



Very intense

Pattern projection

Flexible

Full range of color

Compatible

IP54

CE

effiSHARP-CPT

Powerful and compact shape projector

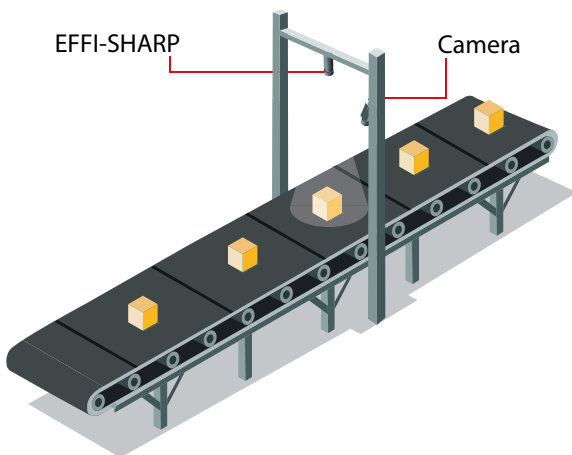
INTRODUCTION

TABLE OF CONTENTS

PART NUMBERING.....	PAGE 3
TECHNICAL SPECIFICATIONS.....	PAGE 4
OPTICAL SPECIFICATIONS.....	PAGE 5
ELECTRONICAL SPECIFICATIONS.....	PAGE 7
MECHANICAL SPECIFICATIONS.....	PAGE 8
CONTACT INFORMATION.....	PAGE 9

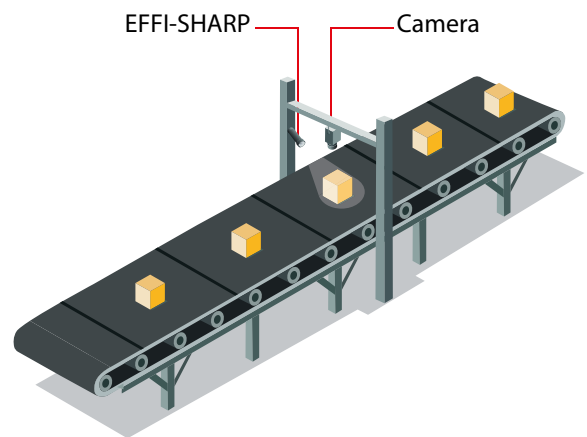
APPLICATIONS

Sharp standard



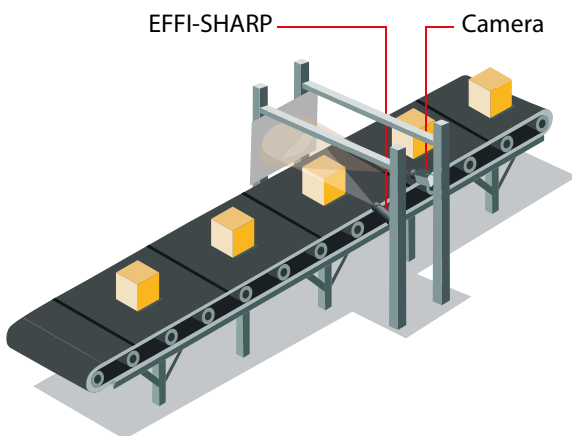
Precise spot light with sharp edges for long working distances.

Sharp dark-field



Tangential illumination for carved codes reading, cleavage inspection, edges view enhancing

Sharp back-light



Backlight illumination with a spot light.

PART NUMBERING

STANDARD VERSION

EFFI-SHARP-CPT - VVV - XX - ZZZ - M

LED pattern

MX1



MX2

*(strobe mode only)



Optical lens

NF: Near Field

MF: Middle Field

FF: Far Field

CM: For any other C-mount configuration lens

Wavelength [nm]

● **405**
(UV)

● **465**
(Blue)

● **525**
(Green)

● **625**
(Red)

● **850**
(Infrared)

○ **000**
(White)

Mask

1: Square 9x9 mm

2: Disc Ø 15.1 mm

3: Half-moon R = 9.5 mm

AVAILABLE OPTIONS

Polarizer option

EFFI-SHARP-CPT - VVV - XX - ZZZ - M - POL

- The optical accessory Polarizer eliminates glare caused by the lighting on parts to control.
- The camera can then analyze the part, without being disturbed by the glow effects.

TECHNICAL SPECIFICATIONS

effiSHARP-CPT

Illumination Mode	Strobe mode only or low constant current (no cooling system)
Wavelengths	405nm, 465nm, 525nm, 625nm, 850nm, 000nm
Power Supply	24V DC
Connector(s)	M8 - 8 pins
Power Consumption	Depending on the current
Weight	380g
Dimensions	Length x height x width = 112,9 mm (NF & MF) or 153,4 mm (FF) x 42 mm x 42 mm
Material	Device body: Aluminum alloy
Fastener	5 x M4 on the back of the device / 3 x M4 on the sides of the device
IP rating	IP54
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 50°C - Humidity: 20 to 85%RH (with no condensation)
Informations	Overvoltage category I - Protective class III - Pollution degree 3
Regulations & Marking	CE - UKCA
Environmental Standards	RoHS Directives (2011/65/EU, 2015/863/EU and China RoHS) - REACH Regulation - WEEE Regulation
Country of Origin	France

OPTICAL SPECIFICATIONS

TYPE OF LENS

NF: Near Field	MF: Middle Field	FF: Far Field
NF: 80 to 400 mm Illuminance: 2 000 000 lux at 100 mm	MF: 400 to 3000 mm Illuminance: 90 000 lux at 500 mm	FF: 400 to 3000 mm Illuminance: 20 000 lux at 1000 mm

Notes: Measurements were made with a 2000mA strobe current through each LED (white MX2 LED version).

POWER FACTOR

Objective	Near Field	Middle Field	Far Field	Intensity through each LED	1.5 A	1 A	0.7 A
Power factor between MX2 and MX1 LED version	1.7	1.3	1.1	Power factor between a 2A strobe and another intensity	1.2	1.7	2.5

MASK AND PATTERN PROJECTION (IF NOT SPECIFIED, DEFAULT 2)

1: Square 9x9 mm



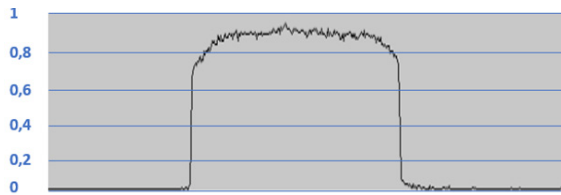
2: Disc Ø 15.1 mm



3: Half-moon R = 9.5 mm

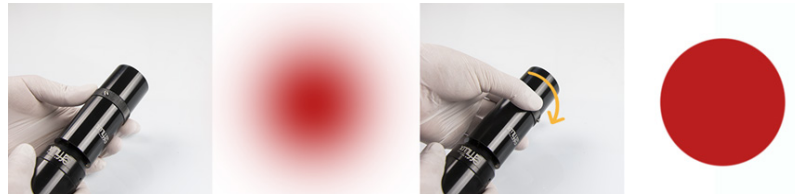


UNIFORMITY



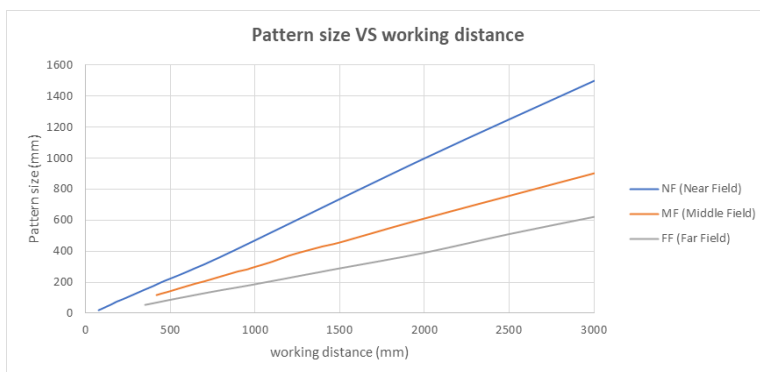
Uniformity higher than 80%

ADJUST OPTICAL CONFIGURATION

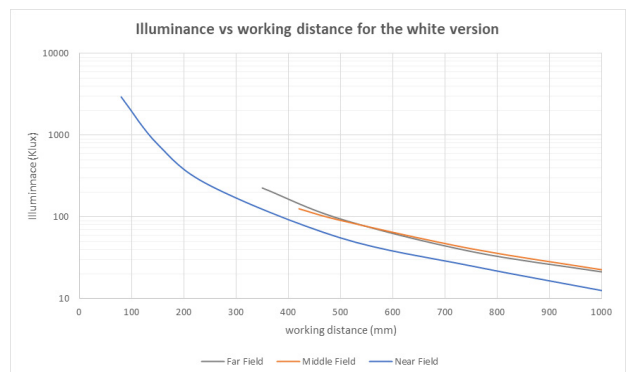


Notes: Rotate the adjustment ring to get a sharp edges pattern and lock the position by screwing the M4 screw.

PATTERN SIZE/ ILLUMINANCE VS WORKING DISTANCE



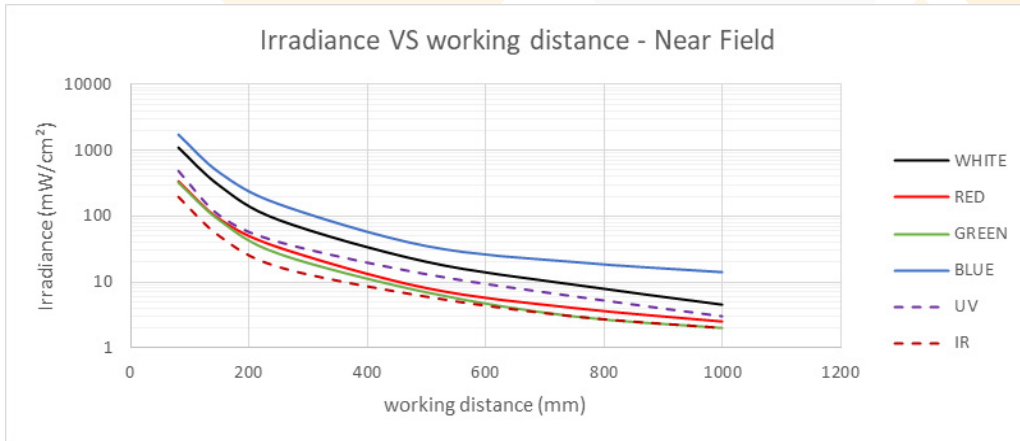
Notes: Measurements were made with the disc Ø15,1 mm mask (Z=2).



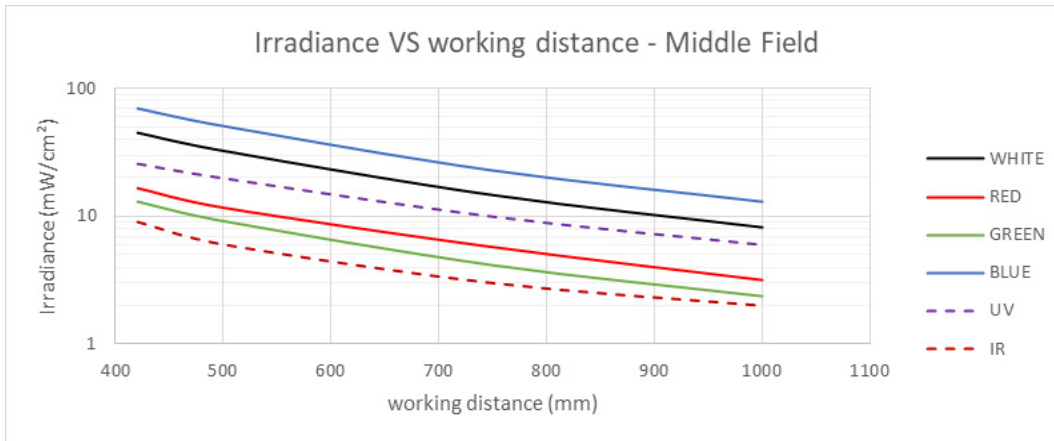
Notes: Measurements were made with a 2000mA strobe current through each LED (MX2). Please refer to the Power factor array for more information.

IRRADIANCE VS WORKING DISTANCE

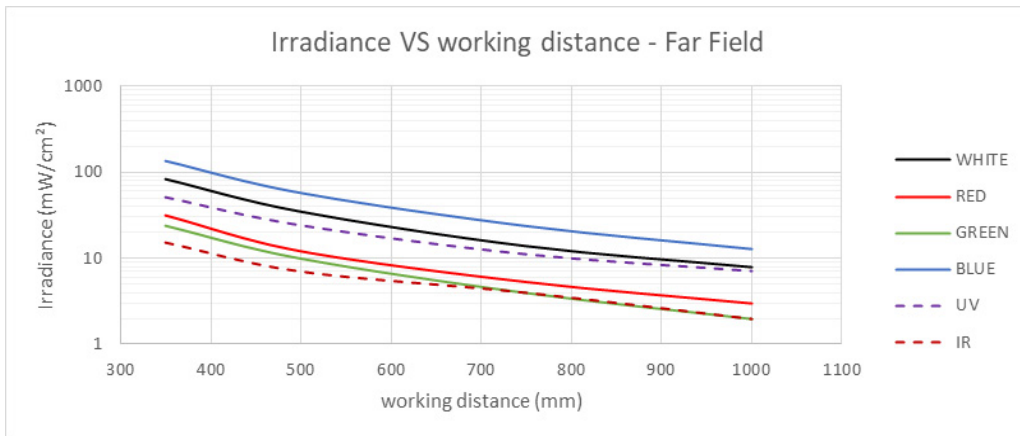
Near Field



Middle Field



Far Field



Notes: Measurements were made with a 2000mA strobe current through each LED (MX2). Please refer to the Power factor array for more information.

C-MOUNT OBJECTIVE SELECTION



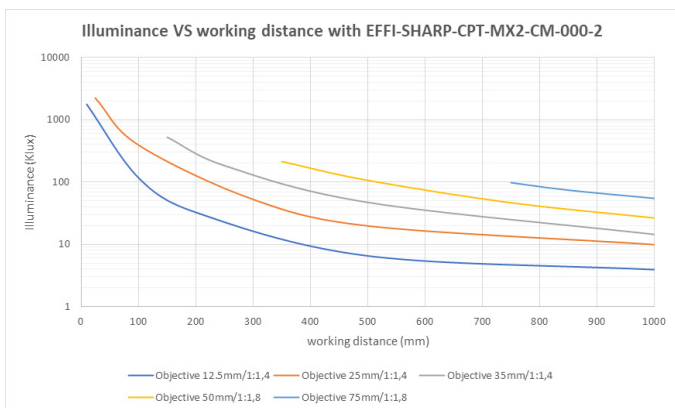
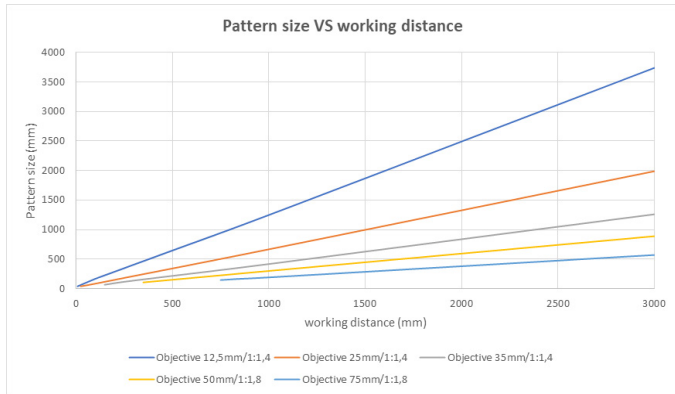
Any C-mount objective can be mounted on the EFFI-SHARP-CPT. The objective is not provided with the EFFI-SHARP-CPT.

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.

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

	OBJ-1-F12.5 CF12.5HA-1	OBJ-1-F25 CF25HA-1	OBJ-1-F35 CF35HA-1	OBJ-1-F50 CF50HA-1	OBJ-1-F75 CF75HA-1
Focal length (mm)	12.5	25	35	50	75
Iris range	F1.4 - F22			F1.8 - F22	
Angle of view (HxV)	45° 13' x 42° 01'	28° 43' x 21° 44'	20° 43' x 15° 37'	14° 35' 10° 58'	9° 45' x 7° 19'
Filter thread	M49 x 0.75 mm				
L x Ø	68.5 x 51 mm	75.5 x 51 mm	48.5 x 51 mm	55.5 x 51 mm	76 x 51 mm
Mechanical characteristics					

EVOLUTION OF THE PATTERN SIZE FOR DIFFERENT C-MOUNT OBJECTIVE

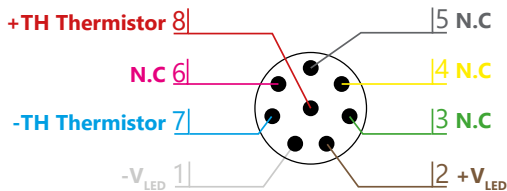


ELECTRONICAL CONSIDERATIONS

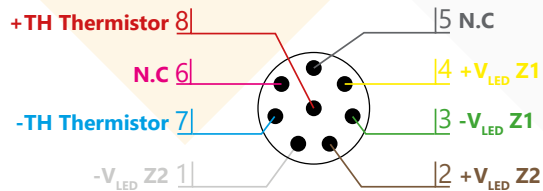
Be careful this product have no LED protection.

WIRING LAYOUT

M8 8pins male connector - MX1



M8 8pins male connector - MX2



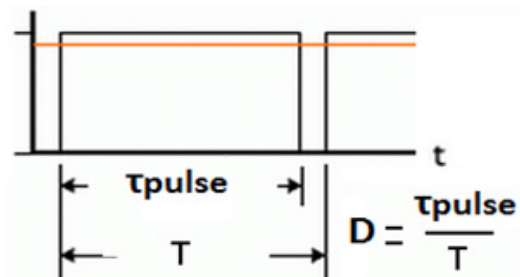
STROBE MODE

EFFILUX proposes a LED controller (EFFI-IPSC4) which allows you to obtain by software interface the ON time and OFF time that you desire.

You can see below 5 possible configurations depending on the current that you provide to the EFFI-SHARP-CPT.

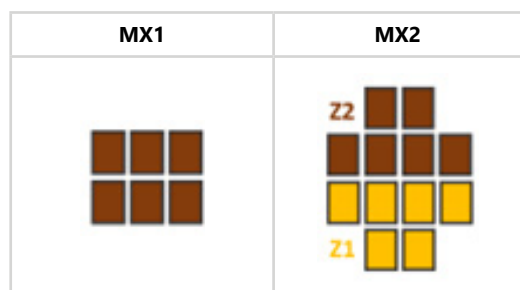
Contact EFFILUX for more information.

Configuration	Current	Max Pulse duration (μ s) / T_{pulse}	D
1	1.2A	50000	0.5
2	1.5A	10000	0.1
3	2A	1000	0.01
4	2.5A	100	0.001
5	3.5A	40	0.0004

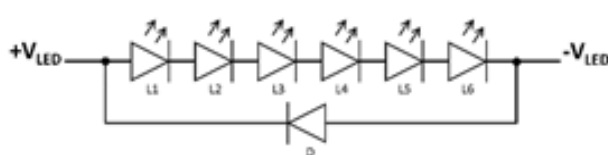


LED ARRANGEMENT AND DIAGRAM

LED arrangement


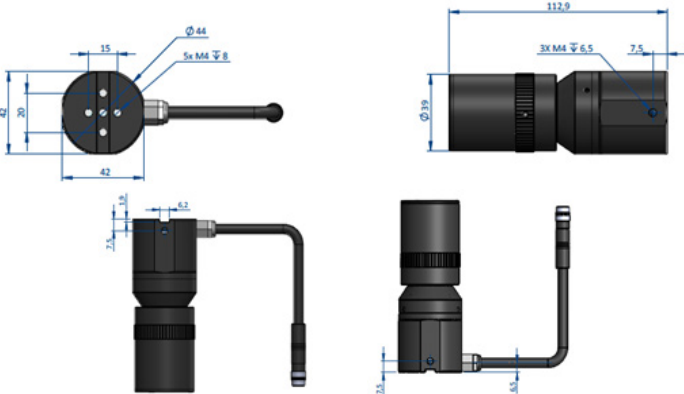

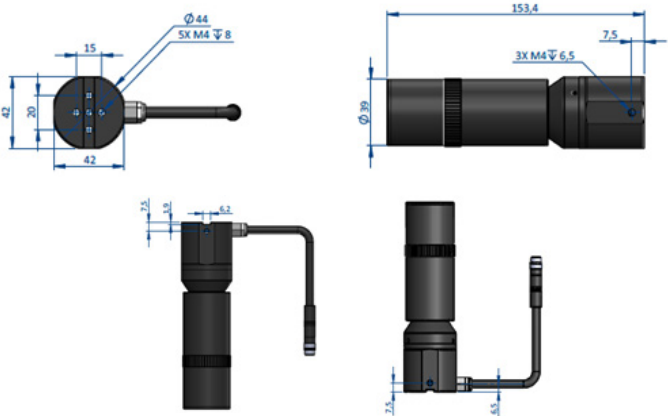

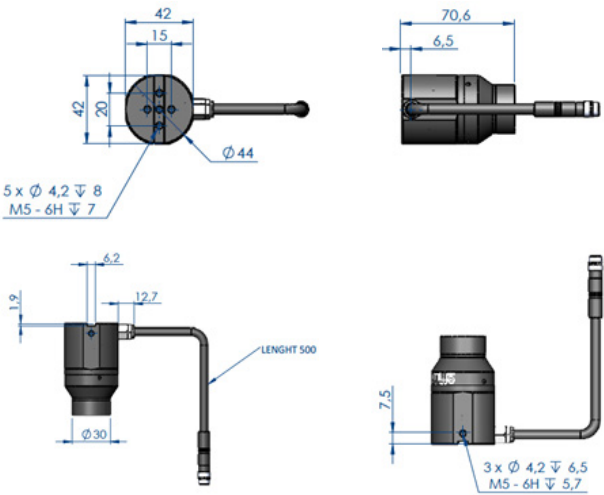


Electrical diagram for each channels



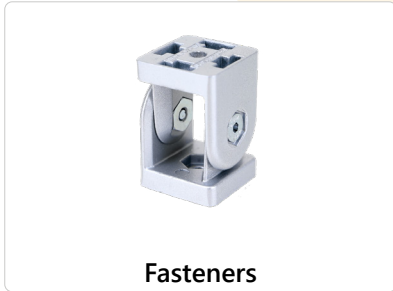
- Protective diode **D** TVS 400mW 24V: PTVS24VS1UR
- Thermistor NTC 10k Ω **TH1**: VISHAY NTC50805E3103JMT

MECHANICAL CONSIDERATIONS (DIMENSIONS IN MM)

Objective version	Dimensions & fastener (in mm)
<p>Near Field (NF) & Middle Field (MF)</p> 	
<p>Far Field (FF)</p> 	
<p>C-mount (CM)</p> 	

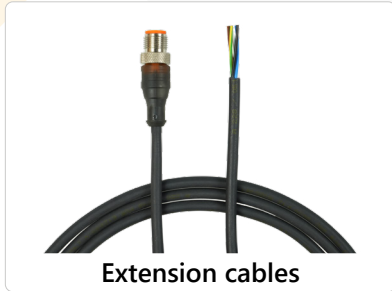
ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-SHARP-CPT.



Fasteners

Clamping: EFFM-1-0001
Pivot joint: EFFM-1-0009
Tripod adapter: EFFM-1-0027



Extension cables

M8
2meters: EFFC-CAB-M8-F-8-D-L2
5meters: EFFC-CAB-M8-F-8-D-L5
10meters: EFFC-CAB-M8-F-8-D-L10



Pulse controller

Pulse controller
EFFI-IPSC4
Cables
2 meters: EFFC-CAB-M8-SUBD-FM-4-DD-L2
5 meters: EFFC-CAB-M8-SUBD-FM-4-DD-L5
10 meters: EFFC-CAB-M8-SUBD-FM-4-DD-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 March 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