

High Brightness LED Line Lights by EFFILUX



EFFI-Line is a range of linescan illuminator for web inspection and optical sorting applications developed by EFFILUX. The high illumination level on the line, associated with an uniform lighting make EFFI-Line the perfect product for high speed applications with linear cameras.

EFFI-Line is an extremely durable LED light source that offers a service life of up to 60,000 hours. It is available in different colors from UV to near infrared.

BENEFITS

Powerful lighting

- Quality control Improvement
- Possible decrease of the Integration time
- More defects detected

Uniform lighting

- Defects easily classified

Working distances

- Adjustable

High performance

- Less heat dissipation needed
- Less energy consumption

Useable in extreme conditions

- IP 68 Available
- IR Protection for hot mill

Adjustable length

- From 100 mm to 1200 mm in Standard
- More in specific

Available in any LED

wavelength from UV to IR

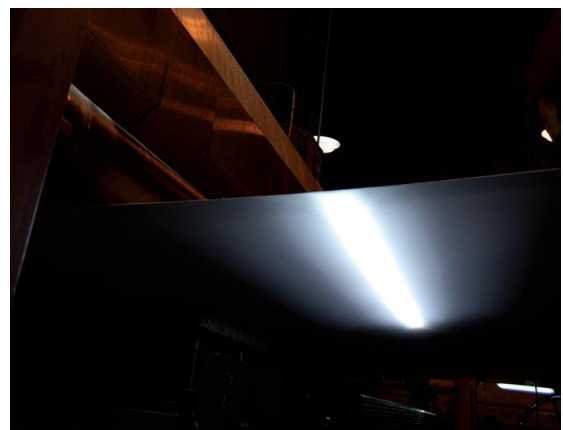
Control by 100 mm segments

- Adaptive intensity profile

Applications:

Web inspection for

- Steel
- Paper
- Foil
- Plastic film
- Road surfaces
- Fabric
- Semiconductors
- Glass
- Metal sheets
- Every Flat panel displays
- Optical sorting



Effi-Line range

EFFI-Line 5-15

- Working distance from 50 to 150 mm
- 200 000 lux at 150 mm
- 500 000 lux at 50 mm

EFFI-Line 20-60

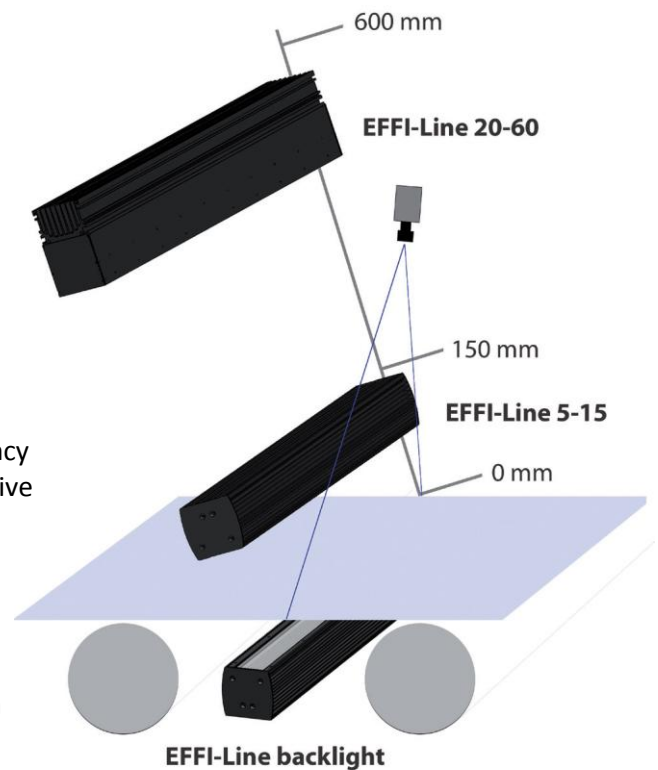
- Working distance from 200 to 600 mm
- 200 000 lux at 150 mm
- 100 000 lux at 600 mm

EFFI-Line backlight

- Highly focalized line for applications by transparency
- Perfect powerful linear led lighting for very reflective surfaces.

EFFI-Line custom

- EFFILUX designs specific EFFI-Line
- Custom working distance up to 2000 mm
- Specific heat dissipation or mechanical integration
- Specific power or wavelength



Product nomenclature



XX-XX	XX	XXXX	XXX	X	X
EFFI-Line range	Lens position: L1: WD of 50 mm L2: WD of 50 -100 mm L3: WD of 100-200 mm L4: Ultra focalization at 5 mm (1 million lux in cool white)**	Mechanical Length: From 100 mm to 1200 mm	Wavelength: 000 : Cool White (6500 K) 001 : Neutral White (4500 K) 002 : Warm White (3000 K) Other : (nm)	Power Version: L : Low power S : Standard P : Power H : High power	Cooling: N : Natural convection F : Fan cooling

* This configuration is used with short mechanical length to improve longitudinal uniformity.

** This configuration is used for transparency applications.

WD: Working Distance

OX

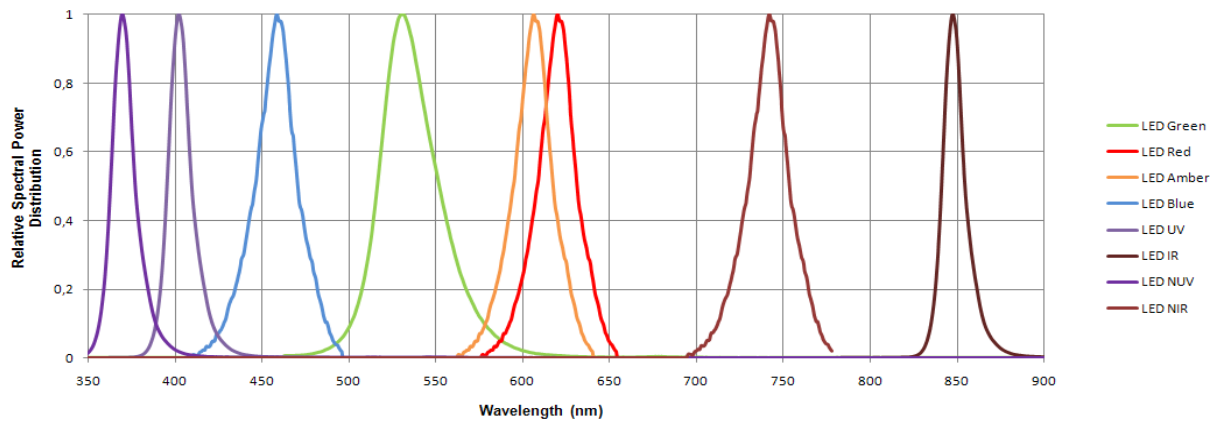
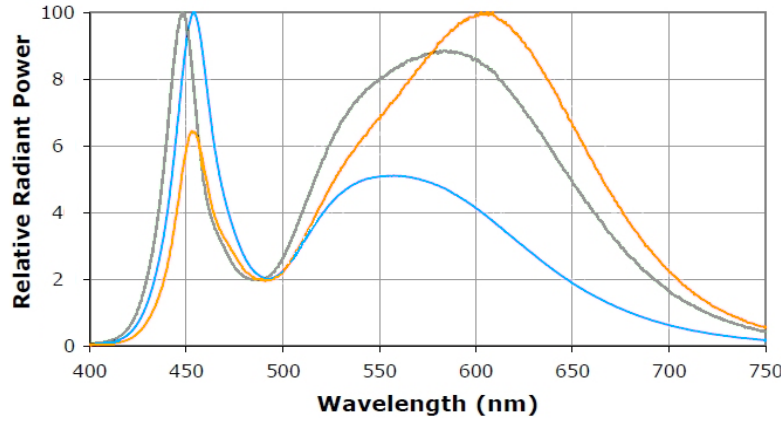
O1: Asymmetric diffuser

O2: Dimming

O3: Waterproof IP67

Optical Characteristics

LED Typical Spectrum

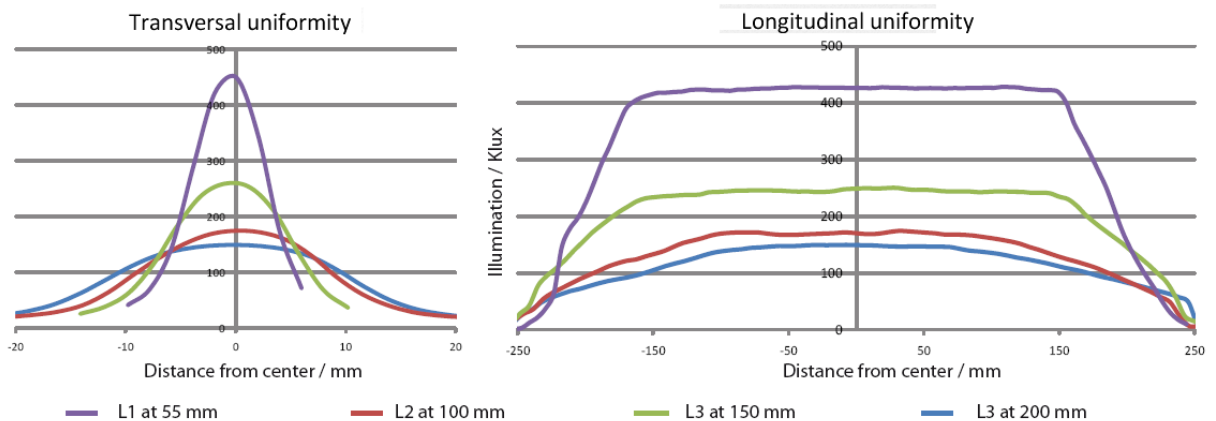


Other wavelength available on request.

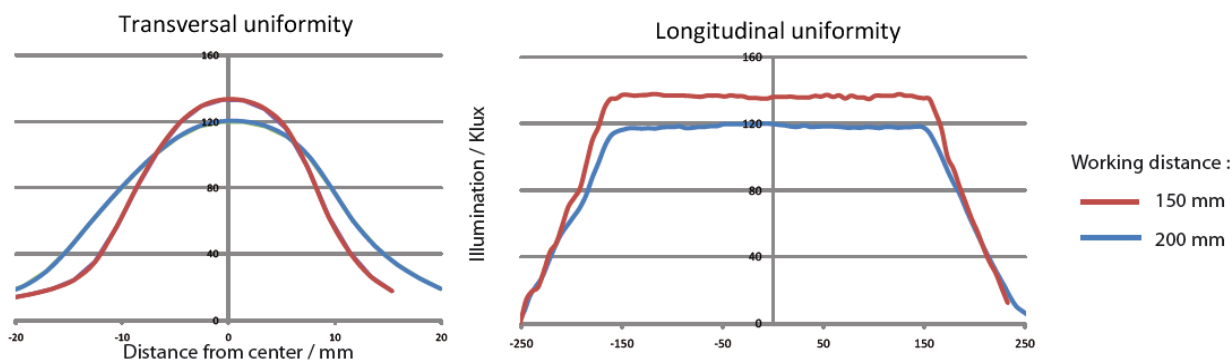
Uniformity of the light

5 different optical configurations are available. Here there are some graphics describing the optical characteristics of each configuration. The reference is an EFFI-Line with 400 mm of LEDs in cool white with power version. Measures are done at working distances corresponding to each configuration, on a plan perpendicular to the lighting device.

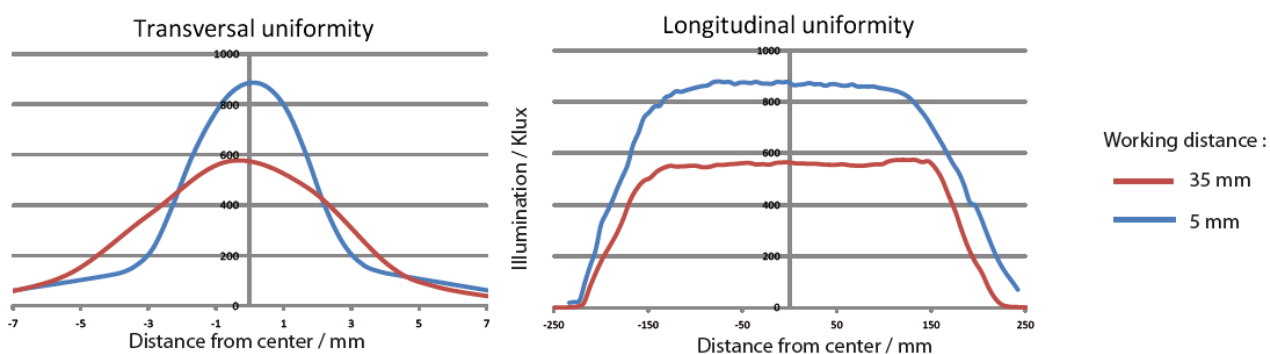
Configuration L1, L2, L3



Configuration L4

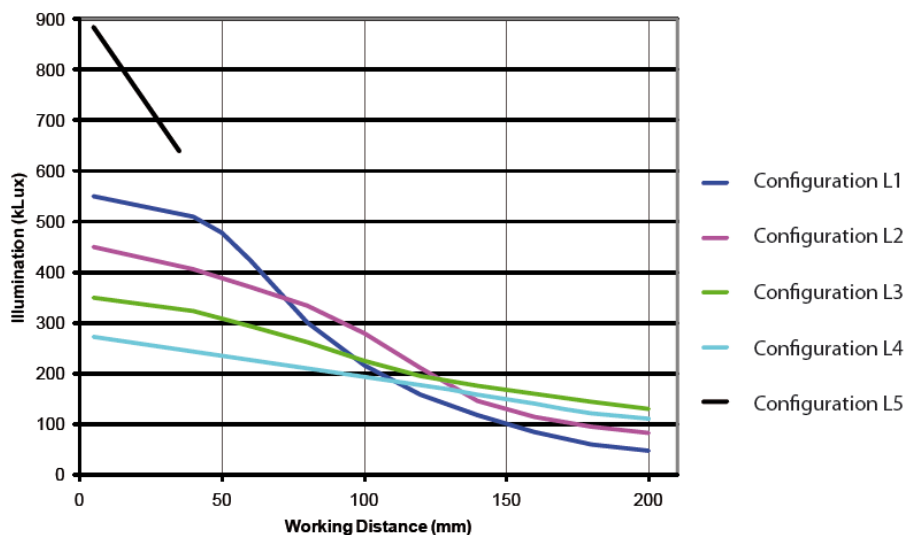


Configuration L5



The EFFI-Line 5-15 with L5 configuration is the perfect linescan illuminator for transparency work.

Illuminance for working distance



The EFFI-Line 5-15 may be entirely customized on request. Contact us for specific demands.

Electric characteristics

Device Power Ratings

Three versions are available: Standard, power, and high power:

	Low Power	Standard	Power	High Power
LEDs current alimentation	700 mA	500 mA	700 mA	700 ma
Voltage alimentation	24 V DC	24 V DC	24 V DC	24 V DC
Power requirements	7.5 W/100 mm of LEDs	20 W/100 mm of LEDs	30 W / 100 mm of LEDs	45 W / 100 mm of LEDs
Heat dissipation	Natural convection	Natural convection	Ventilation	Ventilation
Water proofness	IP 67 optional	IP 67 optional	IP 40	IP 40
Number of LEDs per meter	25	50	50	75
Illumination factor	0.4	0, 7	1	1.3

Dimming control (Optional)

With the supplied software, you can control the light intensity of your lighting thanks to a computer. The connection between your computer and the lighting is done via USB.

Electrical diagram

General Electrical diagram



Wire

Colour of wire:	Brown	Black	Blue
Identification:	24V	Dimming	Ground

M12 connector



Pin	1	2	3	4
Identification:	24 VDC	DIM	GND	n.c.

Mechanical Characteristics (all dimensions are in millimeters)

The EFFI-Line 5-15 range has been mechanically conceived and optimized to improve:

- Heat dissipation :
 - Aluminum fins are disposed all over the profile:

Heat dissipation is insensitive to orientation.

- Life time is improved.
- Watertight optional.
- Easy fixing
- Weight : Only 5 Kg per meter



Mechanical length

To know the size of your lighting.

	Standard bloc LED	Size of the LEDs	
		Minimum size	Maximum size
Low power	200	200	2400
Standard	100	100	1200
Power	100	100	1200
High Power	200	200	800

Low power

Led size	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400
Elec size	40	80	80	100	130	130	130+40	130+130	130+130	130+130	130+130	130+130
Total size	260	500	700	920	1150	1350	1560	1860	2060	2260	2460	2660

Standard

Led size	100	200	300	400	500	600	700	800	900	1000	1100	1200
Elec size	40	80	80	100	130	130	130+40	130+130	130+130	130+130	130+130	130+130
Total size	160	300	400	520	650	750	960	1060	1160	1260	1360	1460

Power

Led size	100	200	300	400	500	600	700	800	900	1000	1100	1200
Elec size	40	80	80	100	130	130	130+40	130+130	130+130	130+130	130+130	130+130
Total size	160	300	400	520	650	750	960	1060	1160	1260	1360	1460

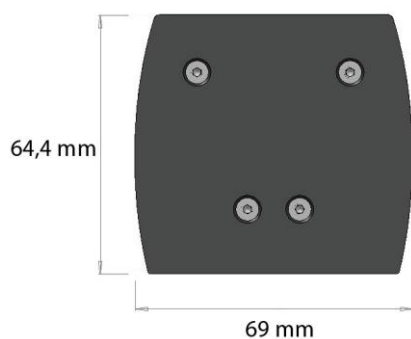
High Power

Led size	200	400	600	800
Elec size	80	130	130+130	130+130
Total size	160	300	380	500

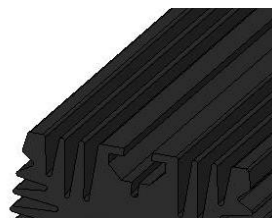
For any specific size of lighting, please contact us.

Dimension

Effi-Line dimension



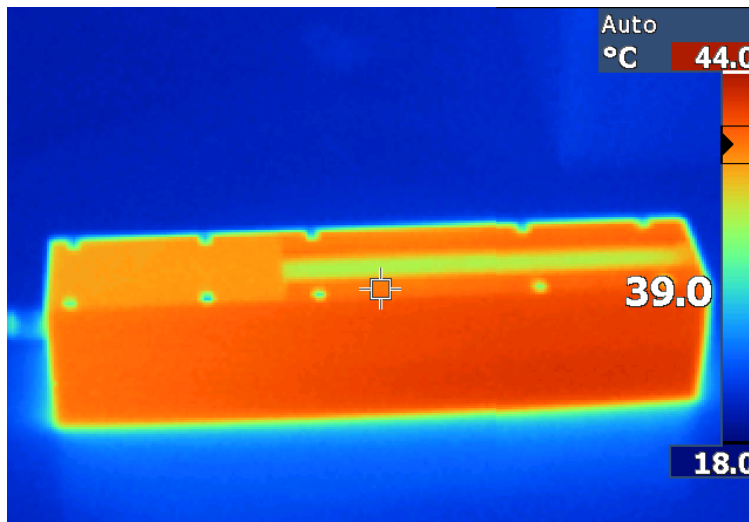
Fixing



A slide rail is made in the profile to make the fixing easier

Thermal Characteristics

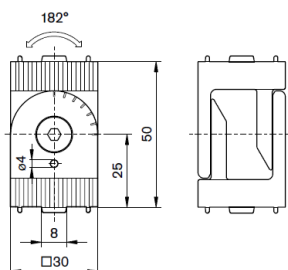
The design of EFFI-Line permits the transfer of LED heat. Each custom LED lighting design involves the concept of efficiently transferring as much heat as possible away from LED PN junction.



Accessories

- Bosch fixation

Réf : 3842502683



- + 2x DIN 7984
M6x12
- + 4x ISO 4032
M6



Thank to Bosh fixation is easy to install EFFI-Line.