



Very intense and uniform illuminated area  
 Full range of colors: from UV to IR, white  
 Long lifetime and few maintenances  
 Compatible with most objectives (C-Mount)  
 No speckle

|                    |                      | PSV (Passive cooling)                      |
|--------------------|----------------------|--|
| <b>Electronics</b> | Connectors           | M12, 5 Contacts (with LED driver)          |
|                    | Power supply         | 24V DC                                     |
|                    | Illumination mode    | Continuous or strobe mode                  |
|                    | Power consumption    | 90W (peak)                                 |
| <b>Optics</b>      | Wavelength           | Various wavelengths (from UV to IR, white) |
|                    | Projected pattern    | Random Cloud of Dots with a density of 50% |
| <b>Mechanics</b>   | Weight               | 400 g                                      |
|                    | Width x length       | 79.1 mm x 129.6 mm (without the objective) |
|                    | Objective adjustment | C-mount adaptor on the projector           |
|                    | Fastener             | 8 x M5 holes on the sides of the device    |
|                    | Material             | Device body: Aluminum alloy                |
| <b>Environment</b> | Working temperature  | 0°C to 40°C                                |
|                    | IP code              | IP54                                       |

### Part Number

Reference:  
**EFFI-LASE-NERIAN-YYY**

**YYY**: Wavelength (nm) / Color (other wavelengths available on demand)

- UV 385 – 395 – 405
- Blue 465
- Green 525
- Red 625
- IR 850
- White 000 (T°= 5500 K ± 500 K)

### Type of Mask

#### Stereovision

Cloud of dots density 50%  
Surface (mm<sup>2</sup>) 12,8x9,6



### Electronical considerations



#### Contact arrangement

The EFFI-LASE is supplied with a 24V constant voltage.

#### CONVENTION CABLE M12

| Pin number | Cable color | Contact arrangement       | Designation | Details  | Max Power Consumption                          |
|------------|-------------|---------------------------|-------------|--|--|
| 1          | Brown       | <p>M12 male connector</p> | +24V        | +24V   | 2,6A@24V (strobe)<br>1,65A@24V (continuous)    |
| 2          | White       |                           | NPN         | NPN [triggered on falling edge] -<br>Max 24V<br>(Light ON if $V_{NPN} < 1.5 V$ / OFF if $V_{NPN} > 3V$ )       | 12mA@3,5V<br>3mA@5V<br>0,5mA@10V<br>0,15mA@24V |
| 3          | Blue        |                           | GND         | GND  | /  |
| 4          | Black       |                           | PNP         | PNP [triggered on rising edge] -<br><b>Max 24V</b><br>(Light ON if $V_{PNP} > 4.5 V$ / OFF if $V_{PNP} < 3V$ ) | 12mA@24V<br>3mA@10V<br>0,5mA@5V<br>0,15mA@3,5V |
| 5          | Grey        |                           | AIC*        | AIC (Analog Intensity control) * -<br>Max 24V  | 0,1mA@0V<br>0,3mA@5V<br>1mA@10V<br>3mA@24V     |

\*if the AIC is not connected, the light will light on at 100% as if  $V_{AIC}=24V$ . If you don't need to adjust light level do not connect/use this PIN.

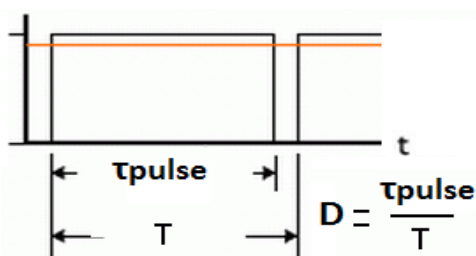
### Strobe mode

The LED driver inside the product is set to automatically pulse the LED.

If you trigger light for a short pulse (< 100 μs), light is pulsed (LED are driven at 2A).

If your pulse is longer, light automatically decreases LED current to protect LED against failure.

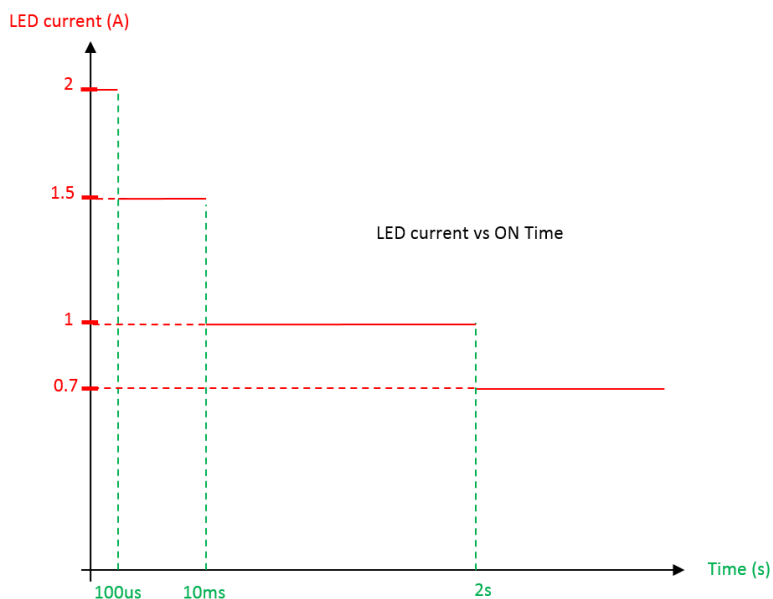
To protect LED, the product will enter in protection mode (Light is OFF for 2 second) if the duty cycle is superior to 0.3. Every 2 seconds, the product will check if duty cycle is correct to restart.



If  $D = \text{Duty cycle (ON TIME / (ON TIME + OFF TIME))} > 0.3 \rightarrow$  Light shutdowns for 2 seconds

### Continuous mode

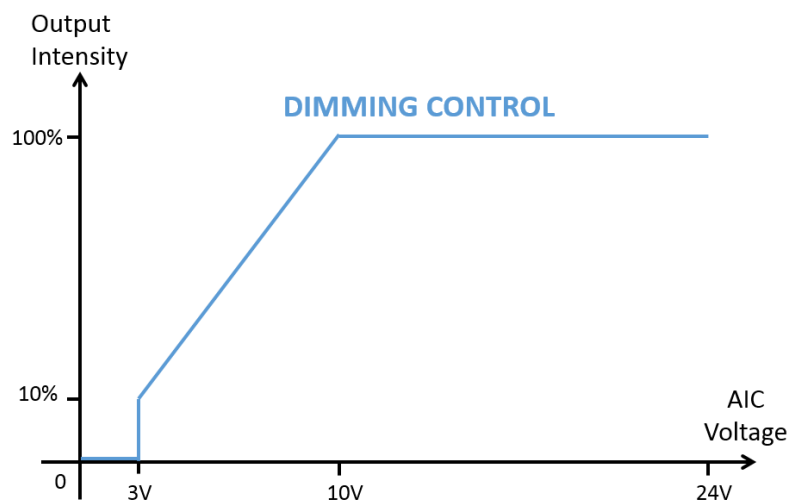
If you set trigger NPN continuously ON (or PNP), the light will run continuously with a 700 mA LED current.



| Power consumption of the EFFI-Lase-Nerian |                              |
|---|------------------------------|
| Power consumption – Continuous (0,7A)     | Power consumption – Max (2A) |
| 30 W                                      | 90 W                         |

### Analog Intensity Control (AIC)

By adjusting the analog tension, light intensity can be controlled from 10% to 100%.  
If the Input AIC is not connected, the EFFI-Lase-Nerian will act as if AIC was set at 24V.



- 0 – 3V: LED OFF
- 3 – 10V: ≈10% to 100% light intensity
- 10 - 24V: LED ON 100%
- 100% if not connected

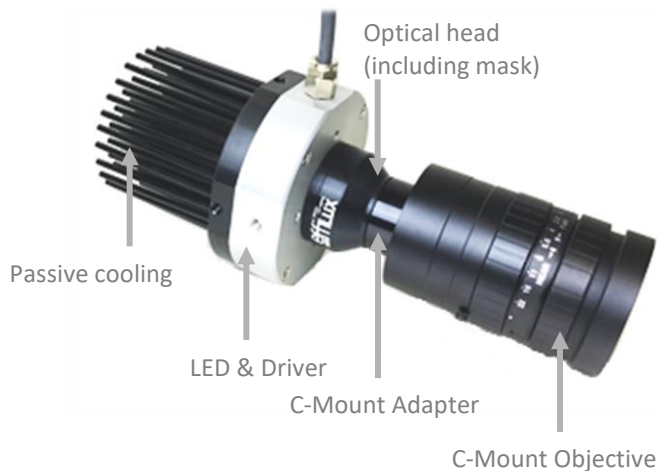
### Temperature protection



The EFFI-Lase-Nerian is protected against over warming.

If LED temperature exceeds 80°, the light is automatically switched off. The EFFI-Lase-Nerian will restart itself as soon as temperature is below 70°C.

### Optical considerations



Any C-mount objective (accessory) can be mounted on the EFFI-Lase-Nerian. Objectives are not sold with EFFI-Lase-Nerian.

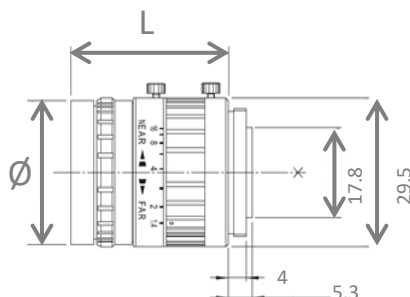
To guarantee the quality of the projector, the pattern is directly mounted in the projector body. However, the pattern can be observed through the aperture of the projector. Avoid any sharp contact with the mask: this one is sensitive and can easily be damaged.

### Objective selection

EFFILUX recommends using one of the following objectives with the EFFI-Lase-Nerian (2/3" 1.5MP and 1" 1.5MP):

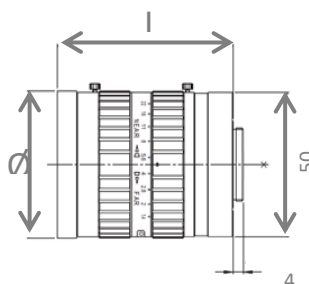
|                            | <b>OBJ-2-3-F9<br/>HF9HA-1B</b> | <b>OBJ-2-3-F12.5<br/>HF12.5HA-1B</b> | <b>OBJ-2-3-F16<br/>HF16HA-1B</b> | <b>OBJ-2-3-F25<br/>HF25HA-1B</b> | <b>OBJ-2-3-F35<br/>HF35HA-1B</b> | <b>OBJ-2-3-F50<br/>HF50HA-1B</b> | <b>OBJ-2-3-F75<br/>HF75HA-1B</b> |
|----------------------------|--------------------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <i>Focal length (mm)</i>   | 9                              | 12.5                                 | 16                               | 25                               | 35                               | 50                               | 75                               |
| <i>Iris Range</i>          | F1.4 – F16                     |                                      |                                  |                                  | F1.6 – F22                       |                                  | F2.8 – F22                       |
| <i>Angle of View (HxV)</i> | 52°06' x 40°16'                | 38°47' x 29°35'                      | 30°45' x 23° 18'                 | 19° 58' x 15° 02'                | 14° 20' x 10° 46'                | 10° 03' x 07° 33'                | 6° 43' x 5° 02'                  |
| <i>Filter thread</i>       | M27 x 0.5 mm                   | M25.5 x 0.5 mm                       |                                  |                                  |                                  |                                  | M30.5 x 0.5 mm                   |
| <i>L x Ø</i>               | 35 x 29.5 mm                   | 29.5 x 29.5 mm                       | 29.5 x 29.5 mm                   | 29.5 x 29.5 mm                   | 29.5 x 29.5 mm                   | 29.5 x 29.5 mm                   | 48 x 29.5 mm                     |

Mechanical characteristics



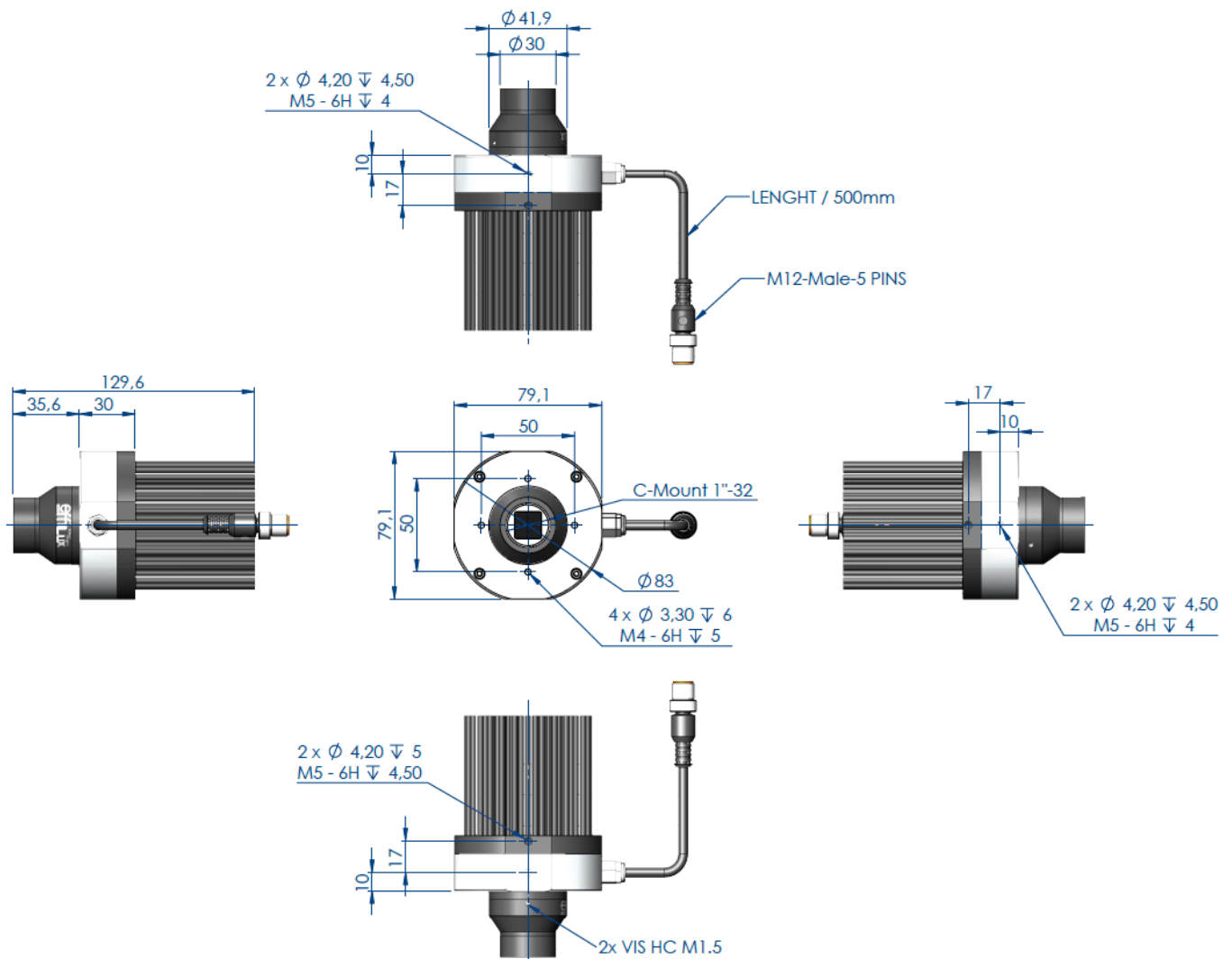
|                            | <b>OBJ-1-F12.5<br/>CF12.5HA-1</b> | <b>OBJ-1-F16<br/>CF16HA-1</b> | <b>OBJ-1-F25<br/>CF25HA-1</b> | <b>OBJ-1-F35<br/>CF35HA-1</b> | <b>OBJ-1-F50<br/>CF50HA-1</b> | <b>OBJ-1-F75<br/>CF75HA-1</b> |
|----------------------------|-----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <i>Focal length (mm)</i>   | 12.5                              | 16                            | 25                            | 35                            | 50                            | 75                            |
| <i>Iris Range</i>          | F1.4 – F22                        |                               |                               |                               | F1.8 – F22                    |                               |
| <i>Angle of View (HxV)</i> | 45° 13' x 42° 01'                 | 43° 36' x 33° 24'             | 28° 43' x 21° 44'             | 20° 43' x 15° 37'             | 14° 35' 10° 58'               | 9° 45' x 7° 19'               |
| <i>Filter thread</i>       | M49 x 0.75 mm                     |                               |                               |                               |                               |                               |
| <i>L x Ø</i>               | 68.5 x 51 mm                      | 70.5 x 51 mm                  | 75.5 x 51 mm                  | 48.5 x 51 mm                  | 55.5 x 51 mm                  | 76 x 51 mm                    |

Mechanical characteristics



| Objective          | Pattern dimensions HxW (cm)                      |           |           |            |
|--------------------|--|-----------|-----------|------------|
|                    | Dimensions of a 12.8x9.6mm cloud of dots pattern |           |           |            |
|                    | WD = 30cm  | WD = 50cm | WD = 80cm | WD = 100cm |
| <i>f</i> = 12.5 mm | 32 x 23  | 51 x 37   | 82 x 59   | 102 x 73   |
| <i>f</i> = 16 mm   | 25 x 19  | 41 x 31   | 66 x 49   | 82 x 61    |
| <i>f</i> = 35 mm   | 11 x 8   | 18 x 14   | 29 x 22   | 36 x 27    |
| <i>f</i> = 50 mm   | n.a  | 12 x 9    | 20 x 15   | 25 X 19    |
| <i>f</i> = 75 mm   | n.a  | n.a       | 13 x 10   | 16 x 12    |

### Mechanical considerations (Dimensions in mm)



### Quick Start



1

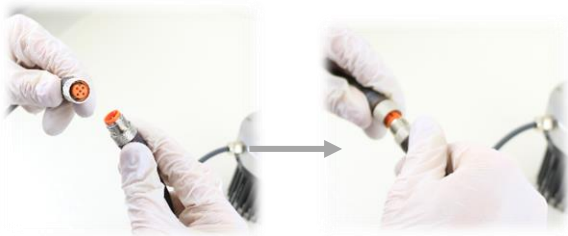
Ready



2

Screw the objective

\*The objective is not provided with the EFFI-LASE.



3

Plug the M12 connector\*

\*You can plug the M12 directly to your own power supply or to the EFFILUX power supply.

|   |      |
|---|------|
| 1 | +24V |
| 2 | NPN  |
| 3 | GND  |
| 4 | PNP  |
| 5 | AIC  |



4

Turn ON and use the product