



Intense and homogeneous (>80%) illumination

Standard connections and fasteners

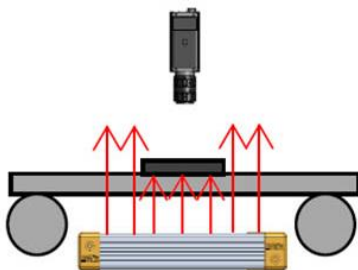
Anti-reflection coating on the diffusive window

Available from 50\*50 mm<sup>2</sup> to 1500\*1500 mm<sup>2</sup> or 500\*3000 mm<sup>2</sup>

Long lifetime and few maintenance

<b>Electronics</b>	Connectors	M12 - 4 contacts
	Power supply	24V DC
	Illumination mode	Continuous with a DIM process [0-24V] – Analog voltage or Strobe mode
	Power consumption	Related to the dimensions (page 3)
	Cable length	500mm
<b>Optics</b>	Wavelength	Single wavelength (from Blue to IR, white)
<b>Mechanics</b>	Weight	Related to the dimensions
	Thickness	43.2 mm
	Dimensions	Any multiple of 50mm
	Fastener	A groove all around the device
	Material	Device body: Aluminum alloy & ABS; Window: Acrylic
<b>Environment</b>	Working temperature	0°C to 50°C
	IP code	IP54 (Option: IP65 and IP69K)

## Applications



**Inspection:**  
Edge measurements,  
absence/presence, size  
control...

**Robotics:**  
Object localization to pick  
and place



Inspected Part



High contrasted result

## Part Number



Reference:

EFFI-BL-**XXX**-**YYY**-**ZZZ**-**VVVV**

**XXX**: Optical width (mm) & **YYY**: Optical length (mm) (**XXX** ≤ **YYY**)

Dimensions are available for every 50mm steps, from 50mm x 50mm up to 1500mm x 1500mm or 500\*3000 mm<sup>2</sup>

**ZZZ**: Color / Wavelength (nm) (other wavelengths available on request)

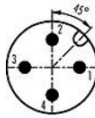
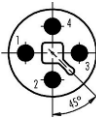
● Red 625

● IR 850

○ White 000 (T°= 5700 K ± 700 K)

**VVVV**: Connector Version

According to the electrical power, there one or several connectors. They can be M12 or M12P. Refer to the electrical power consumption table to know the power of the product according to the dimensions.

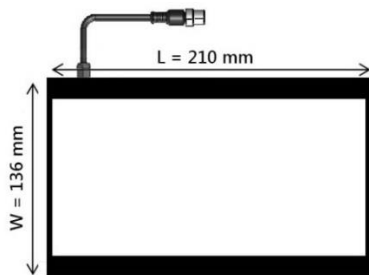
Electrical Power	Corresponding color	Amount & type of connectors	M12 Male connector	M12P Male connector
≤70 W		1X M12	VVVV = <b>XM12</b> 	VVVV = <b>XM12P</b> 
75W - 145W		2X M12 OR 1X M12 Power	With <b>X</b> = number of connectors	With <b>X</b> = number of connectors
150W - 270W		3X M12 OR 1X M12 Power		
275W - 560W		2X M12 Power		
> 560W		Specific configuration Contact EFFILUX for more information		

### Option Thin Edges

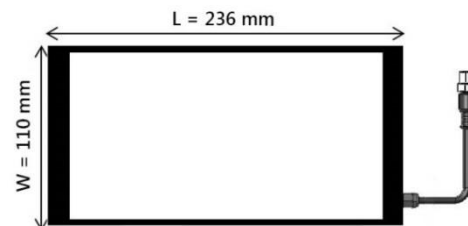
Advantages: Less bulky / More easily integrated / Dust accumulation prevented (smooth walls)

If **thin edges**: add **T** after the dimension which must be reduced (Contact EFFILUX for any CAD request)

Part number: EFFI-BL-**XXXT**-**YYY**-**ZZZ**-**VVVV** or EFFI-BL-**XXX**-**YYT**-**ZZZ**-**VVVV**



Example 1: EFFI-BL-100T-200-1M12



Example 2: EFFI-BL-100-200T-1M12

### Option Polarizer (to eliminate glare caused by the lighting – Not available for IR)

If polarizer, add **-POL** in the part number: EFFI-BL-**XXX**-**YYY**-**000**-**VVVV**-**POL**

### Option Power version

**⚠ Caution: Only for white (000) / Use with a duty cycle <30%**

If power version, add **-SXXX** at the end of the part number

Electrical Power -> **3x** Electrical power of standard EFFI-BL

Part number: EFFI-BL-**XXX**-**YYY**-**000**-**VVVV**-**S150**

Electrical Power -> **14x** Electrical power of standard EFFI-BL

Part number: EFFI-BL-**XXX**-**YYY**-**000**-**VVVV**-**S600**

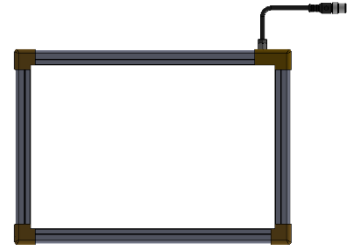
## Electronical considerations



### Contact arrangement

The EFFI-BL and EFFI-FD are supplied with a 24V constant voltage. The DIM contact needs to be connected.

Contact arrangement	Number	Color Contact	Designation
<p style="text-align: center; margin-top: 5px;"> <i>M12 Male connector</i>      <i>M12 Power connector</i> </p> <p><b>Connector depends on electrical power consumption</b></p>	1	Brown	+24V
	2	White	n.a.
	3	Blue	GND
	4	Black	DIM - max 24V



Length M12 cable (Cable gland → Connector) : 500mm

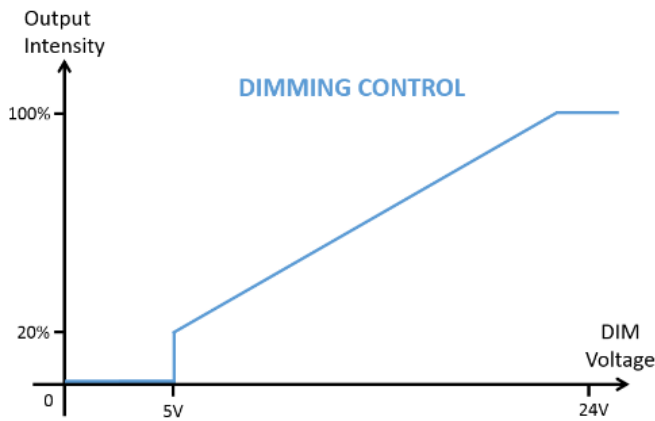
### Power supply

		Electrical Power consumption (W) for standard EFFI-BL																				
		Optical length (mm)																				
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1500
Optical width (mm)	50	5	5	10	10	10	15	15	15	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	55	105	155	210	260	310	360	415	465	515	565	620	670	720	770	825	875	925	975	1030	1540	

For the consumption (W) of the EFFI-BL with **power option** (EFFI-BL-XXX-YYY-ZZZ-S150): **Multiply by 3** the values in the array above.

Electrical Power	Corresponding color	Amount & type of connectors
≤70 W		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

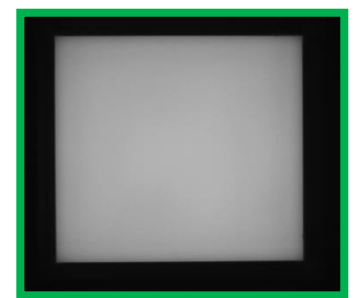
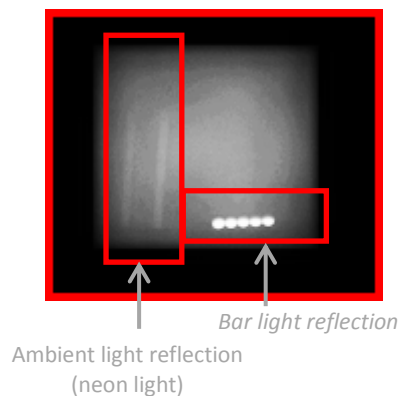
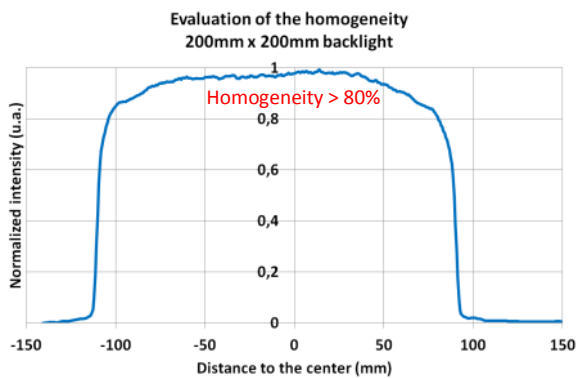
## Dimming control



DIM consumption (mA) for EFFI-BL & EFFI-FD standard

		Optical length (mm)											
		50	100	150	200	250	300	400	500	750	1000	1500	
Optical width (mm)	50	0.3	0.6	0.9	1.2	1.5	1.8	2.4	3	4.5	6	9	
	100	0.6	0.3	0.9	0.6	0.9	0.9	1.2	1.5	2.7	3	4.5	
	150	0.9	0.9	1.8	1.8	2.7	2.7	3.6	4.5	7.2	9	13.5	
	200	1.2	1.2	1.8	1.2	2.4	1.8	2.4	3	5.4	6	9	
	250	1.5	1.5	2.7	2.4	3.9	3.6	4.8	6	9.9	12	18	
	300	3	0.9	2.7	1.8	3.6	2.7	3.6	4.5	8.1	9	13.5	
	500	3	1.5	4.5	3	6	4.5	6	7.5	13.5	15	22.5	

## Optical considerations

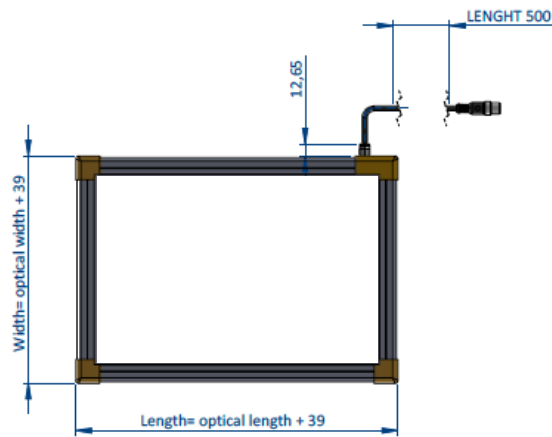
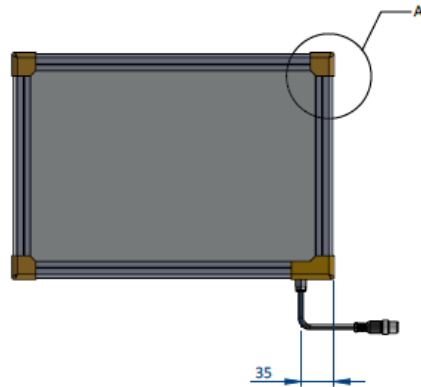


EFFI-BL has an anti-reflection system which reduces reflections of parasite lighting around the system

Mechanical considerations (Dimensions in mm)

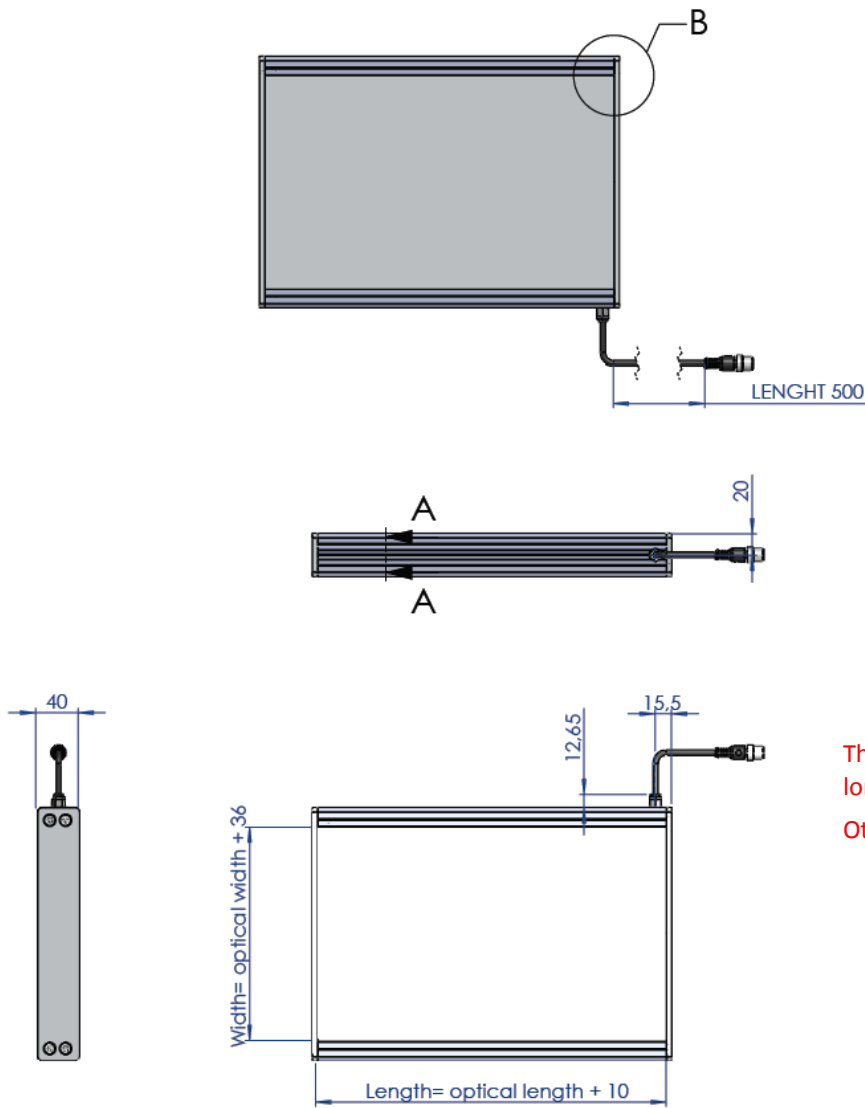


Standard Version



The connector is always on the long side like on the picture.  
Other position on request.

Thin Edges Version



The connector is always on the long side like on the picture.  
Other position on request.