



**Very intense**

**Long lifetime**

**Wide depth**

**Pattern projector**

**No speckle**

**IP5X**



**CE**

# effiLASE-V3

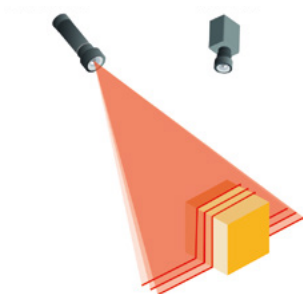
Ultra High Power Structured Lighting LED Pattern Projector

# INTRODUCTION

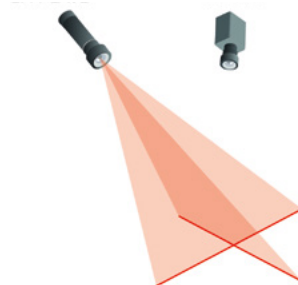
## TABLE OF CONTENTS

PART NUMBERING.....	PAGE 3
TECHNICAL SPECIFICATIONS.....	PAGE 4
OPTICAL SPECIFICATIONS.....	PAGE 5
ELECTRONICAL SPECIFICATIONS.....	PAGE 7
MECHANICAL SPECIFICATIONS.....	PAGE 8
ACCESSORIES.....	PAGE 8
CONTACT INFORMATION.....	PAGE 8

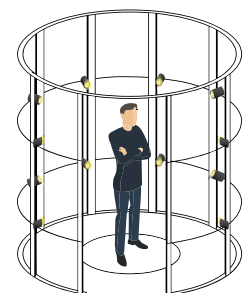
3D Profiling



Alignment application



Body scanning



## RELATED PRODUCT & QUICK COMPARISON

Refer to the datasheets of the products below for more details on those related products.

	effiLASE	effiLASE-PWR	effiLASE-V2	effiLASE-V3
Product				
Objective	C-Mount 25mm	C-Mount 25mm	C-Mount 25mm	C-Mount 35mm
Optical Power factor (for the same area illuminated)	1	x2	x6	x30

# PART NUMBERING

## STANDARD VERSION

<b>EFFI-LASE-V3</b>	- <b>ZZZ</b>	- <b>MMM</b>	- <b>CCC</b>
	<b>Wavelength [nm]</b> <ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <b>465</b> (Blue)</li> <li><span style="color: green;">●</span> <b>520</b> (Green)</li> <li><span style="color: red;">●</span> <b>625</b> (Red)</li> </ul>	<b>Mask</b> <b>3D Profilometry (line length 25mm)</b> L01/ L02/ L03/ L07/ L08 <b>Stereovision (diameter 25mm)</b> C02/ C10 Other custom masks upon request	<b>Connector(s)</b> <b>M12P (standard)</b> M12 Power - 4pins <b>FL</b> Flying leads

# TECHNICAL SPECIFICATIONS

## effiLASE-V3

<b>Illumination Mode</b>	Strobe or continuous
<b>Wavelengths</b>	465nm, 520nm and 625nm
<b>Power Supply</b>	24V DC (+/-10%)
<b>Connector(s)</b>	<b>M12 Power - 4pins</b> <b>Flying leads</b>
<b>Max Power Consumption</b>	Strobe mode: 180W Continuous mode: 30W
<b>Autostrobe</b>	400% Overdrive current during 150 ms max then continuous at 100%
	Max. duty cycle 5.8%
	PNP trigger input: Light ON from 3.3V to 24V / Don't exceed 24VDC / Max. signal consumption: 1.5mA
<b>Weight</b>	350g (without the lens)
<b>Dimensions (projector)</b>	Projector: 59mm x 95.2mm (without the lens) / Driver: 105mm x 84mm x 38.5mm (L x W x H)
<b>Material</b>	Device body: Aluminum alloy / Delrin®
<b>Fastener</b>	3x M4 both sides
<b>IP rating</b>	IP5X (dust protected)
<b>Operation environment</b>	Temperature: 0°C to 40°C - Humidity: 20 to 85%RH (with no condensation) - Altitude: Up to 2000m
<b>Storage environment</b>	Temperature: -20° to 60°C - Humidity: 20 to 85%RH (with no condensation)
<b>Informations</b>	Overvoltage category I - Protective class III - Pollution degree 3 - Made in France
<b>Regulations &amp; Marking</b>	CE - UKCA
<b>Environmental Standards</b>	RoHS Directives (2011/65/EU, 2015/863/EU and China RoHS) - REACH Regulation - WEEE Regulation

# OPTICAL SPECIFICATIONS

## TYPE OF MASK

### 3D Profilometry (line length: 25mm)



L01-3: 1 line 100µm



L02-3: 1 line 40µm



L03-3: 1 line 20 µm



L07-3: 100 lines (67.5 µm x 19.5mm) pitch 100 µm



L08-3: 22 lines (75 µm x 19.5mm) pitch 500 µm

### Stereovision and Alignment (diameter: 25mm)



C02-3: Cloud of dots density 50%:  
Pixel size (smallest dot) 22.5 µm  
Effective mask surface: Ø25mm



C10-3: Cloud of dots density 50%:  
Pixel size (smallest dot) 20 µm  
Effective mask surface: Ø25mm

## LENS SELECTION

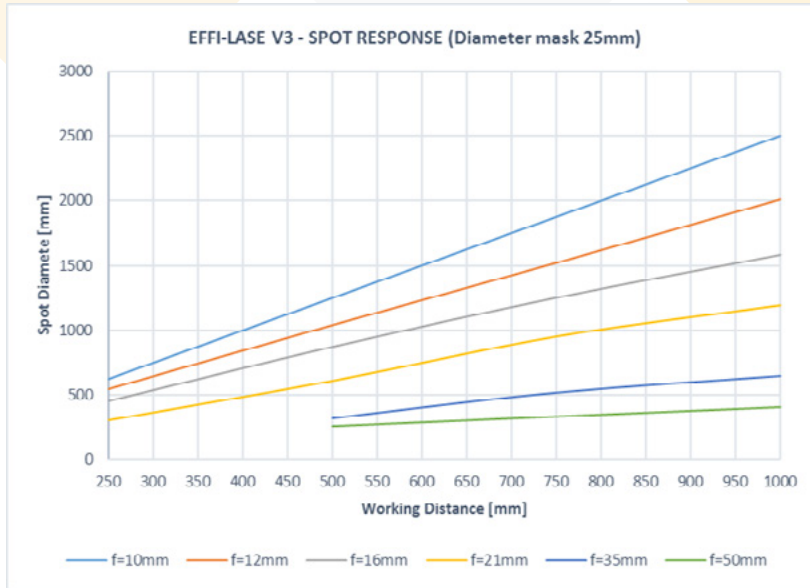
Any E-Mount lens (accessory) can be mounted on the EFFI-Lase-V3. The product is delivered without any lens, it has to be purchased separately. To guarantee the best quality of the projector, the pattern is directly mounted in the projector body. However, the pattern can be observed through the aperture of the projector. Avoid any contact with the mask : the mask is sensitive and can easily be damaged.

EFFILUX recommends using one of the following lenses with the EFFI-LASE-V3:

Efflux References	EFFO-SG-10-F2.8-ASP-C-HR-EM	EFFO-SG-12-F2.8-ASP-C-HR-EM	EFFO-SG-16-F2.8-ASP-C-HR-EM	EFFO-SG-21-F2.8-ASP-C-HR-EM	EFFO-SG-35-F2.8-ASP-C-HR-EM	EFFO-SG-50-F2.8-ASP-C-HR-EM
	014601	006694	014602	007828	009112	009113
	10mm F2.8 ED AS NCS CS	12mm F2.0 NCS CS	16mm F2.0 ED AS UMC CS	21mm F1.4 ED AS UMC CS	35mm F1.2 ED AS UMC CS	50mm AS UMC CS
Focal length (mm)	10	12	16	21	35	50
Aperture Range	F2.8~22	F2.0~22	F2.0~22	F1.4~22	F1.2~22	F1.2~22
Angle of view APS-C (°)	109.5	98.9	83.1	69.3	44.6	31.7
Mount	E-mount					
M filter size	-	M67 x 0.75	M77 x 0.75	M58 x 0.75	M62 x 0.75	M62 x 0.75
L x Ø (mm)	76.7 x 86	59.1 x 72.5	115.4 x 83	64.3 x 67.5	74.2 x 67.5	74.2 x 67.5
Weight (g)	580	245	615	275	420	375

## PATTERN VS WORKING DISTANCE

Depending on the working distance (WD) and the E-mount lens selected, different spot sizes can be obtained:



## ILLUMINANCE VS WORKING DISTANCE

Depending on the E-Mount lens selected, different minimum focus distances can be obtained. These values were measured using an EFFI-Lase-V3 in blue color during the AutoStrobe.

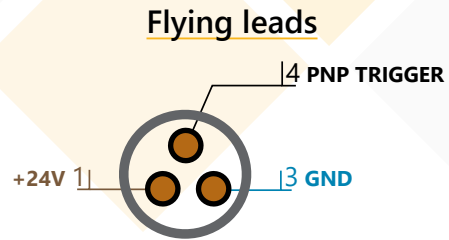
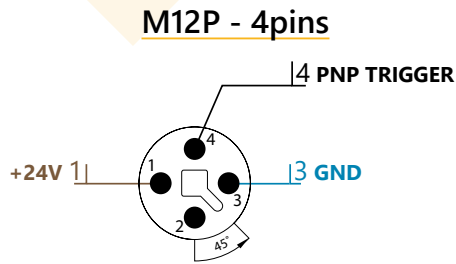
Lens			Illumination at the center (mW/cm <sup>2</sup> ) - 25 cm Mask diameter			
Reference	Focal	Min focus distance	WD= 25cm	WD= 50cm	WD= 75cm	WD= 100cm
EFFO-SG-10-F2.8-ASP-C-HR-EM	f = 10mm	240mm	-	-	-	-
EFFO-SG-12-F2.8-ASP-C-HR-EM	f = 12mm	200mm	9.2	1.8	1.1	0.9
EFFO-SG-16-F2.8-ASP-C-HR-EM	f = 16mm	200mm	8.4	2.8	1.5	1.2
EFFO-SG-21-F2.8-ASP-C-HR-EM	f = 21mm	280mm	N/A	5.8	2.8	1.9
EFFO-SG-35-F2.8-ASP-C-HR-EM	f = 35mm	380mm	N/A	19.9	7.5	5.1
EFFO-SG-50-F2.8-ASP-C-HR-EM	f = 50mm	450mm	N/A	29.8	16.3	8.2

**Note:** Adaptive extension rings are available (1mm, 2mm, 3mm, 5mm, 7.5mm, 10mm, 12.5mm, 15mm).

# ELECTRONICAL SPECIFICATIONS

## WIRING LAYOUT & POWER CONSUMPTION

The average power consumption is: 180W during strobe mode and 30W during continuous mode.

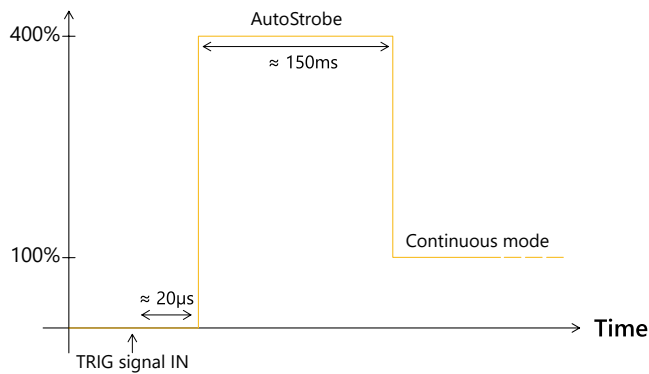


### Notes:

- The EFFI-LASE-V3 requires 24V DC input power.
- Light OFF if  $VPNP < 3VDC$  / Light ON @100% if  $VPNP > 3.3VDC$ .

## AUTOSTROBE MODE

### Output Intensity



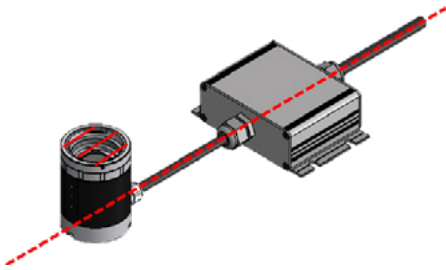
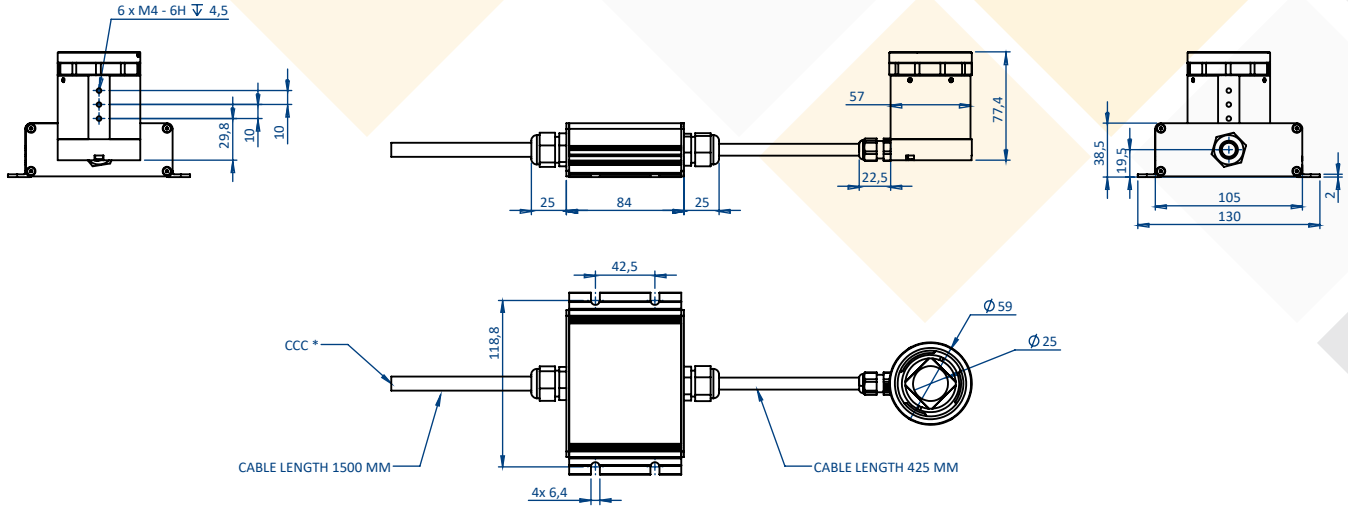
Autostrobe: 400% current value with a max duty cycle of 5.8% and max pulse duration of 150ms.  
After the autostrobe, the product automatically goes to continuous mode.

## ELECTRONICAL FLEXIBILITY

The electronic mode of the EFFI-LASE-V3 can be easily customized by Efflux. The standard parameters of the AutoStrobe mode (strobe duration, duty cycle max, intensity values, ...) can be adapted to your application.

Please contact Efflux for more information.

# MECHANICAL SPECIFICATIONS



The lines of the LXX masks are oriented parallel to the connector axis as illustrated on the side.

## ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-LASE-V3.



**Extension cables**

2meters: EFFC-CAB-M12P-F-4-D-L2

5meters: EFFC-CAB-M12P-F-4-D-L5

10meters: EFFC-CAB-M12P-F-4-D-L10

## CONTACT INFORMATION

Please refer to the specific documentation (datasheet, user manual and drawing) for complementary information. Contents of this document are based on information available as of February-2025 and may be changed without prior notice.



EFFILUX  
1, Rue de Terre Neuve  
Mini Parc du Verger - Bâtiment E  
91940 Les Ulis - FRANCE

Tel: +33 9 72 38 17 80  
Fax: +33 9 72 11 21 69  
Mail: sales@effilux.fr

Copyright 2022 Effilux - All rights Reserved