



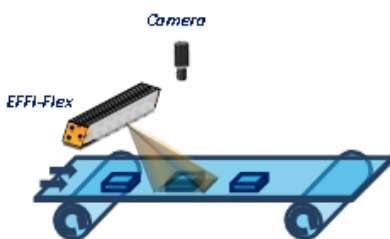
Strobe version available

Very intense and uniform illuminated area
Full range of colors: from UV to IR, white, tricolor
Long lifetime and minimal maintenance
Standard connections and fasteners

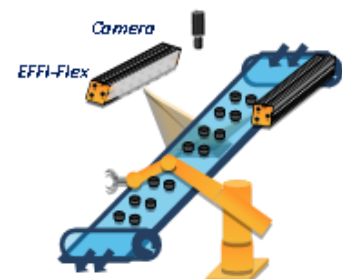
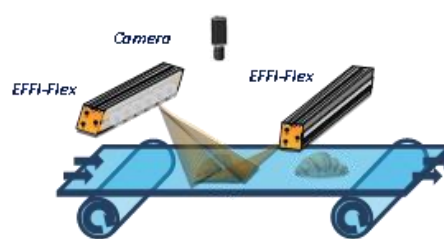
Flexible: Adjustable illumination angles (4 angles) & different projection windows

Electronics	Connectors	M12 – 4 Pins or M12 Power (T-coded) – 4 Pins
	Power supply	24V DC
	Illumination mode	Continuous or strobe mode
	Power consumption	Depending on the amount of LEDs
	Electronic mode	Standard (Autostrobe) or ELS
Optics	Wavelength	Single (from UV to IR, white) wavelengths
Mechanics	Weight	Depends on the amount of LEDs
	Width x height x length	50mm x 37mm x Length depends on the amount of LEDs
	Fastener	1 rails for M4 T-nut: one on the back
	Material	Device body: Aluminum alloy & ABS; Window: PMMA
Environment	Working temperature	0°C to 50°C
	IP code	IP67

Applications



Quality control



Pick and place

Part Number



Reference:

EFFI-FLEX-CPT-**VVV**-**XXX**-**YYY**-**WWW**-**PP**

VVV: Cooling version

∅: No water cooling

WTR: Water cooling

XXX: Number of LEDs

XXX		1	3	5	10	15	in 5 LED increment
Optical Length (See page for mechanical length)	Standard version (LED pitch = 20mm)	20mm	60mm	100mm	200mm	300mm	Max 2900mm (145 LED) ⁽²⁾
	Version 1 LED / 2 positions ⁽¹⁾ (LED pitch = 40mm)	-	-	200mm	400mm	600mm	Max 2900mm (70 LED) ⁽²⁾

(1) For the 1 LED / 2 positions type, add -L2 (Length x 2) before the number of LEDs [EFFI-FLEX-L2-XXX...]
 (2) For standard lead time. Ask EFFILUX for longer sizes (up to 6m).

YYY: Color / Wavelength (nm)

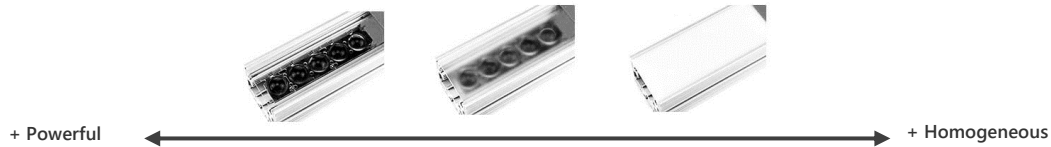
●●● RGB RGB Optional	● UV 365 Only available in TR-P0	● UV 405	● Blue 465	● Green 525	● Red 625	● IR 850	○ White 000 (T°= 5500K ±500K)
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WWW: Windows (if not specified, default semi-diffusive window)

TR: Transparent

SD: Semi-diffusive

OP: Opaline



PP: Position (if not specified, default position P2) / Emission angle according to the lens position

P0 (Without lens)	P1	P2	P3

Option Polarizer (to eliminate glare caused by the lighting)

Option Pure UV (for fluorescence applications)



Without polarizer



With polarizer

If polarizer, add **-POL** in the reference. Possibility to buy only the accessory.

Part number: EFFI-FLEX-CPT-**WW**-**XXX**-**YY**-**ZZ**-**POL**

The standard polarizer is not suitable for continuous mode use of blue or white light. For this kind of application, the high durability polarizer is necessary.

(Available up to 40 LEDs). Part number: EFFI-FLEX-CPT-**XXX**-**YYY**-**TR**-**PP**-**POL**-**HDY**



Without PureUV



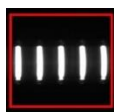
With Pure UV

The PureUV is an innovative EFFILUX technology which allows you to eliminate unwanted reflections. If PureUV, add **-PUV** in the reference.

Only for 365nm Effi-Flex. Part number: EFFI-FLEX-CPT-**WW**-**365**-**TR**-**P0**-**PUV**

Option Linescan (linear lighting or a darkfield lighting)

Option Cylindrical lens (linear lighting)



Without Linescan



With Linescan

If linescan, add **-LS** in the reference. Possibility to buy only the accessory.

Part number: EFFI-FLEX-CPT-**WW**-**XXX**-**YY**-**ZZ**-**LS**



If Effi-Flex-CPT with cylindrical lens, add **-CYL** in the reference.

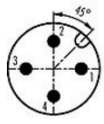
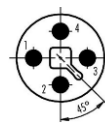
Part number: EFFI-FLEX-CPT-**XXX**-**YYY**-**TR**-**P1**-**LS**-**CYL**

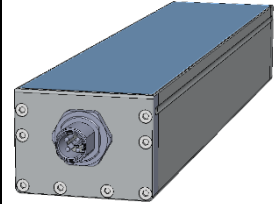
Electronical considerations



Contact arrangement

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

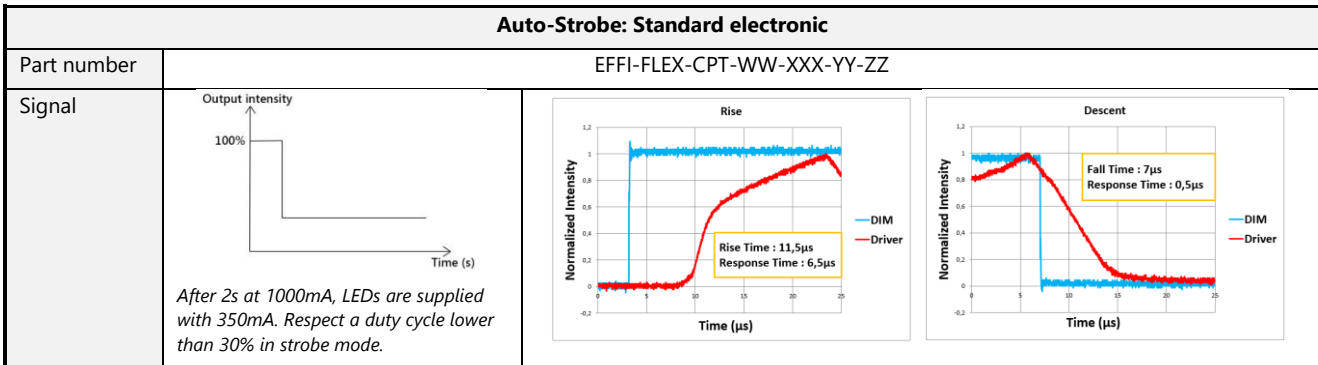
Contact arrangement ⁽¹⁾	Number	Color Contact	Designation
  M12 Male connector M12 Power connector Connector depends on electrical power consumption	1	Brown	+24V
	2	White	n.a.
	3	Blue	GND
	4	Black	TRIG ⁽²⁾ - max 24V Analog Voltage



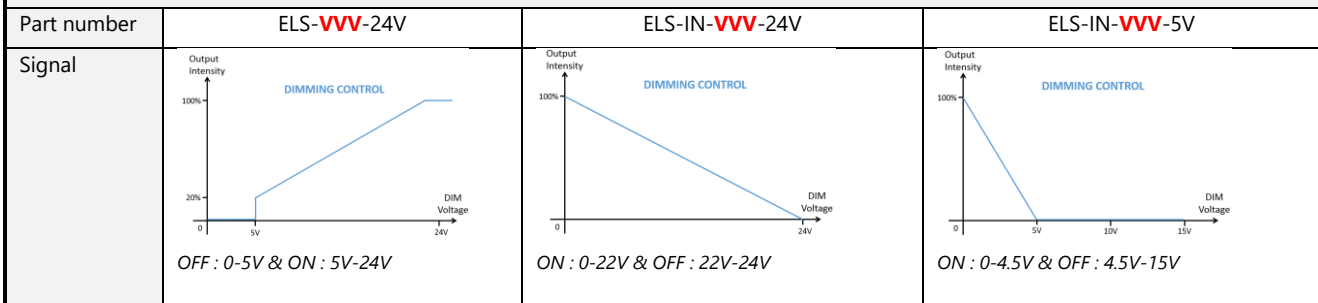
(1) Contact arrangement is different for RGB Option (2) Or DIM if ELS version

Dimming control

Auto-Strobe: Standard electronic

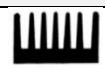





OPTION : ELS version: EFFI-FLEX-CPT-WW-XXX-YY-ZZ-ELS-VVV-24V



Recommended Cooling system for ELS version (contact EFFILUX for more information)

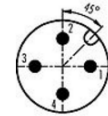
Part number: EFFI-FLEX-CPT-VVV-WW-XXX-YY-ZZ-ELS-UUU-24V

UUU	Output current (mA)[0-100%]	EFFI-Flex CPT	EFFI-Flex CPT 1 LED/2
350	0-350 mA	 Passive cooling	 Passive cooling
500	0-500 mA	 Passive cooling + fan* (if duty cycle > 50%)	
700	0-700 mA	 Passive cooling + fan* (if duty cycle > 30%)	
1000	0-1000 mA	From a duty cycle > 30%, contact us.	

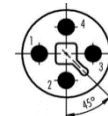
*Fan is not included in the product / Duty Cycle : $DC = T_{ON} / (T_{ON} + T_{OFF})$

Power supply

Amount of LED	Max Electrical power consumption (W)					
	Standard version		ELS 350mA	ELS 500mA	ELS 700mA	ELS 1000mA
	P _{Peak_2s}	P _{CW} *				
1	5	2	5	5	5	5
3	15	5	5	10	10	15
5	20	8	10	10	15	20
10	40	15	15	20	30	40
15	60	20	20	30	40	60
20	80	30	30	40	55	80
25	95	35	35	50	70	95
30	115	45	40	60	80	115
35	135	50	50	70	95	135
40	155	55	55	80	110	155
45	175	60	60	90	120	175
50	190	65	70	95	135	190
55	210	70	75	105	150	210
60	230	75	80	115	160	230
65	250	85	90	125	175	250
70	270	90	95	135	190	270



M12 Male connector



M12 Power Male connector

*With standard version: M12 connector can accept more electrical power thanks to its strobe mode

Signal consumption

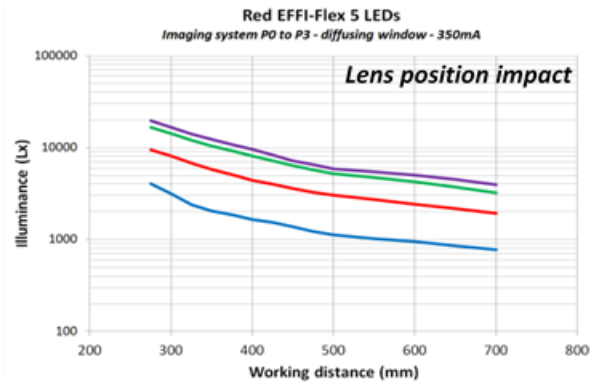
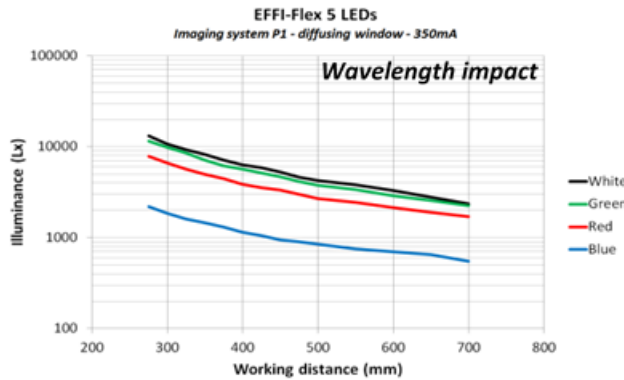
DIM consumption				
ELS version (DIM)	ELS-IN- VVV -24V VVV = 350, 500, 700 or 1000	ELS-IN- VVV -5V VVV = 350, 500, 700 or 1000	ELS-350-24V	ELS- VVV -24V VVV = 500, 700 or 1000
DIM consumption (mA)	4.5mA @24V every 5 LEDs	3mA @24V every 5 LEDs	0.2mA @24V every 10 LEDs	2mA @24V every 5 LEDs

TRIG consumption			
Amount of LED	Consumption @5V (mA)	Consumption @10V (mA)	Consumption @24V (mA)
1	0.05	0.1	1.5
3	0.05	0.1	0.25
5	0.05	0.1	0.25
10	0.1	0.2	0.45
15	0.05	0.1	0.25
20	0.1	0.2	0.45
30	0.1	0.2	0.45
40	0.15	0.3	0.7
50	0.2	0.4	0.9
75	0.25	0.45	1.1
100	0.35	0.65	1.55
125	0.41	0.82	2
150	0.45	0.9	2.2

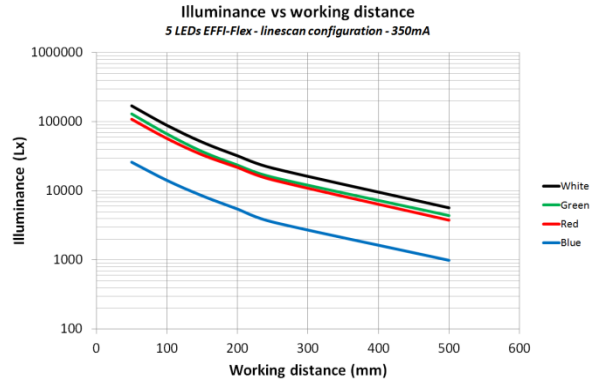
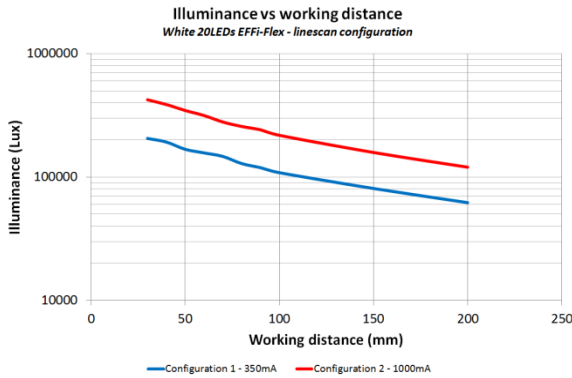
Optical considerations



Illuminance vs the working distance

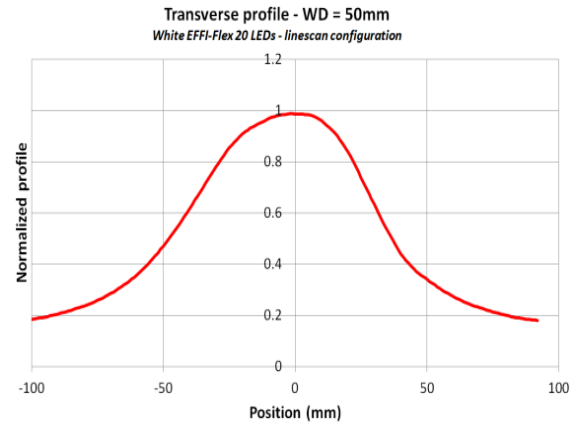
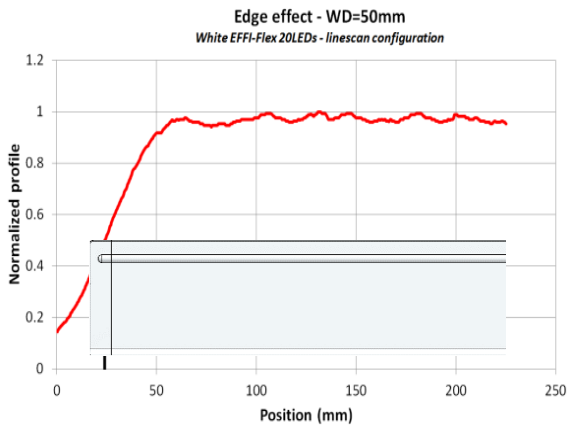
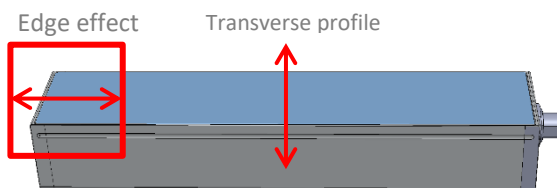


Linescan configuration



NB: Configuration 2 requires an additional thermal management system

Profile

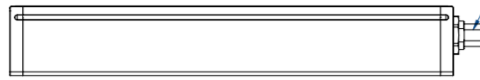
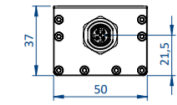


Mechanical considerations

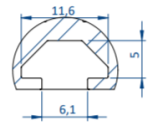
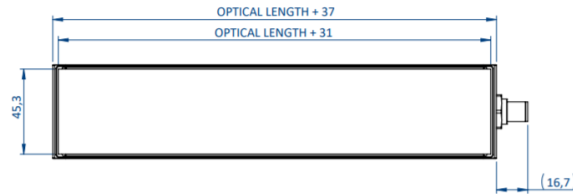
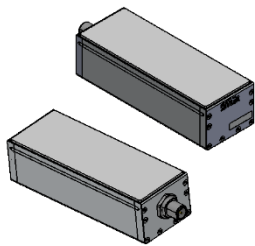
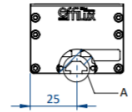


Amount of LEDs	Designation	Optical Length Lop(mm)	Mechanical Length L(mm)
		Standard: L op(mm) = 20 x nb_of_LED L2: L op(mm) = 40 x nb_of_LED	Standard: L(mm) = [20 x nb_of_LED] + 37 L2: L(mm) = [40 x nb_of_LED] + 37
1	EFFI-FLEX-CPT-1-XXX-YY-ZZ	20	57
3	EFFI-FLEX-CPT-3-XXX-YY-ZZ	60	97
5	EFFI-FLEX-CPT-5-XXX-YY-ZZ	100	137
	EFFI-FLEX-CPT-5-L2-XXX-YY-ZZ	200	237
10	EFFI-FLEX-CPT-10-XXX-YY-ZZ	200	237
	EFFI-FLEX-CPT-10-L2-XXX-YY-ZZ	400	437
15	EFFI-FLEX-CPT-15-XXX-YY-ZZ	300	337
	EFFI-FLEX-CPT-15-L2-XXX-YY-ZZ	600	637
20	EFFI-FLEX-CPT-20-XXX-YY-ZZ	400	437
	EFFI-FLEX-CPT-20-L2-XXX-YY-ZZ	800	837
25	EFFI-FLEX-CPT-25-XXX-YY-ZZ	500	537
	EFFI-FLEX-CPT-25-L2-XXX-YY-ZZ	1000	1037
30	EFFI-FLEX-CPT-30-XXX-YY-ZZ	600	637
	EFFI-FLEX-CPT-30-L2-XXX-YY-ZZ	1200	1237
50	EFFI-FLEX-CPT-50-XXX-YY-ZZ	1000	1037
	EFFI-FLEX-CPT-50-L2-XXX-YY-ZZ	2000	2037
70	EFFI-FLEX-CPT-70-XXX-YY-ZZ	1400	1437
	EFFI-FLEX-CPT-70-L2-XXX-YY-ZZ	2800	2837

EFFI-FLEX-CPT



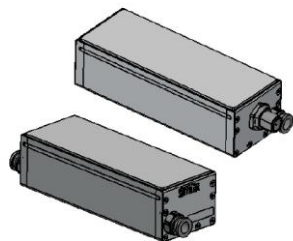
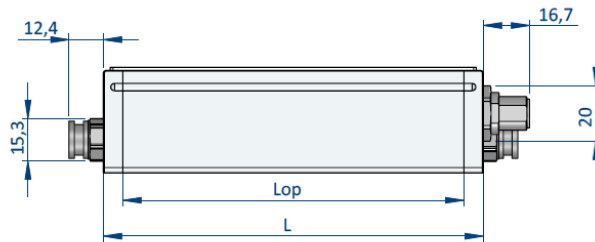
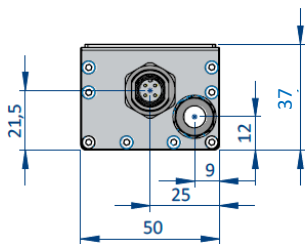
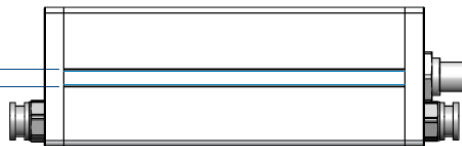
M12 OR M12P DEPENDING ON POWER CONSUMPTION.
REFER TO THE DATASHEET



DETAIL A
SCALE 2 : 1
MOUNTING: T-NUT 6MM SLOT, M4

EFFI-FLEX-CPT-WTR

6,1 FOR T-NUT BOLT M4



WATER FITTING FOR PIPE Ø 8

M12 MALE 4 PINS