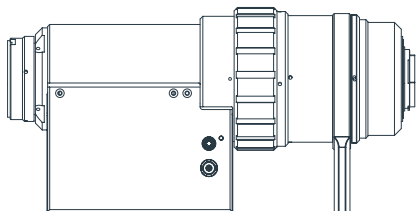
Applications

Particle Image Velocimetry (PIV)
Time-gated luminescence
Bio- and chemiluminescence imaging
Plasma physics
Single Photon imaging
Laser Induced Fluorescence (LIF)

Solar PV and LED characterization
Combustion research
Single-molecule imaging
Fluorescence Lifetime-Imaging
Microscopy (FLIM)
Förster Resonance Energy Transfer (FRET)



Models



TRiCATT 25

25mm image intensifier

Gate repetition rate

100 kHz, 300 kHz or 1MHz

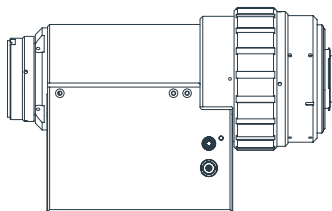
Relay optics

1:1 or 1.7:1

Fixed aperture

Input + Output Mounts

F-mount and C-mount



TRiCATT 18

18mm image intensifier

Gate repetition rate

100 kHz, 300 kHz or 1MHz

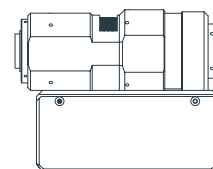
Relay optics

1:1

Fixed aperture

Input + Output Mounts

F-mount and C-mount



TRiCATT 18C

Compact 18mm image intensifier

Gate repetition rate

100 kHz or 300 kHz or 1MHz

Relay optics

1:1

Variable aperture

Input + Output Mounts

C-mount

Lambert Instruments BV

Leonard Springerlaan 19
9727 KB Groningen
The Netherlands

T: +31 50 501 8461

E: sales@lambertinstruments.com

Part of Tibidabo Scientific Industries

LI-TRiCATT-SF-Rev03 / Oct2024

Lambert Instruments is dedicated to development, production and worldwide sales of products for **time resolved imaging at low-light levels**.

Our mission is to enable our users to **reveal previously unseen phenomena**. Our products provide a possibility to record fast events at low-light conditions. Together with our software, we **reimagine detection** to offer complete solutions to challenging imaging problems.