



Standard



Homogeneous

**Anti-reflexion
coating**



Long lifetime



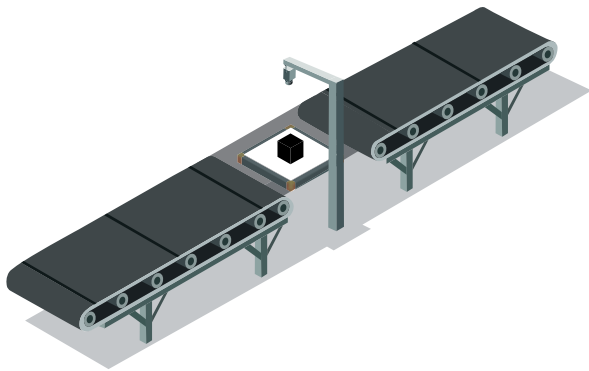
effiBL

High power & uniformity LED Backlight

TABLE OF CONTENTS

PART NUMBERING.....	PAGE 3
GENERAL SPECIFICATIONS.....	PAGE 4
OPTICAL SPECIFICATIONS.....	PAGE 5
ELECTRONICAL SPECIFICATIONS.....	PAGE 7
MECHANICAL SPECIFICATIONS.....	PAGE 9
CONTACT INFORMATION.....	PAGE 11

APPLICATIONS



Inspection:

- Dimension control: Highlighting the edges of the object (maximum contrast between the background and the form).
- Absence/presence of holes.
- Liquid level control of bottle.
- Ideal for transparent and translucent materials (glass, fabric, printed circuit...).
- And many other machine vision applications.

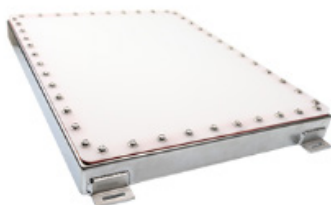
Robotics:

- Object location for pick and place.

RELATED PRODUCT

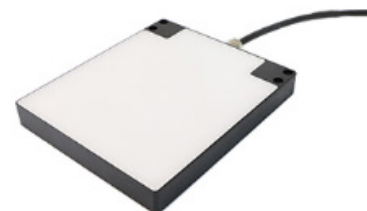
Refer to the datasheets of the products below for more details on those related products.

EFFI-BL-IP69K



IP69K version for
Food Industry & Washdown Environments

EFFI-SBL



IP67 Compact version

PART NUMBERING

STANDARD VERSION

EFFI-BL	- XXX	- YYY	- ZZZ	- VVVV
	Optical width (mm)	Optical length (mm)	Wavelength (nm)	Connector
	50	50	● 465 (Blue)	1M12
	100	100	● 525 (Green)	2M12
	150	150	● 625 (Red)	3M12
	...Every 50mm steps	...Every 50mm steps	● 850 (Infrared)	1M12P
	1450	2950	● 940 (Infrared)	2M12P
			○ 000 (White 5500K)	

IMPORTANT NOTE: YYY must be larger than XXX in the part number.

AVAILABLE VERSIONS & OPTIONS

VERSION	
Power version S150 (3x output power)	EFFI-BL-XXX-YYY-000-VVV-S150 Max duty cycle: 30% (mandatory) with max 1' time ON. Only available in white.
OPTICAL OPTIONS	
Polarizer (maximum size: 600-600)	EFFI-BL-XXX-YYY-ZZZ-VVVV-POL2 Eliminate glare from the workpiece making it easier to acquire a suitable image for the application with no hot spot. Effilux also proposes a polarizer kit accessory to install the polarizer directly on top of the product: EFFO-BL-POL2-XXX-YYY-KIT
Collimated option (maximum size: 500-500)	EFFI-BL-XXX-YYY-ZZZ-VVVV-1XLCF or 2XLCF The collimation film allows you to collimate the light and reduce the emission angle. Effilux also proposes a collimated film accessory to install on top of the product: EFFO-BL-1XLCF-XXX-YYY or EFFO-BL-2XLCF-XXX-YYY
Zebra	EFFI-BL-XXX-YYY-ZZZ-VVV-ZB-MMM The zebra mask is used by EFFILUX in metrology and deflectometry to reveal defects (stripe, impact, or positioning, etc.) on reflective, transparent, or semi-transparent surfaces. Effilux also proposes a zebra mask accessory to install on top of the product: EFFO-BL-XXX-YYY-ZZZ-ZB-TR-MMM
MECHANICAL OPTION	
Thin edges	EFFI-BL-XXX T -YYY-ZZZ-VVVV or EFFI-BL-XXX-YYY T -ZZZ-VVVV This option decrease the thickness on the side indicated with T in the part-numbering. Advantages: Less bulky / Thickness / Dust accumulation prevented (smooth walls). For dimensions larger than 1m, contact Effilux.
Width Side Connector (WSC)	EFFI-BL-XXX-YYY-ZZZ-VVV- WSC Moves the connector on the width side (XXX).

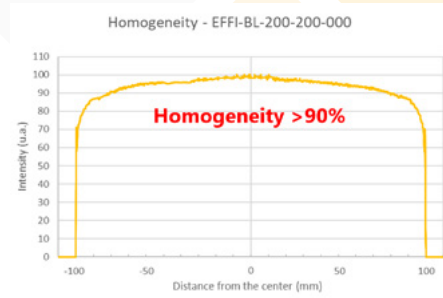
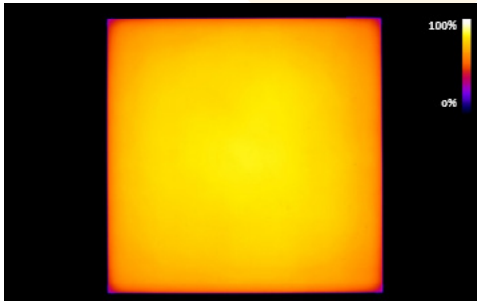
GENERAL SPECIFICATIONS



Illumination Mode	Continuous with AIC (Analog Intensity Control)	
Wavelengths	465nm, 525nm, 625nm, 850nm, 940nm, White (5500K ±500K)	
Power Supply	24V DC	
Connector(s)	M12 - 5 pins (x1, x2 or x3)	M12 Power - 4 pins (x1 or x2)
Power Consumption	Related to the dimensions	
Analog Intensity Control (AIC)	The output optical power is adjustable from 20% to 100% by applying a signal from [5V-24V DC] Total voltage range [0V-24VDC] / Don't exceed 24V DC / Max. signal consumption: 4mA	
Weight	Related to the dimensions	
Thickness	43.2mm (40mm with thin edge option)	
Dimensions	Any multiple of 50mm	
Material	Device body: Aluminum alloy & ABS	
Fastener	Built-in M6 T-nut slot profile	
IP rating	IP5X	
Operation environment	Temperature: 0°C to 50°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	
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	

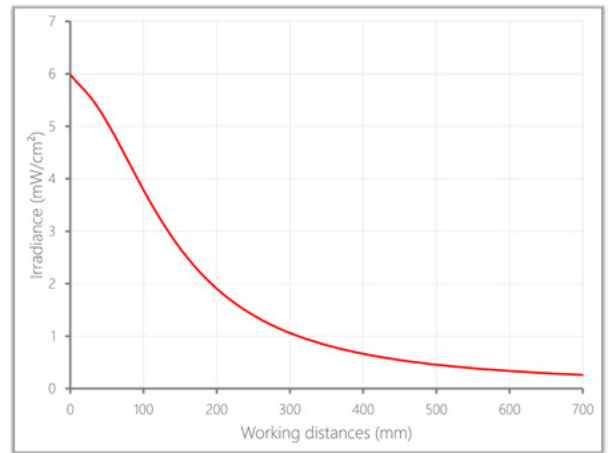
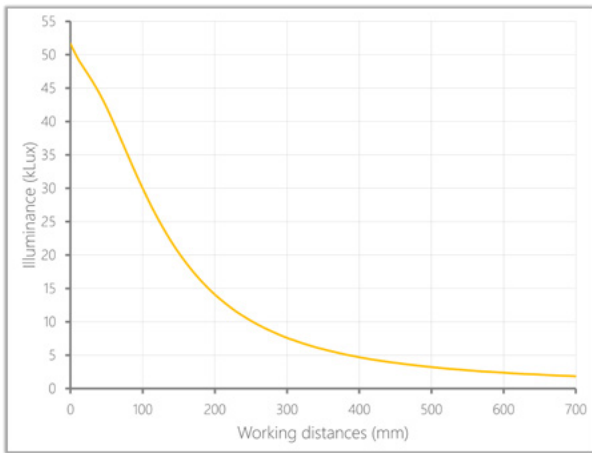
OPTICAL SPECIFICATIONS

HOMOGENEITY



Note: The homogeneity is calculated on the optical area (5mm of edge effect)

OUTPUT POWER



— White 5500K — Red 625nm & IR850

POLARIZER

Using polarizer, on the Efflux light and on the camera, it is possible to eliminate glare from your workpiece making it easier to acquire a suitable image for the application.



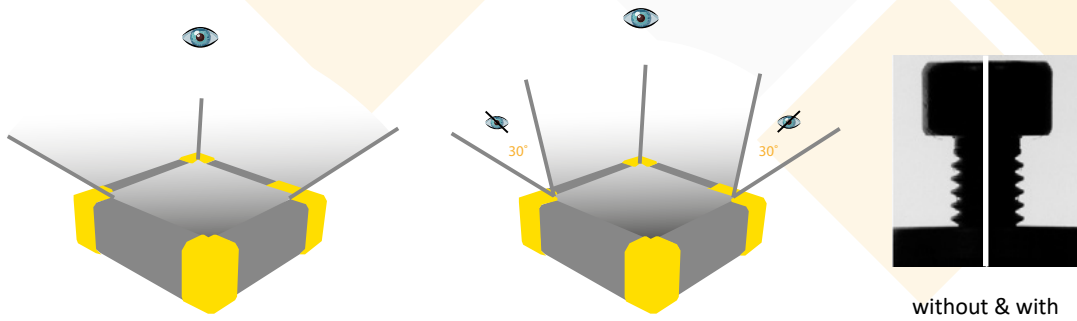
EFFI-BL: no reflection



Bar light and neon light reflection

COLLIMATED OPTION

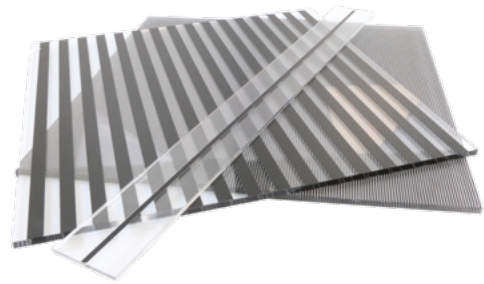
Collimation film can be used on backlights to reduce the angle of emission and get parallel light rays. This helps to provide high-contrast images needed for precise edge detection and defect analysis.



ZEBRA

The zebra mask from EFFILUX is the ideal mask for metrology and deflectometry to reveal defects (stripe, impact, or positioning, etc) on reflective / transparent surfaces /or semi transparent.

The goal of ZB lighting is to provide maximum contrast so that machine vision software can evaluate and make necessary judgment. On the image, the defect will be revealed in white on black.

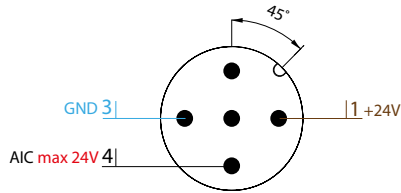


ELECTRONICAL SPECIFICATIONS

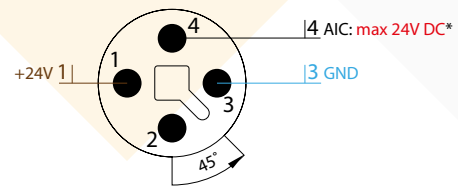
CONTACT ARRANGEMENT

The EFFI-BL is supplied with 24V DC. Depending on the size, the EFFI-BL come with different types and numbers of connectors.

M12 connector (A-coded) Male



M12 connector Power (T-coded) Male



Important notes:

- The AIC pin needs to be connected.
- In the case of multiple connectors, the AIC (DIM) contact is in the first connector, the one closer to the edge (the AIC contact on the other connectors is not assigned).
- (*) For the power version this pin is used for the strobe.

POWER CONSUMPTION & CONNECTOR DEFINITION

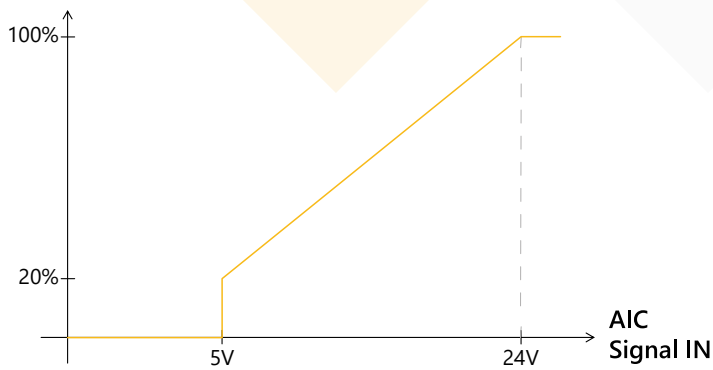
Optical width (mm)	Optical length (mm)																				
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1500
50	5	5	10	10	10	15	15	15	20	20	20	25	25	25	30	30	30	35	35	35	55
100	5	10	15	15	20	25	25	30	35	35	40	45	45	50	55	55	60	65	65	70	105
150	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	155
200	10	15	25	30	35	45	50	55	65	70	80	85	90	100	105	110	120	125	130	140	210
250	10	20	30	35	45	55	60	70	80	90	95	105	115	120	130	140	150	155	165	175	260
300	15	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	210	310
350	15	25	40	50	60	75	85	100	110	120	135	145	160	170	180	195	205	220	230	240	360
400	15	30	45	55	70	85	100	110	125	140	155	165	180	195	210	220	235	250	260	275	415
450	20	35	50	65	80	95	110	125	140	155	170	185	205	220	235	250	265	280	295	310	465
500	20	35	55	70	90	105	120	140	155	175	190	210	225	240	260	275	295	310	325	345	515
550	20	40	60	80	95	115	135	155	170	190	210	230	245	265	285	305	320	340	360	380	565
600	25	45	65	85	105	125	145	165	185	210	230	250	270	290	310	330	350	370	390	415	620
650	25	45	70	90	115	135	160	180	205	225	245	270	290	315	335	360	380	405	425	445	670
700	25	50	75	100	120	145	170	195	220	240	265	290	315	340	360	385	410	435	455	480	720
750	30	55	80	105	130	155	180	210	235	260	285	310	335	360	385	415	440	465	490	515	770
800	30	55	85	110	140	165	195	220	250	275	305	330	360	385	415	440	470	495	520	550	825
850	30	60	90	120	150	175	205	235	265	295	320	350	380	410	440	470	495	525	555	585	875
900	35	65	95	125	155	185	220	250	280	310	340	370	405	435	465	495	525	555	585	620	925
950	35	65	100	130	165	195	230	260	295	325	360	390	425	455	490	520	555	585	620	650	975
1000	35	70	105	140	175	210	240	275	310	345	380	415	445	480	515	550	585	620	650	685	1030
1500	35	105	155	210	260	310	360	415	465	515	565	620	670	720	770	825	875	925	975	1030	1540

Electrical Power	Corresponding color	Amount & type of connectors
≤ 70W		1X M12
75W - 145W		2X M12 or 1X M12 Power
150W - 270W		3X M12 or 1X M12 Power
275W - 560W		2X M12 Power
> 560W		Specific configuration - contact EFFILUX for more information

AIC: ANALOG INTENSITY CONTROL

The output optical power of the EFFI-BL is adjustable from 20% to 100% by applying a signal from 0V to 24V on the AIC pin. The control range can be changed to 0-10V or 0-5V on request.

Output Intensity

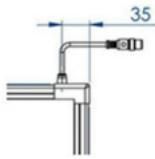
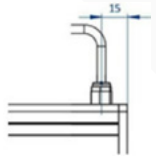
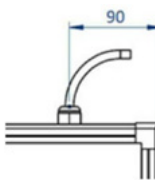

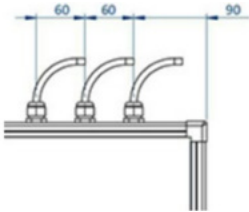
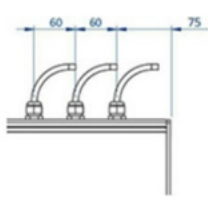


AIC Signal consumption

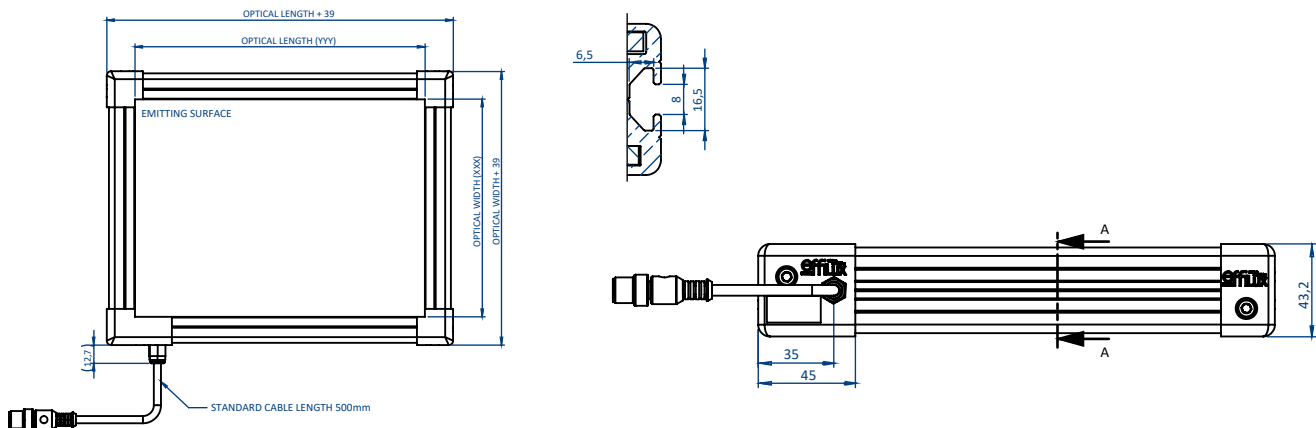
		Optical length (mm)							
		50	100	200	300	400	500	1000	1500
Optical width (mm)	50	0.3	0.6	1.2	1.8	2.4	3	6	9
	100	0.6	0.3	0.6	0.9	1.2	1.5	3	4.5
	150	0.9	0.9	1.8	2.7	3.6	4.5	9	13.5
	200	1.2	1.2	1.2	1.8	2.4	3	6	9
	250	1.5	1.5	1.5	3.6	4.8	6	12	18
	300	3	0.9	0.9	2.7	3.6	4.5	9	13.5
	500	3	1.5	1.5	4.5	6	7.5	15	22.5

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)

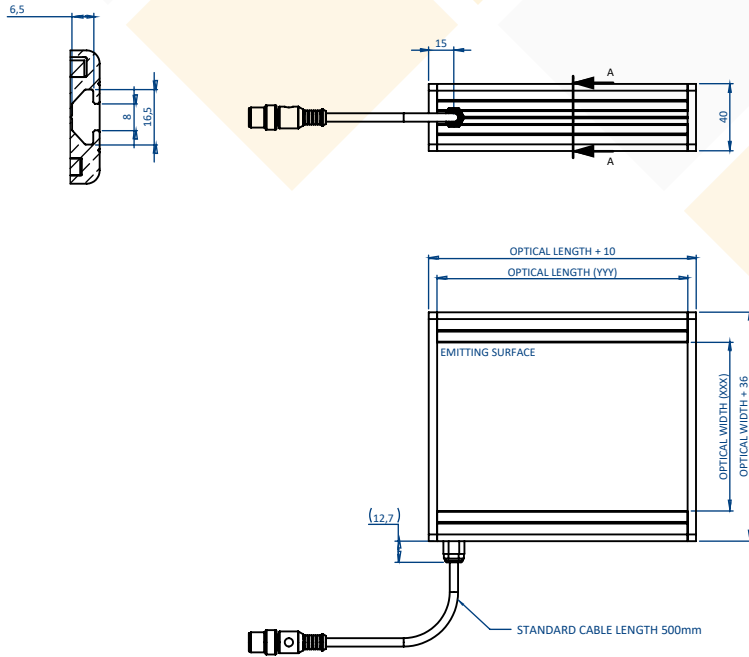
CONNECTORS POSITIONS

Number of connectors	Connector type	Connector position(s)	
		EFFI-FD Standard: On the longest side	EFFI-FD Thin Edges: On the longest side with standard edges
1	M12 Standard	35mm from edge of the product 	15mm from edge of the product 
	M12 Power	90mm from the edge of the product 	75 mm from the edge of the product 
Many	M12 Standard or M12 Power	First 90mm connector Space between 2 cable glands: 60mm 	First 75mm connector Space between 2 cable glands: 60mm 

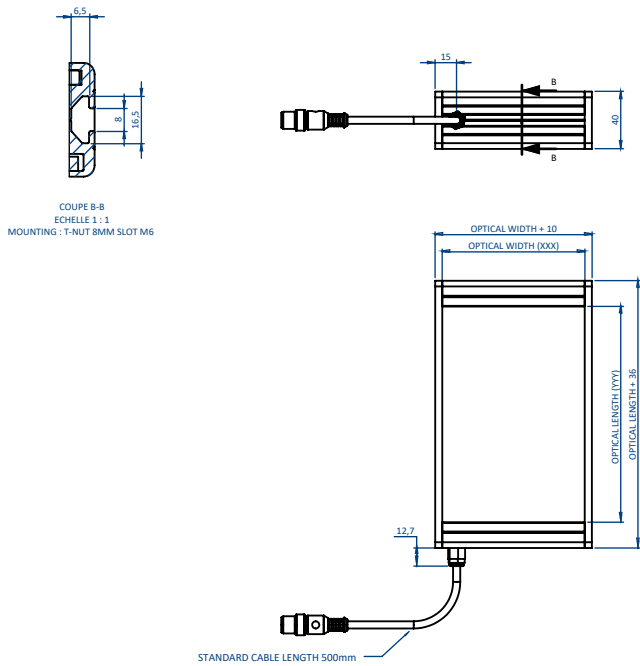
STANDARD VERSION



THIN EDGES VERSION - EFFI-BL-XXXT-YYY-ZZZ-VVV



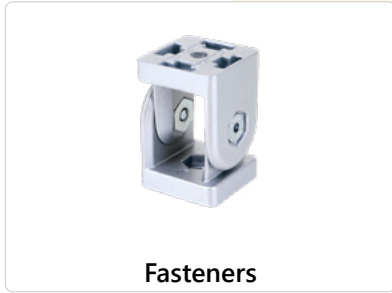
THIN EDGES VERSION - EFFI-BL-XXX-YYYT-ZZZ-VVV



Note: For thin edges dimensions larger than 1m, contact Effilux.

ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-BL



Fasteners

T-Nut Kit: EFFV-BOLT-0011
Pivot joint Kit: EFFM-1-0002
Bracket: EFFM-1-0017



Extension cables

M12
2meters: EFFC-CAB-M12-FM-5-DD-L2
5meters: EFFC-CAB-M12-FM-5-DD-L5
10meters: EFFC-CAB-M12-FM-5-DD-L10
M12P
2meters: EFFC-CAB-M12P-FM-4-DD-L2
5meters: EFFC-CAB-M12P-FM-4-DD-L5
10meters: EFFC-CAB-M12P-FM-4-DD-L10



Potentiometer

EFFI-DIMMER
EFFI-DIMMER2

CONTACT INFORMATION

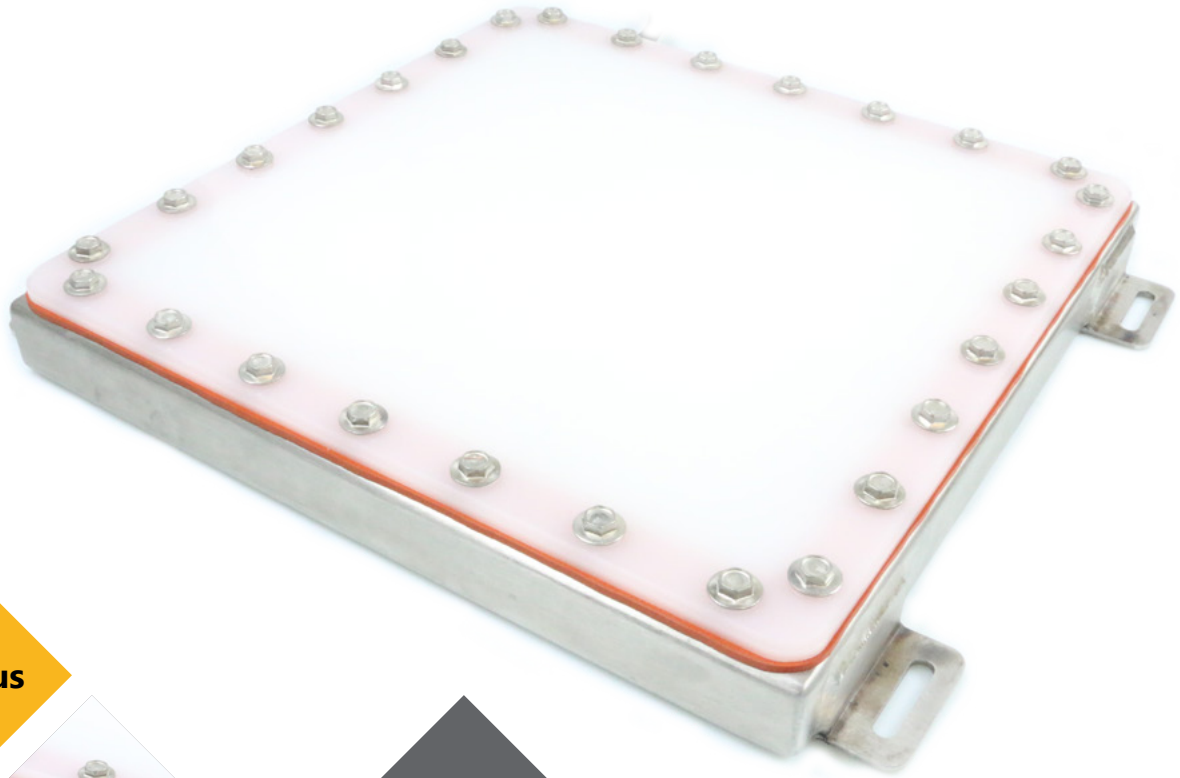
Please refer to the specific documentation (datasheet, user manual and drawing) for complementary information. Contents of this document are based on information available as of January-2025 and may be changed without prior notice.



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



Homogeneous



**High-pressure
Washdown
resistant**

Intense

**Food
Compatibility**



LED Backlight

- UNIFORMITY
80%
- ↔
- IP69K
- CE

effiBL-IP69K

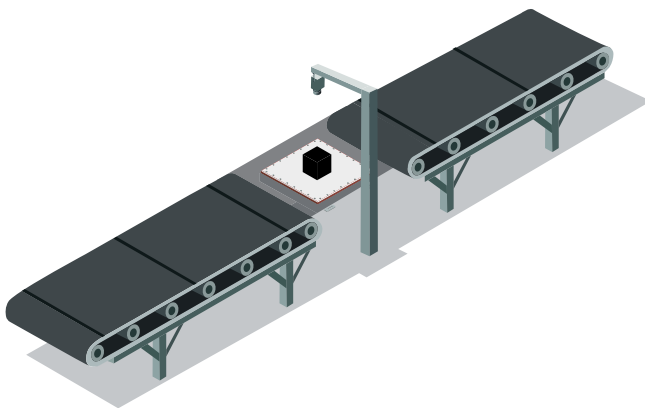
Waterproof backlight for food and chemical environment.

INTRODUCTION

TABLE OF CONTENTS

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

APPLICATIONS



Inspection:

- Edge measurements.
- Absence/presence of holes.
- Size control.
- And many other machine vision applications.

Robotics:

- Object location for pick and place.

RELATED PRODUCT

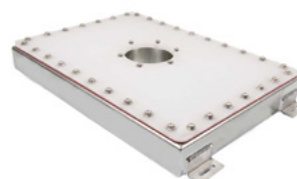
Refer to the datasheets of the products below for more details on those related products.

EFFI-BL



High power & uniformity LED Backlight

EFFI-FD-IP69K



IP69K version equivalent but with a hole for the camera

PART NUMBERING

STANDARD VERSION

EFFI-BL-IP69K	- XXX	- YYY	- ZZZ
	Optical width (mm)	Optical length (mm)	Wavelength (nm)
	100	100	● 465 (Blue)
	200	200	● 525* (Green)
	300	300	● 625 (Red)
	...Every 100mm steps	...Every 100mm steps	● 850 (Infrared)
	600	600	● 940* (Infrared)
			○ 000 (White 5500K)

Important notes:

- YYY must be larger than XXX in the part number.
- (*) Only on request, contact EFFILUX.

AVAILABLE VERSIONS & OPTIONS

VERSION	
Food version	EFFI-BL-IP69K- FOOD -XXX-YYY-ZZZ For food processing environment, the nickel-plated brass gland can be replaced with a stainless steel one.
ELECTRONICAL OPTION	
Power option (\$150)	EFFI-BL-IP69K-XXX-YYY-ZZZ- S150 Triples the power output but the maximum duty cycle for this option is 30%.
MECHANICAL OPTION	
5m cable length	EFFI-BL-IP69K-XXX-YYY-ZZZ- L5 Default configuration: cable length 10 meters. This option reduces the length to 5 meters.
Venting option	EFFI-BL-IP69K-XXX-ZZZ-WW-PP- V Vent to equalize pressure and minimize condensation. Not compatible with FOOD version.

GENERAL SPECIFICATIONS

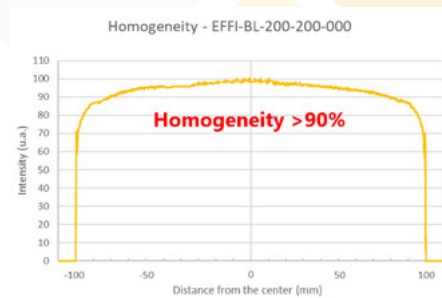
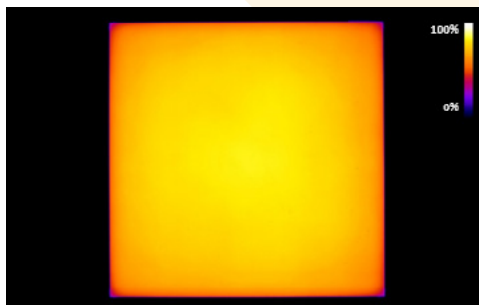
effiBL-IP69K

Illumination Mode	Continuous with AIC (Analog Intensity Control)	
Wavelengths	465nm, 525nm*, 625nm, 850nm, 940nm*, White (5500K ±500K)	
Power Supply	24V DC	
Connector(s)	Cable with flying leads	Cable with M12 - 5 pins
Power Consumption	Related to the dimensions	
Analog Intensity Control (AIC)	The output optical power is adjustable from 20% to 100% by applying a signal from [5V-24V DC] Total voltage range [0V-24VDC] / Don't exceed 24V DC / Max. signal consumption: 11mA	
Weight	Related to the dimensions	
Thickness	35.6 mm	
Dimensions	From 100mm x 100mm to 600mm x 600mm	
Fastener	4 holes (Ø 5.5mm/ 20mm length)	
Material	Device body: Stainless steel; Window: PMMA	
IP rating	IP69K	
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	
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	

(*) On request only, contact EFFILUX.

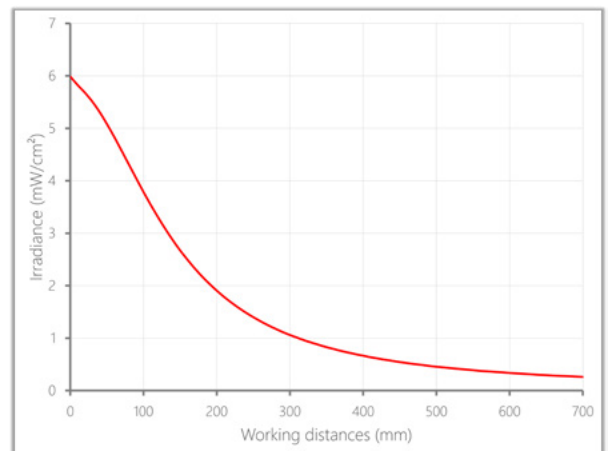
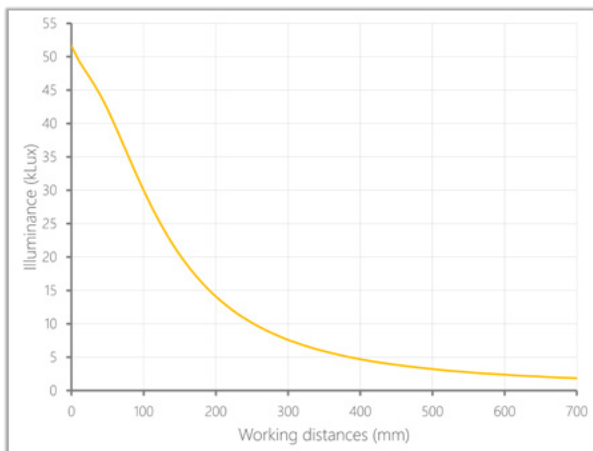
OPTICAL SPECIFICATIONS

HOMOGENEITY



Note: The homogeneity is calculated on the optical area (5mm of edge effect)

OUTPUT POWER



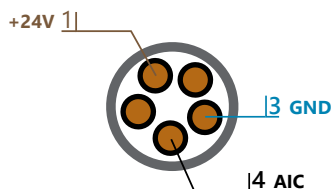
— White 5500K — Red 625nm & IR850

ELECTRONICAL SPECIFICATIONS

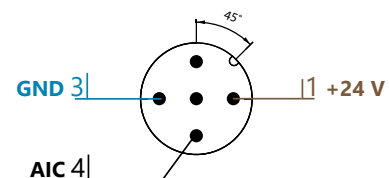
WIRING LAYOUT

Depending on the product size and the chosen options, the light comes with different connectors. (See the Power Consumption section).

Flying lead - 1 input (Standard)



M12 5pins - 1 input (Food version)



Important notes:

- The EFFI-BL-IP69K requires 24V DC input power.
- The AIC contact needs to be connected.
- The standard cable included is resistant to detergent, hot water, bio-oil, harsh environment and can be used outdoor.
- A M12-5pins connector is molded at the end of the FOOD cable contrary to the standard which is a flying lead.
- Please note that for the FOOD option above 500mm x 500mm the EFFI-BL-IP69K must be supplied with 2 cables.

POWER CONSUMPTION

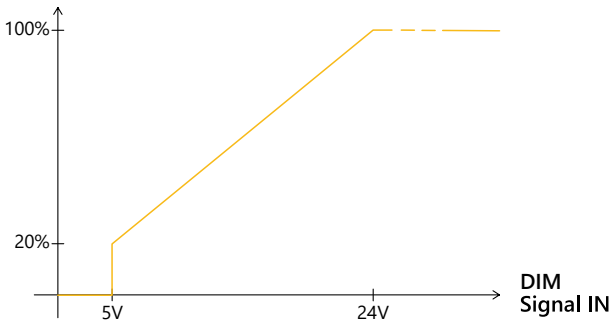
Refer to the below table to get the power consumption depending on the product dimensions.

		Maximum electrical power consumption @24V (W) of standard white EFFI-BL-IP69K						
		Optical length (mm)						
		100	150	200	300	400	500	600
Optical width (mm)	100	5	8	8	13	15	18	23
	150		10	13	18	23	28	33
	200			15	23	28	35	43
	300				33	43	53	63
	400					55	70	85
	500						88	110
	600							125

DIMMING CONTROL

		Optical length (mm)						
		100	150	200	300	400	500	600
Optical width (mm)	100	0.3	0.9	0.6	0.9	1.2	1.5	1.8
	150		1.8	1.8	2.7	3.6	4.5	5.4
	200			1.2	1.8	2.4	3	3.6
	300				2.7	3.6	4.5	5.4
	400					4.8	6	7.2
	500						7.5	9.0
	600							10.8

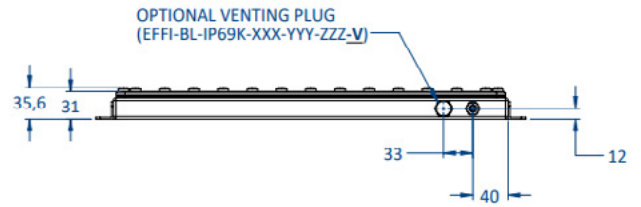
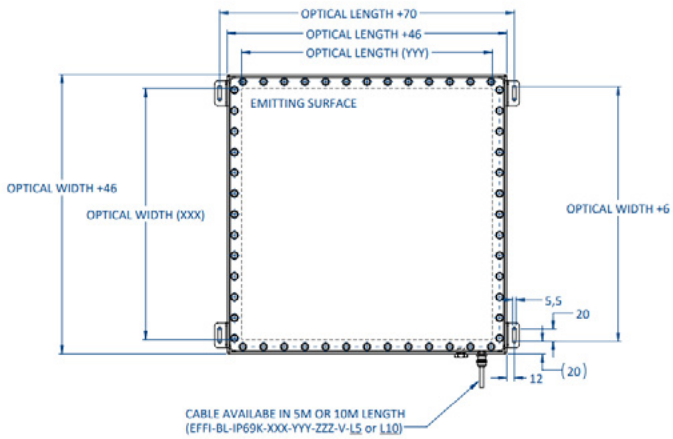
Output Intensity



The output optical power of the EFFI-BL is adjustable from 20% to 100% by applying a signal from 0V to 24V on the AIC pin.

The control range can be changed to 0-10V or 0-5V on request.

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)



ACCESSORIES

Please refer to the specific documentation for additional information on the accessories of the EFFI-BL-IP69K



EFFI-DIMMER
EFFI-DIMMER2

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



Compact

**Up to
300x300mm**

High uniformity

Thin edges

Easy-to-use



**Driver built-in
or on cable**



IP67

CE

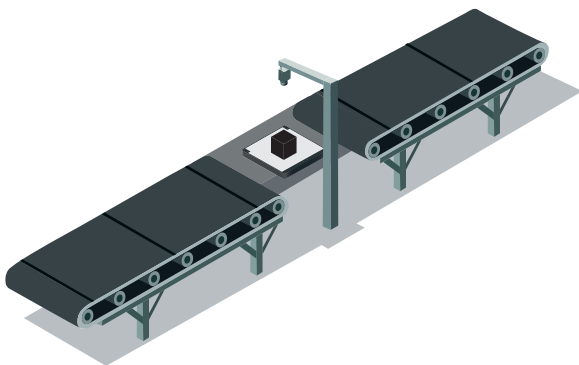
effiSBL

Compact Backlight

INTRODUCTION

TABLE OF CONTENTS

PARTNUMBERING.....	PAGE 3
TECHNICAL SPECIFICATIONS.....	PAGE 4
OPTICAL SPECIFICATIONS.....	PAGE 5
ELECTRONICAL SPECIFICATIONS.....	PAGE 8
MECHANICAL SPECIFICATIONS.....	PAGE 9
CONTACT INFORMATION.....	PAGE 10



Inspection:

- Dimension control: Highlighting the edges of the object (maximum contrast between the background and the form).
- Absence/presence of holes.
- Liquid level control of bottle.
- Ideal for transparent and translucent materials (glass, fabric, printed circuit...).
- And many other machine vision applications.

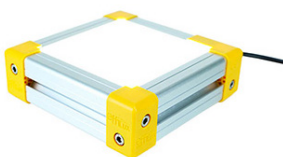
Robotics:

- Object location for pick and place.

RELATED PRODUCT

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

EFFI-BL



LED Backlight

PART NUMBERING

STANDARD VERSION

EFFI-SBL	- XXX	- YYY	- ZZZ
	Optical Width [mm]	Optical Length [mm]	Wavelength [nm]
	25	25	● 625 (Red)
	50	50	● 850 (Infrared)
	75	75	○ 000 (White 5700K ±700 K)
	100	100	
	... Every 25mm	... Every 25mm	
	300	300	

IMPORTANT NOTE : XXX which is the optical width is related to the side with the connector. EFFI-SBL is not available in 175x175mm.

AVAILABLE OPTIONS

Option STR: without driver

EFFI-SBL - XXX - YYY - ZZZ - STR

- The direct current option gives a full control over the current sent in the LEDs. It allows strobing and more light power.
- Warning: There is no LED protection

Polarizer

EFFI-SBL - XXX - YYY - ZZZ - POL2

- Eliminate glare from the workpiece making it easier to acquire a suitable image for the application with no hot spot.
- With this configuration the product has a different mechanical layout.

Collimated

EFFI-SBL - XXX - YYY - ZZZ - 1XLCF or 2XLCF

- The collimation film allows you to collimate the light and reduce the emission angle.
- With this configuration the product has a different mechanical layout.

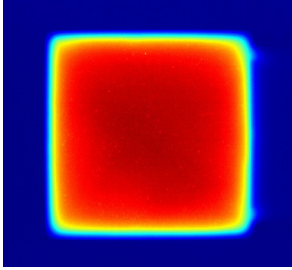
TECHNICAL SPECIFICATIONS



Illumination Mode	Continuous with Analog Intensity Control or Strobe (STR option only)	
Wavelengths	White, Red, Infrared (<i>Other wavelengths upon request</i>)	
Power Supply	24V DC	
Connectors	M12 – 5 contacts (Standard version)	M8 – 8 contacts (STR version)
Power consumption	Depending on the current and the LED version	
Weight	Related to the dimensions	
Dimensions	Every multiple of 25mm up to 300x300mm	
Material	Device body: Aluminum alloy / Window: PMMA	
Fastener	M4 holes in the corner of the product	
IP rating	IP67	
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	
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

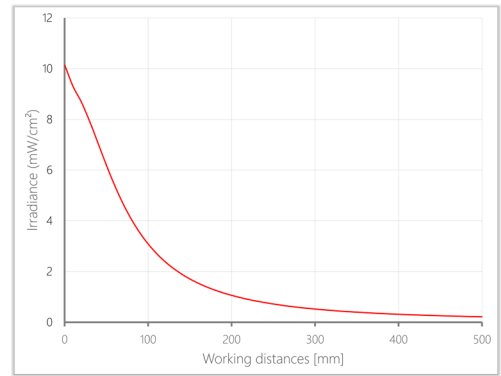
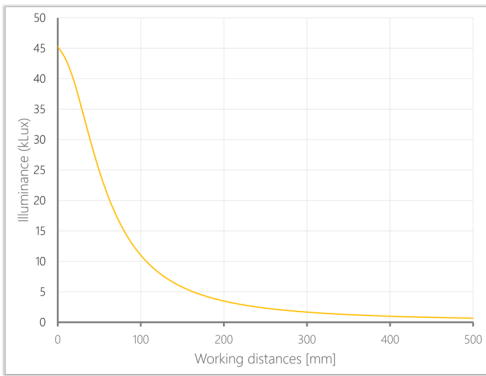
UNIFORMITY



Notes:

- Uniformity >90% on the optical area
- Formula used: $1 - ((I_{max} - I_{min}) / (I_{max} + I_{min}))$. Calculated on the optical area (10mm of edges not considered).

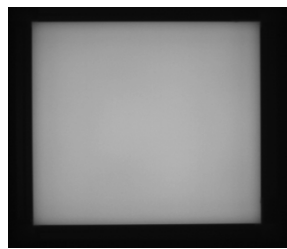
INTENSITY VS WORKING DISTANCE



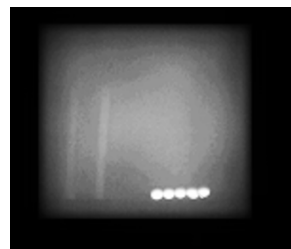
— White 5500K — Red 625nm

POLARIZATION AND COLLIMATION

Using polarizer, on the Efflux light and on the camera, it is possible to eliminate glare from your workpiece making it easier to acquire a suitable image for the application.

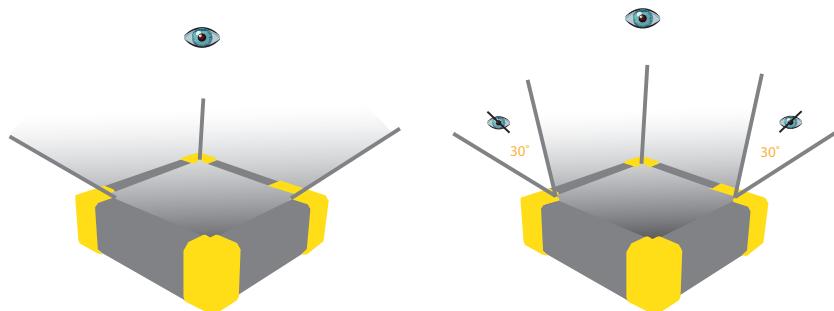


EFFI-SBL: no reflection



Bar light and neon light reflection

Collimation film can be used on backlights to reduce the angle of emission and get parallel light rays. This helps to provide high-contrast images needed for precise edge detection and defect analysis.



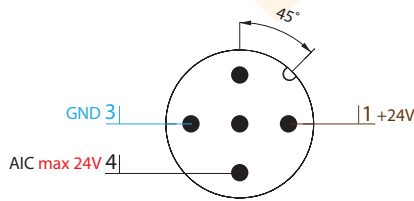
IMPORTANT:

For those configurations the mechanical considerations are different. Refer to the related section «MECHANICAL CONSIDERATION».

ELECTRONICAL SPECIFICATIONS

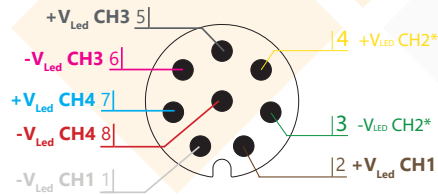
CONTACT ARRANGEMENT

With LED driver



Without LED driver = STR

Expert mode: LED are wired directly to the M8 without protection



Notes:

- The EFFI-SBL is supplied with a 24V constant voltage.
- The AIC contact needs to be connected.
- Cable length: 325mm with external driver configuration and 500mm with internal driver or STR option.
- STR version: Depending on the size, the EFFI-SBL comes with 1 or 2 channels input.
- (*) To connect only if needed (see table below). All channels must be connected to switch ON the entire light.

POWER CONSUMPTION (W)

		Optical Length (mm) - YYY											
		25	50	75	100	125	150	175	200	225	250	275	300
Optical width (mm) - YYY	25	< 1	1	2	2	3	3	4	4	5	5	6	6
	50		2	3	4	5	6	7	8	9	10	11	12
	75			5	6	8	9	10	12	13	14	16	17
	100				8	10	12	14	15	17	19	21	23
	125					12	14	17	19	22	24	27	29
	150						17	21	23	26	29	32	35
	175								27	31	34	37	41
	200								31	35	39	43	47
	225									39	44	48	53
	250										49	53	58
	275											59	64
	300												70

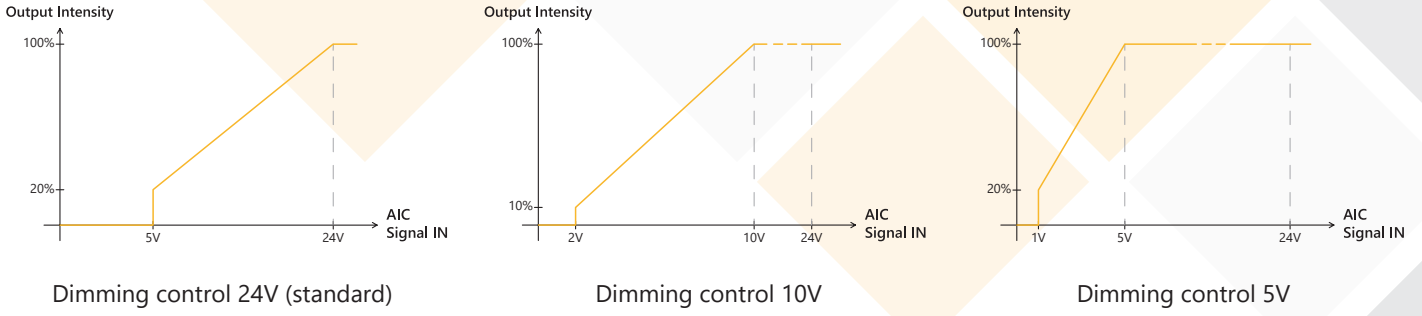
STR OPTION - CHANNELS & MAX CURRENT PER CHANNEL

		Optical Length (mm) - YYY											
		25	50	75	100	125	150	175	200	225	250	275	300
Optical width (mm) - YYY	25	1Ch 30mA	1Ch 55mA	1Ch 75mA	1Ch 100mA	1Ch 125mA	1Ch 150mA	1Ch 175mA	1Ch 200mA	1Ch 225mA	1Ch 250mA	1Ch 275mA	1Ch 300mA
	50		1Ch 80mA	1Ch 120mA	1Ch 160mA	1Ch 200mA	1Ch 240mA	1Ch 280mA	1Ch 320mA	1Ch 360mA	1Ch 400mA	1Ch 440mA	1Ch 480mA
	75			1Ch 180mA	1Ch 240mA	1Ch 300mA	1Ch 360mA	1Ch 420mA	1Ch 480mA	1Ch 540mA	1Ch 600mA	1Ch 660mA	2Ch 360mA
	100				1Ch 320mA	1Ch 400mA	1Ch 480mA	1Ch 560mA	1Ch 640mA	1Ch 720mA	2Ch 400mA	2Ch 440mA	2Ch 480mA
	125					1Ch 500mA	1Ch 600mA	1Ch 700mA	1Ch 800mA	2Ch 450mA	2Ch 500mA	2Ch 550mA	2Ch 600mA
	150						2Ch 360mA	2Ch 420mA	2Ch 480mA	2Ch 540mA	2Ch 600mA	2Ch 660mA	3Ch 480mA
	175								2Ch 560mA	2Ch 630mA	2Ch 700mA	3Ch 510mA	3Ch 560mA
	200								2Ch 640mA	2Ch 720mA	3Ch 530mA	3Ch 580mA	3Ch 640mA
	225									3Ch 540mA	3Ch 600mA	3Ch 660mA	4Ch 540mA
	250										3Ch 660mA	4Ch 550mA	4Ch 600mA
	275											4Ch 605mA	4Ch 660mA
	300												4Ch 720mA

EFFILUX proposes an external driver (EFFE-DRV-RD) to easily supply your EFFI-SBL in STR version. Contact EFFILUX for more information.

DIMMING CONTROL

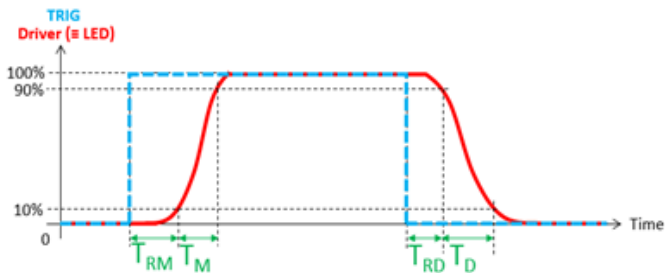
EFFI-SBL with integrated driver



DIM Consumption	EFFI-SBL (driver on cable)			EFFI-SBL (built-in driver)		
	DIM Signal	5V	10V	24V	5V	10V
DIM Consumption	1mA	1mA	1.1mA	0.1mA	0.2mA	0.3mA

ELECTRONICAL CHARACTERISTICS

Designation	Time
Rise time (TM)1	5µs
Response rise time (TRM)2	3µs
Fall time (TD)3	5µs
Response fall time (TRD)4	2µs



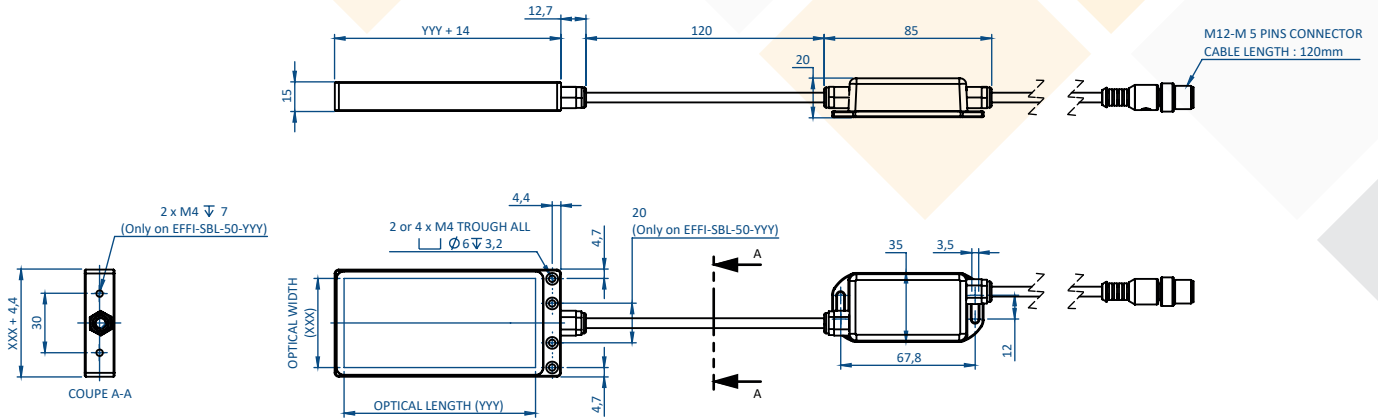
Notes:

- (1) From 10% to 90% of the peak value of driver signal
- (2) From 90% to 10% of the peak value of driver signal AIC pin can stay unplugged for Autostrobe mode, or tied to +24V for continuous mode at maximum intensity.
- (3) From the beginning of the TRIG signal to 10% of the peak value of driver signal
- (4) From the ending of the TRIG signal to 90% of the peak value of driver signal

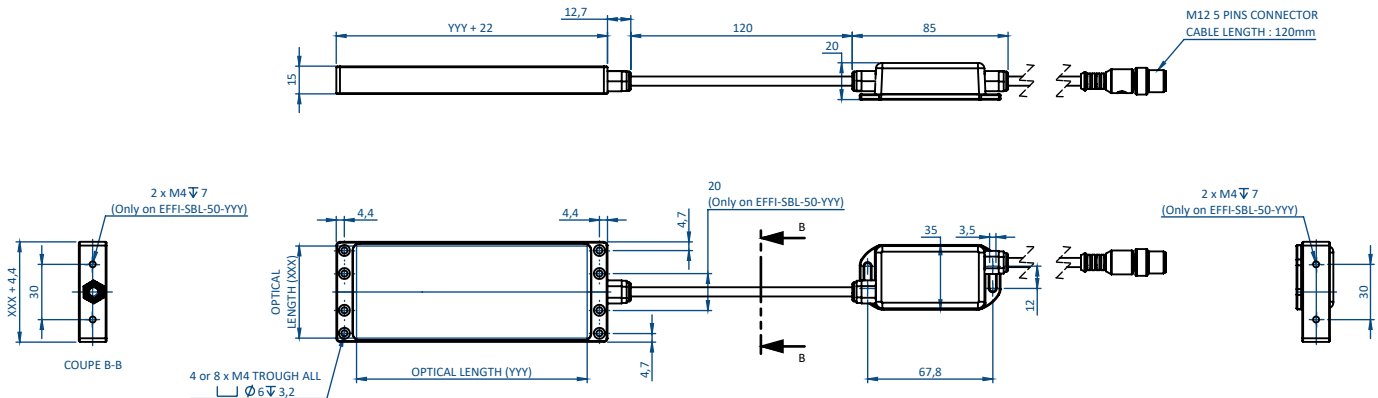
MECHANICAL SPECIFICATIONS

Standard versions : external driver

EFFI-SBL (XXX = 25 → 50)

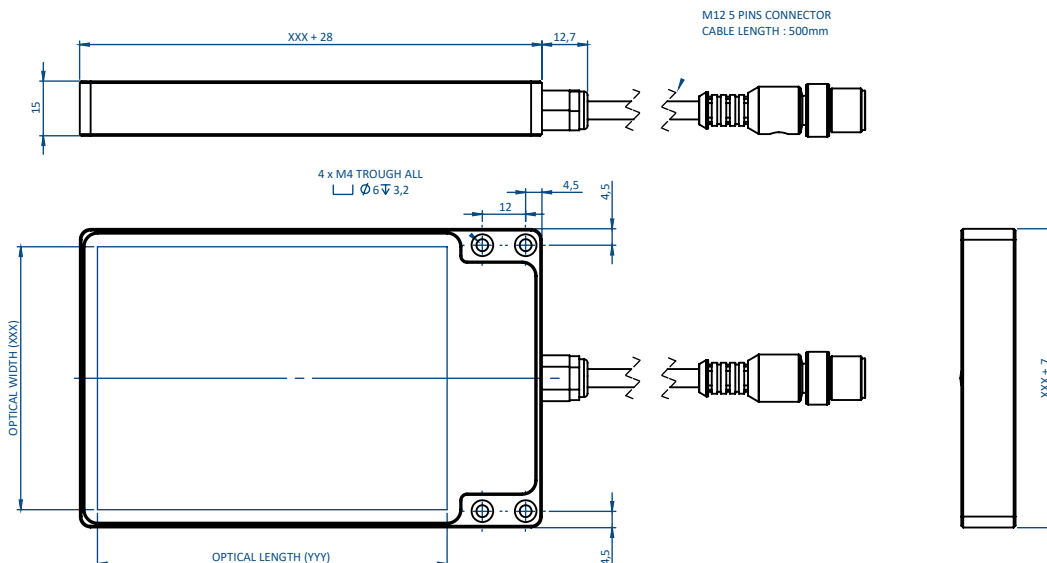


EFFI-SBL (XXX = 125 → 200)



Standard versions : internal driver

EFFI-SBL (XXX = 75 → 100)

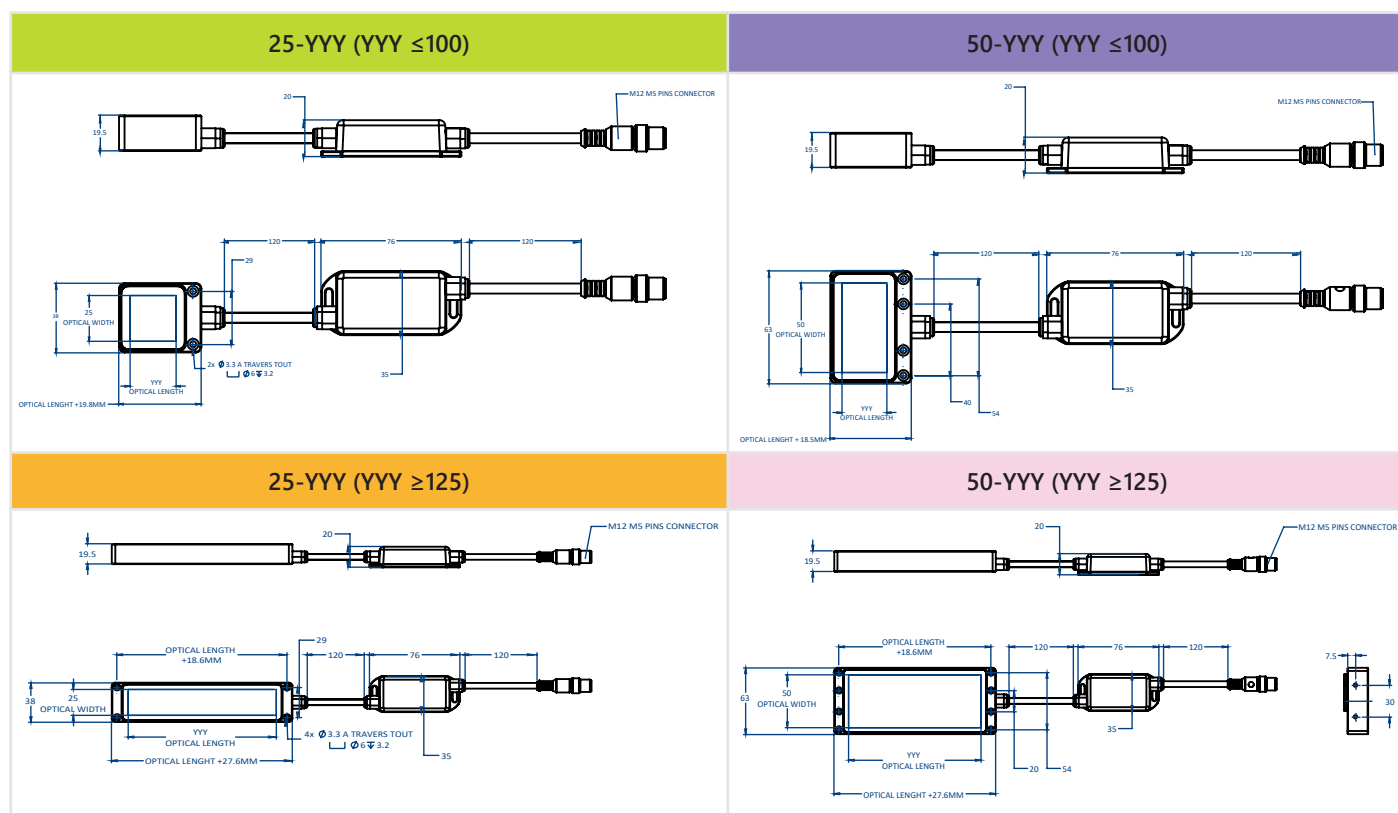


1XLCF/ 2XLCF/ POL Configuration

		Optical width (mm)											
		25	50	75	100	125	150	175	200	225	250	275	300
Optical length (mm)	25	25-25	50-25	75-25	100-25	125-25	150-25	175-25	200-25	225-25	250-225	275-25	300-25
	50	25-50	50-50	75-50	100-50	125-50	150-50	175-50	200-50	225-50	250-50	275-50	300-50
	75	25-75	50-75	75-75	100-75	125-75	150-75	175-75	200-75	225-75	250-75	275-75	300-75
	100	25-100	50-100	75-100	100-100	125-100	150-100	175-100	200-100	225-100	250-100	275-100	300-100
	125	25-125	50-125	75-125	100-125	125-125	150-125	175-125	200-125	225-125	250-125	275-125	300-125
	150	25-150	50-150	75-150	100-150	125-150	150-150	175-150	200-150	225-150	250-150	275-150	300-150
	175	25-175	50-175	75-175	100-175	125-175	150-175	175-175	200-175	225-175	250-175	275-175	300-175
	200	25-200	50-200	75-200	100-200	125-200	150-200	175-200	200-200	225-200	250-200	275-200	300-200
	225	25-225	50-225	75-225	100-225	125-225	150-225	175-225	200-225	225-225	250-225	275-225	300-225
	250	25-250	50-250	75-250	100-250	125-250	150-250	175-250	200-250	225-250	250-250	275-250	300-250
	275	25-275	50-275	75-275	100-275	125-275	150-275	175-275	200-275	225-275	250-275	275-275	300-275
	300	25-300	50-300	75-300	100-300	125-300	150-300	175-300	200-300	225-300	250-300	275-300	300-300

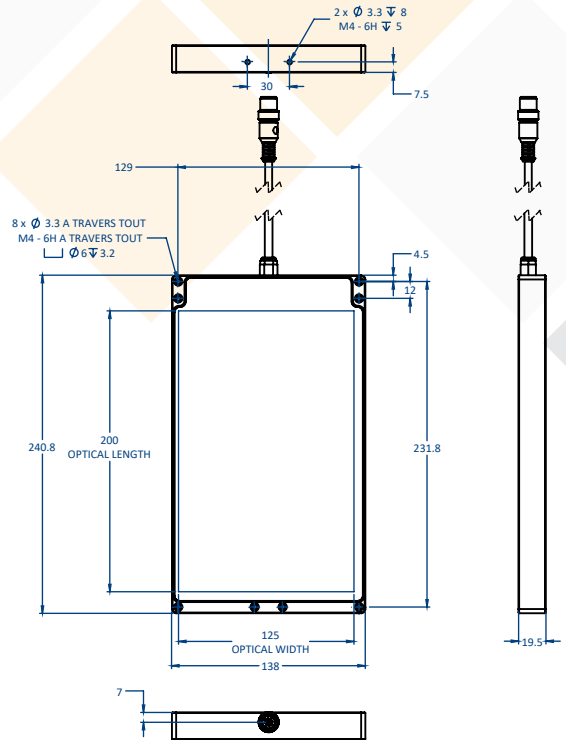
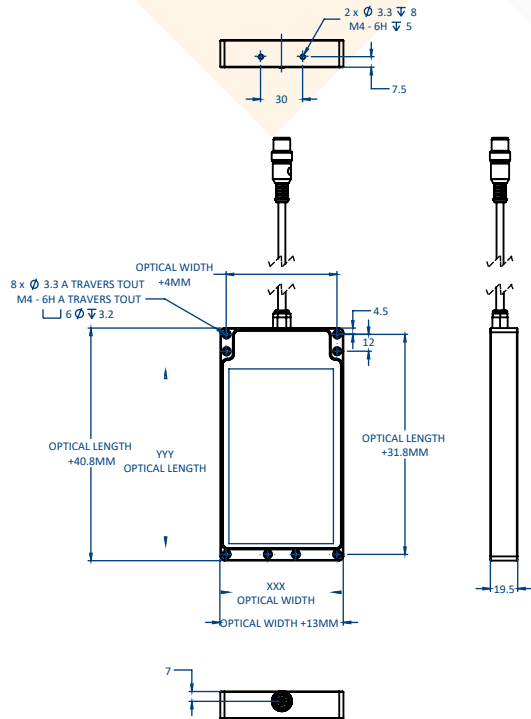
Contact Efflux for more informations.

External driver

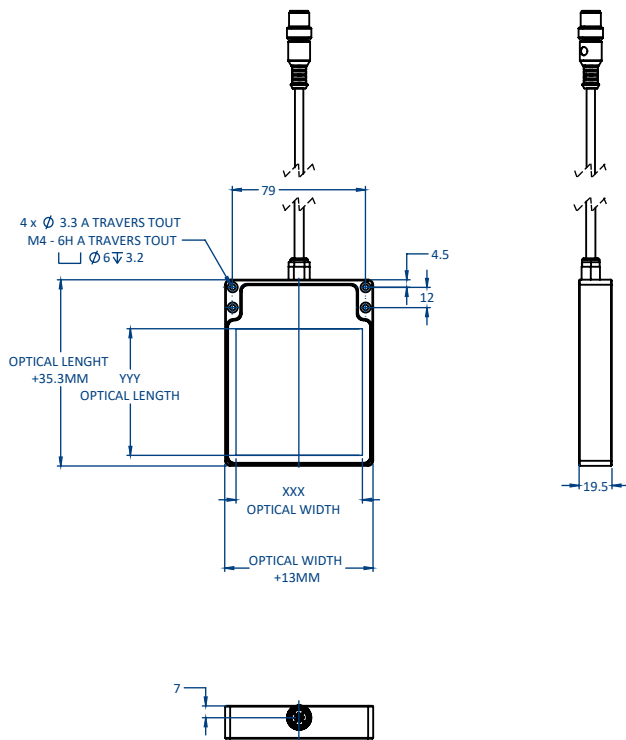


Internal driver

XXX ≥ 75 / YYY ≤ 100



XXX ≥ 75 / YYY ≥ 125



ACCESSORIES

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



Potentiometer

EFFI-DIMMER
EFFI-DIMMER2



Extension cables

M12

2meters: EFFC-CAB-M12-FM-5-DD-L2
5meters: EFFC-CAB-M12-FM-5-DD-L5
10meters: EFFC-CAB-M12-FM-5-DD-L10

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

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 January 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@efflux.fr

Copyright 2022 Efflux - All rights Reserved



effiMBL

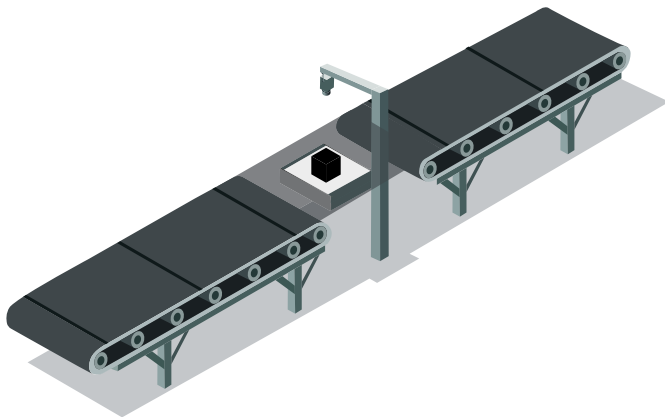
SWIR Backlight

INTRODUCTION

TABLE OF CONTENTS

PART NUMBERING.....	PAGE 3
GENERAL SPECIFICATIONS.....	PAGE 4
OPTICAL SPECIFICATIONS.....	PAGE 5
ELECTRONICAL SPECIFICATIONS.....	PAGE 6
MECHANICAL SPECIFICATIONS.....	PAGE 8
CONTACT INFORMATION.....	PAGE 10

APPLICATIONS



PART NUMBERING

STANDARD VERSION

EFFI-MBL	- XXXT	- YYY	- ZZZ
	Optical width (mm)	Optical length (mm)	Wavelength [nm]
	100	100	1050 nm
	200	200	1200 nm
	300	300	1300 nm
	400	400	1450 nm
			1550 nm
			1650 nm

IMPORTANT NOTE: YYY must be larger than XXX in the part number.

AVAILABLE OPTIONS

Polarizer option (custom)

EFFI-MBL	- XXXT	- YYY	- ZZZ	- POL-NIR2
----------	--------	-------	-------	------------

- 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.
- We have no available stocks for this reference, please contact Effilux.

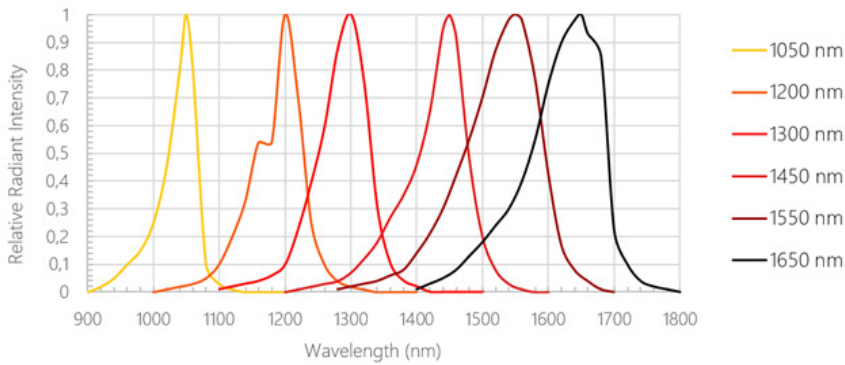
GENERAL SPECIFICATIONS



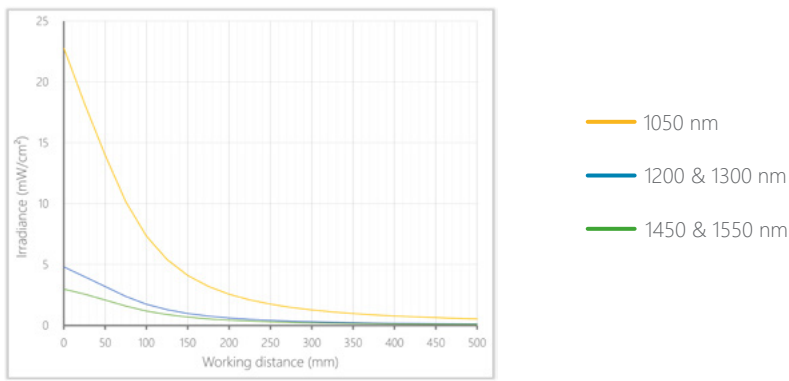
Illumination Mode	Continuous mode
Wavelengths	1050nm, 1200nm, 1300nm, 1450nm, 1550nm, 1650nm
Power Supply	24V DC
Connector	M12 - 5 pins
Power Consumption	Depends on the dimensions
Weight	Depends on the dimensions
Dimensions	Any multiple of 100mm up to 400x400mm
Material	Device body: Aluminum Alloy & ABS; Window: PMMA
Fastener	2 T-nut slot profile on two sides of the device
IP rating	IP5X
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
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

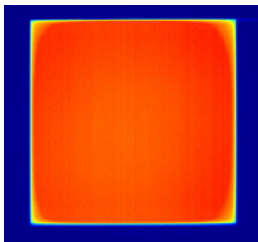
AVAILABLE WAVELENGTHS



IRRADIANCE VS WORKING DISTANCE



HOMOGENEITY



With an EFFI-MBL-100T-100-1050 with 100us exposure time: Homogeneity > 90%.
For other wavelengths: Homogeneity > 85%

POLARIZER

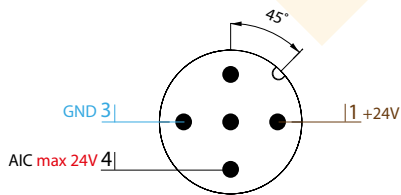
Using polarizer, on the Efflux light and on the camera, it is possible to eliminate glare from your workpiece making it easier to acquire a suitable image for the application. It can be ordered separately with the part-number EFFO-POL-MBL-XXXT-YYY-NIR2.



ELECTRONICAL SPECIFICATIONS

WIRING LAYOUT

M12P 5pins cable - male connector

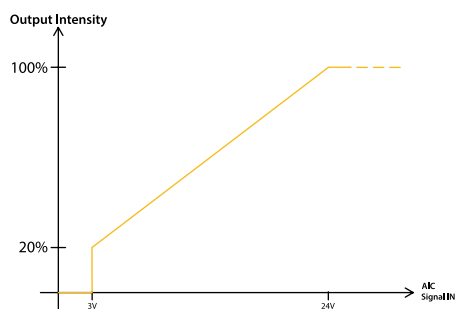


Important notes:

- The product must be supplied with a 24V constant voltage.
- The AIC pin needs to be connected.
- Cable length = 500mm.

AIC: ANALOG INTENSITY CONTROL

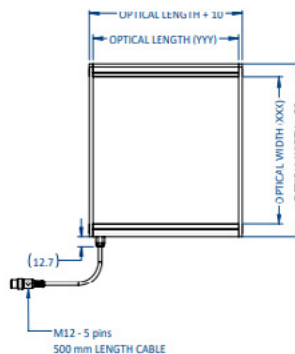
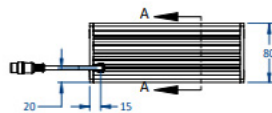
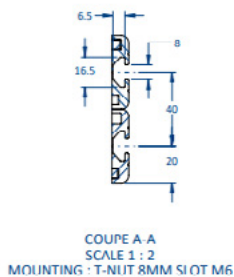
The output optical power of the EFFI-MBL is adjustable from 20% to 100% by applying a signal from 0V to 24V on the AIC pin. The control range can be changed to 0-10V on request (add -10V at the end of the part-number).



POWER CONSUMPTION

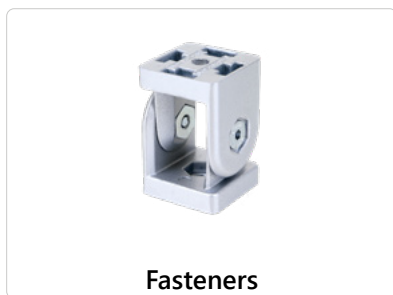
		XXXT: Optical width (mm)			
		100T	200T	300T	400T
YYY: Optical length (mm)	100	7			
	200	14	28		
	300	21	42	63	
	400	28	56	84	112

MECHANICAL SPECIFICATIONS (DIMENSIONS IN MM)



ACCESSORIES

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



T-Nut Kit: EFFV-BOLT-0011
Pivot joint Kit: EFFM-1-0002
Bracket: EFFM-1-0017



M12
2meters: EFFC-CAB-M12-FM-5-DD-L2
5meters: EFFC-CAB-M12-FM-5-DD-L5
10meters: EFFC-CAB-M12-FM-5-DD-L10



EFFI-DIMMER
EFFI-DIMMER2

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