DATASHEET

Efficient Led Lighting

effiLux

Very intense

Long lifetime

Wide depth

Pattern projector

No speckle

IP5X

AUTOSTROBE

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

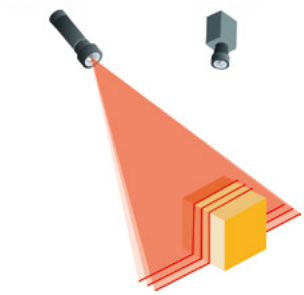
MECHANICAL SPECIFICATIONS..... PAGE 8

ACCESSORIES..... PAGE 8

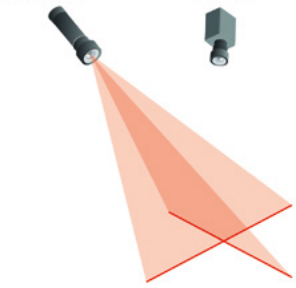
CONTACT INFORMATION..... PAGE 8

APPLICATIONS

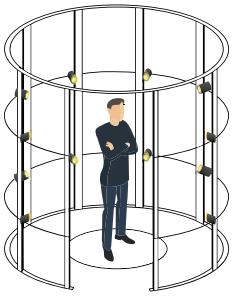
3D Profiling



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	C-Mount	C-Mount	E-Mount
Optical Power factor (for the same area illuminated)	1	x2	x6	x30

PART NUMBERING

Standard version

EFFI-LASE-V3 - ZZZ - MMM - CCC

Wavelength [nm]

- **465** (Blue)
- **520** (Green)
- **625** (Red)

Mask

3D Profilometry (line length 25mm)
L01/ L02/ L03/ L07/ L08

Stereovision (diameter 25mm)
C02/ C10

Other custom masks upon request

Connector(s)

M12P (standard)
M12 Power - 4pins

FL
Flying leads

TECHNICAL SPECIFICATIONS

effiLASE-V3

Illumination Mode	Strobe or continuous	
Wavelengths	465nm, 520nm and 625nm	
Power Supply	24V DC (+/-10%)	
Connector(s)	**M12 Power - 4pins**	**Flying leads**
Max Power Consumption	Strobe mode: 180W Continuous mode: 30W	
Autostrobe	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	
Weight	350g (without the lens)	
Dimensions (projector)	Projector: 59mm x 95.2mm (without the lens) / Driver: 105mm x 84mm x 38.5mm (L x W x H)	
Material	Device body: Aluminum alloy / Delrin®	
Fastener	3x M4 both sides	
IP rating	IP5X (dust protected)	
Operation environment	Temperature: 0°C to 40°C - Humidity: 20 to 85%RH (with no condensation) - Altitude: Up to 2000m	
Storage environment	Temperature: -20° to 60°C - Humidity: 20 to 85%RH (with no condensation)	
Informations	Overvoltage category I - Protective class III - Pollution degree 3 - Made in France	
Regulations & Marking	CE - UKCA	
Environmental Standards	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 Alignement (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

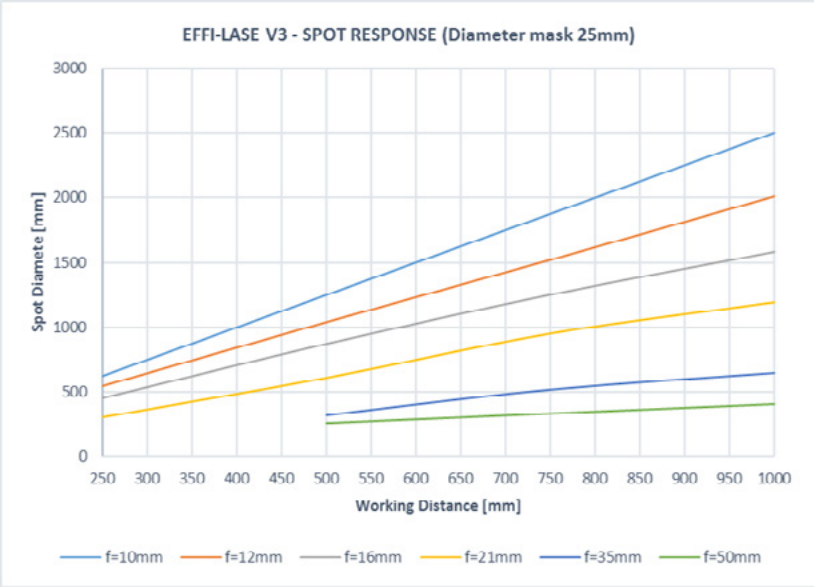
Any E-Mount lens (accessory) can be mounted on the EFFI-Lase-V3. The product is delivered without any lens, it has to be purchased seperately. To guarantee the best quality of the projector, the pattern is directly mounted in the projector body. However, the pattern can be observed through the aperture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

Effilux References	EFFO-7A-12-F2.8-APS-C-HR-EM	EFFO-7A-25-F1.8-APS-C-HR-EM	EFFO-7A-35-F1.2-APS-C-HR-EM	EFFO-7A-50-F1.8-APS-C-HR-EM
Focal length (mm)	12	25	35	50
Aperture Range	f/2.8	f/1.8	f/1.2	f/1.8
Angle of view APS-C (°)	~ 100°	~ 68°	~ 44°	~ 32°
M filter size	67 mm	46 mm	46 mm	52 mm
L x Ø (mm)	60 x 70	37.8 x 59.9	32 x 51	40 x 55

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 pn 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/cm²) - 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

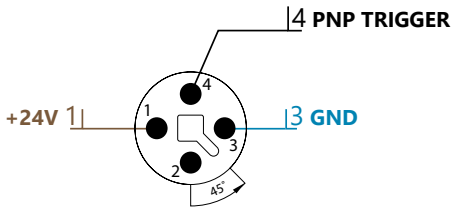
Note: Adaptative extension rings are available (1mm, 2mm, 3mm, 5mm, 7.5mm, 10mm, 12.5mm, 15mm).

ELECTRONICAL SPECIFICATIONS

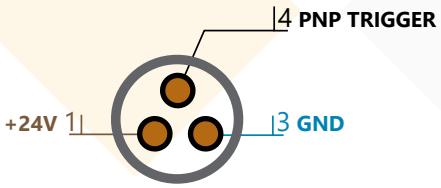
Wiring layout & power consumption

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

M12P - 4pins



Flying leads

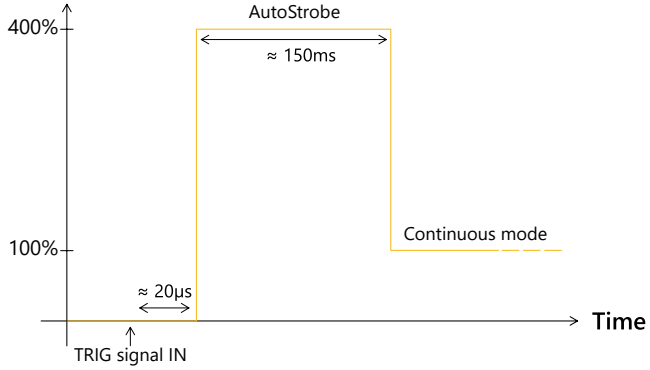


Notes:

- 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



Austostrobe: 400% current value with a max duty cycle of 5.8% and max pulse duration of 150ms.

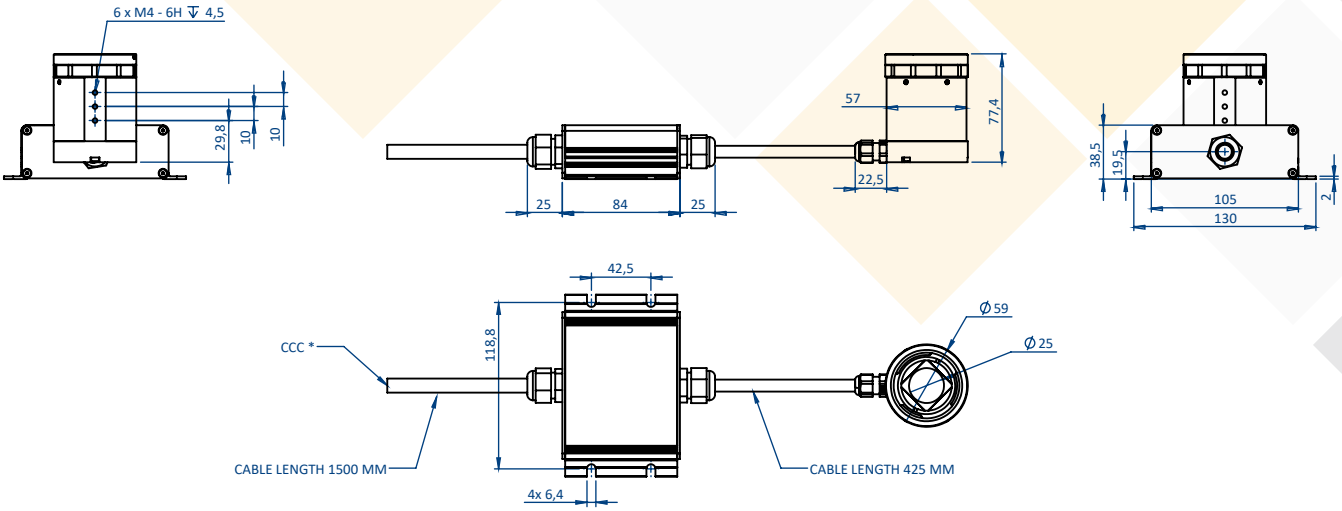
After the autostrobe, the product automatically goes to continuous mode.

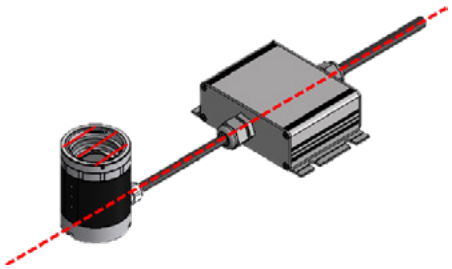
Electronical flexibilty

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

Please contact Effilux 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