



**Ideal for
InGaAs camera**

Long lifetime

**SWIR
wavelengths**

Standard

IP5X



SWIR

CE

effiMBL

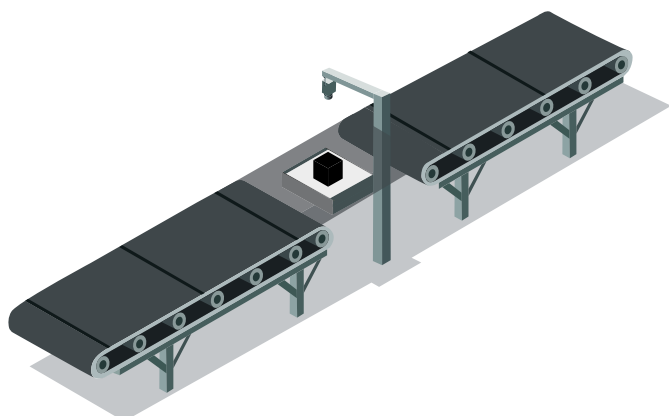
SWIR Backlight

INTRODUCTION

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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
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- 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.

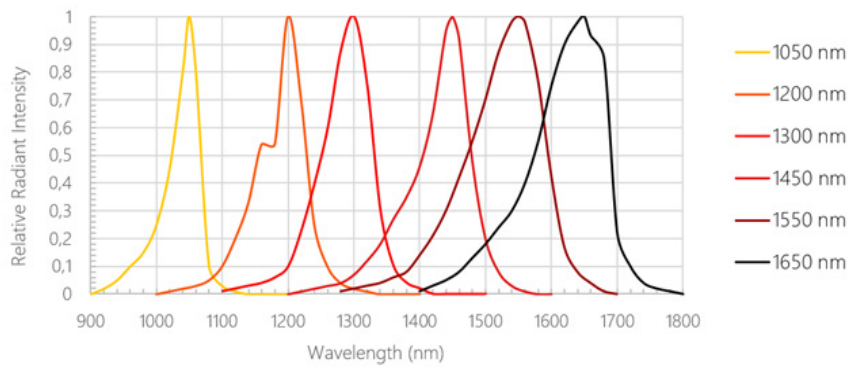
GENERAL SPECIFICATIONS



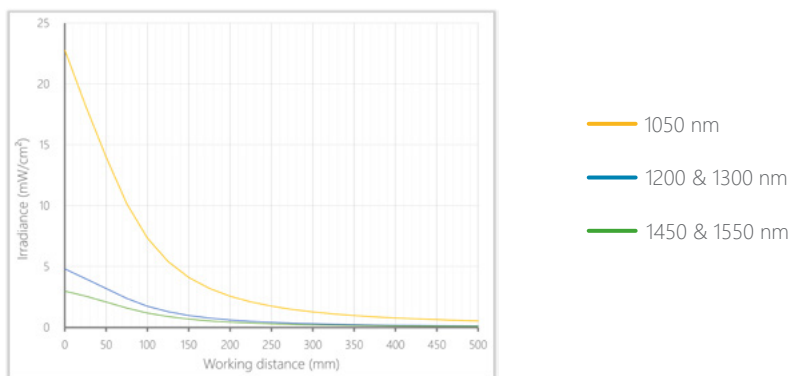
Illumination Mode	Continuous mode
Wavelengths	1050nm, 1200nm, 1300nm, 1450nm, 1550nm, 1650nm
Power Supply	24V DC
Connector	M12 - 5 pins
Power Consumption	Depends on the dimensions
Weight	Depends on the dimensions
Dimensions	Any multiple of 100mm up to 400x400mm
Material	Device body: Aluminum Alloy & 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

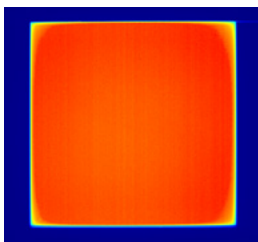
AVAILABLE WAVELENGTHS



IRRADIANCE VS WORKING DISTANCE



HOMOGENEITY



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

POLARIZER

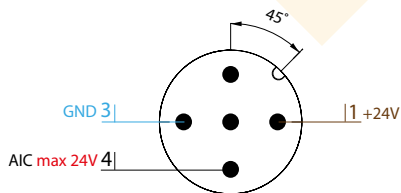
Using polarizer, on the Efflux light and on the camera, it is possible to eliminate glare from your workpiece making it easier to acquire a suitable image for the application. It can be ordered separately with the part-number EFFE-POL-MBL-XXXT-YYY-NIR2.



ELECTRONICAL SPECIFICATIONS

WIRING LAYOUT

M12P 5pins cable - male connector

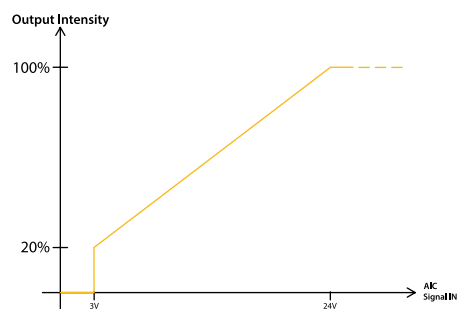


Important notes:

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

AIC: ANALOG INTENSITY CONTROL

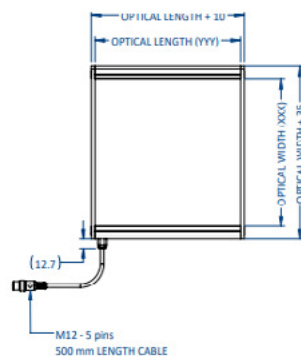
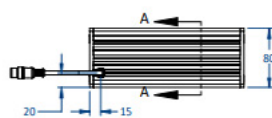
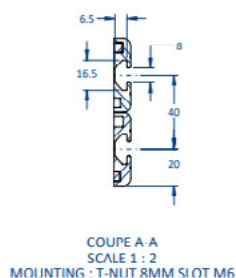
The output optical power of the EFFI-MBL is adjustable from 20% to 100% by applying a signal from 0V to 24V on the AIC pin. The control range can be changed to 0-10V on request (add -10V at the end of the part-number).



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.



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



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 March 2025 and may be changed without prior notice.



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