Very intense and uniform Linear LED light illumination

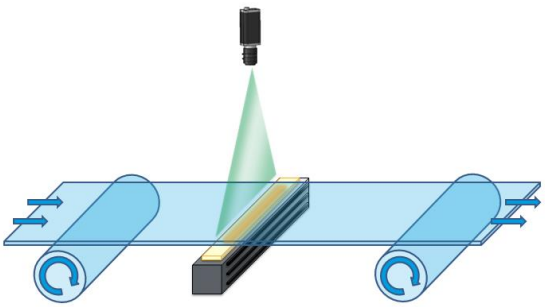
Long lifetime and few maintenance

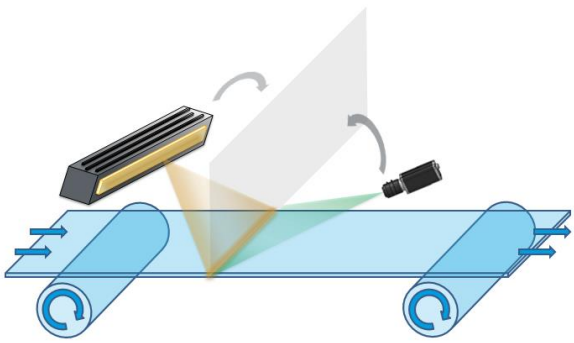
Standard connections and fasteners

| | | |
|---|---|---|
| **Electronics** | Connectors | M12 – 4 Pins |
| | Power supply | 24V DC |
| | Illumination mode | Continuous or strobe mode |
| | Power consumption | Depends on the amount of LEDs (page 4) |
| | Electronic mode | Continuous |
| **Optics** | Wavelength | Single (from UV to IR, white) wavelengths |
| **Mechanics** | Weight | 135g + 285g every 100mm |
| | Width x height x length | 51mm x 49mm x length depends on the amount of LEDs |
| | Fastener | 2 rails for M6 T-nut: one on the back and one on the side |
| | Material | Device body: Aluminum alloy & ABS; Window: PMMA |
| **Environment** | Working temperature | 0°C to 50°C |
| | IP code | IP50 (option IP67→ Refer to EFFI-FLEX-CPT-BL and IP69K → Refer to EFFI-FLEX-IP69K-BL) |

## Applications

Web and linescan inspection for: Paper / Glass / Plastic film / Any semi-transparent materials





# Part Number

*Refererence:*
EFFI-FLEX-BL-WWW-XXX

**WWW**: Optical length

Minimum length : 100 mm – then, available in 100 mm increments

**XXX**: Color / Wavelength (nm)

| | | | | |
|---|---|---|---|---|
| ● Blue 465 | ● Green 525 | ● Red 625 | ● IR 850 | ○ White 000 (T°= 5500 K ± 500 K) |

## Option cylindric Lens (to concentrate the Light)

If cylindric Lens, add **-CYL** in the part number. Possibility to buy only the accessory.

**Part number**: EFFI-FLEX-BL-WW-XXX-**CYL**

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

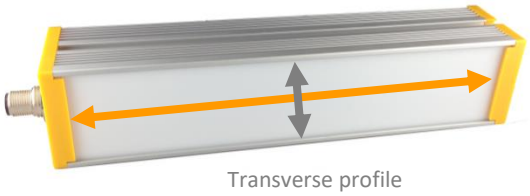

*Without polarizer* *With polarizer*

If polarizer, add -POL in the part number. Possibility to buy only the accessory.

**Part number**: EFFI-FLEX-BL-WW-XXX-**POL**

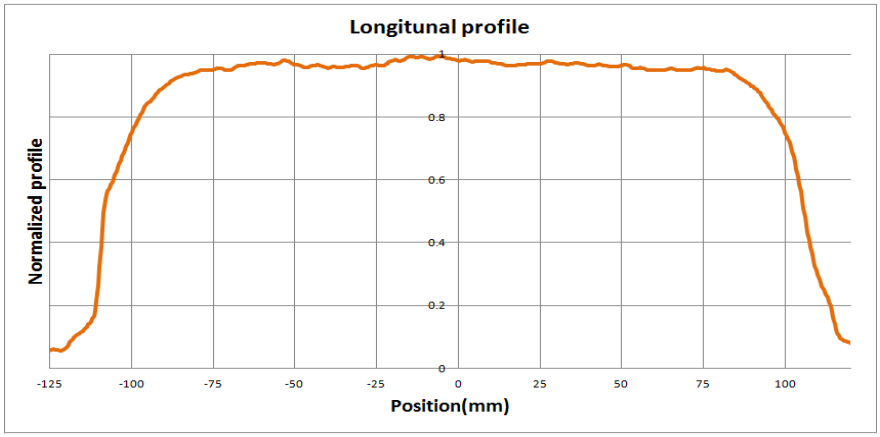
# Optical considerations

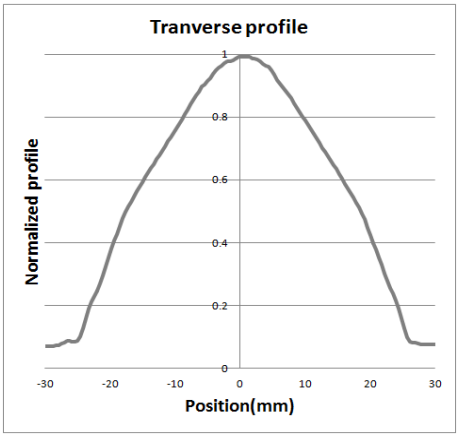
## Homogeneity



Longitudinal profile

Transverse profile

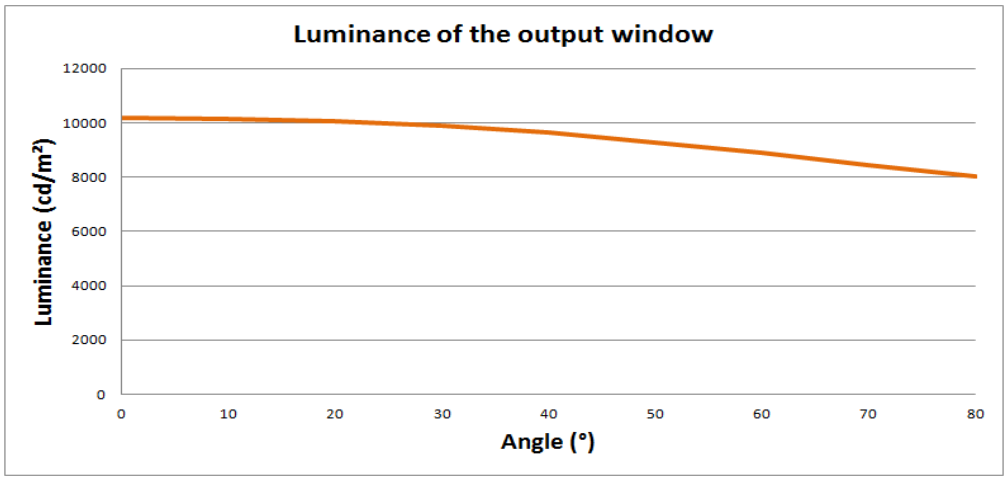



Longitudinal profile : for length of 200mm

## Optical power

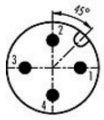
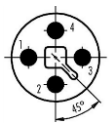
(Luminance in the middle of the output window)

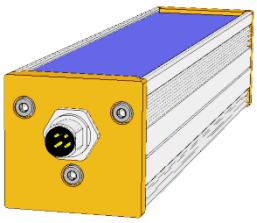



# Electronical considerations

## Contact arrangement

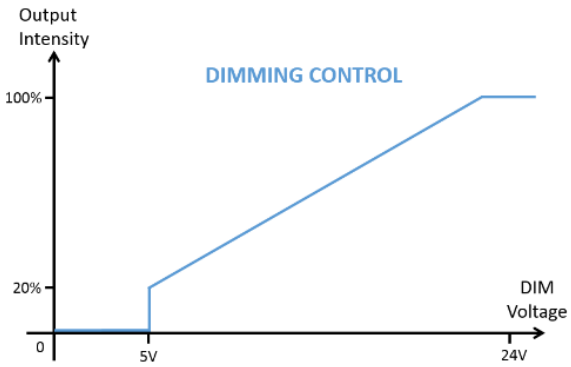
The EFFI-Flex-BL is supplied with a 24V constant voltage. The DIM contact needs to be connected.

| Contact arrangement | Number | Color Contact | Designation |
|---|---|---|---|
|  *M12 Male connector*  *M12 Power connector* ***Connector depends on* electrical *power consumption*** | 1 | Brown | +24V |
| | 2 | White | n.a. |
| | 3 | Blue | GND |
| | 4 | Black | DIM - max 24V Analog Voltage Consumption = 0,5mA every 500mm |



## Dimming control

Using the DIM pin, the light intensity can be linearly increased:




OFF: 0-5V & ON: 5V-24V

## Power supply

The following formula gives the electrical power of your lighting:

$\text{Power}_{\text{electrical}} = \frac{\text{Length}_{\text{in mm}}}{100} * 5\ W$ (**Example**: EFFI-Flex-BL-500 $\text{Power}_{\text{electrical}} = \frac{\text{Length}_{\text{in mm}}}{100} * 5\ W = \frac{500}{100} * 5\ W = 25\ Watts$)

| Designation | Electrical Power @24V (W) | Optical Length L op(mm) | Mechanical Length L (mm) | Type of connectors |
|---|---|---|---|---|
| EFFI-FLEX-BL-200-XXX | 10 | 215 | 235 | M12 |
| EFFI-FLEX-BL-300-XXX | 15 | 315 | 335 | M12 |
| EFFI-FLEX-BL-400-XXX | 20 | 415 | 435 | M12 |
| EFFI-FLEX-BL-500-XXX | 25 | 515 | 535 | M12 |
| EFFI-FLEX-BL-600-XXX | 30 | 615 | 635 | M12 |
| EFFI-FLEX-BL-700-XXX | 35 | 715 | 735 | M12 |
| EFFI-FLEX-BL-800-XXX | 40 | 815 | 835 | M12 |
| EFFI-FLEX-BL-900-XXX | 45 | 915 | 935 | M12 |
| EFFI-FLEX-BL-1000-XXX | 50 | 1015 | 1035 | M12 |
| … | +5W per 100mm length | Length +15mm | Length +35mm | M12 |
| EFFI-FLEX-BL-1500-XXX | 75 | 1515 | 1535 | M12 |
| EFFI-FLEX-BL-1600-XXX | 80 | 1615 | 1635 | M12P |
| … | +5W per 100mm length | Length +15mm | Length +35mm | M12P |
| EFFI-FLEX-BL-2900-XXX | 160 | 3215 | 3235 | M12P |

## Mechanical considerations (Dimensions in mm)