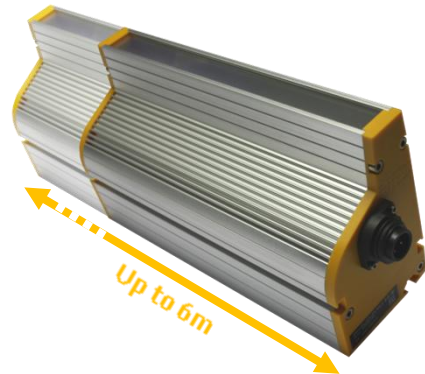


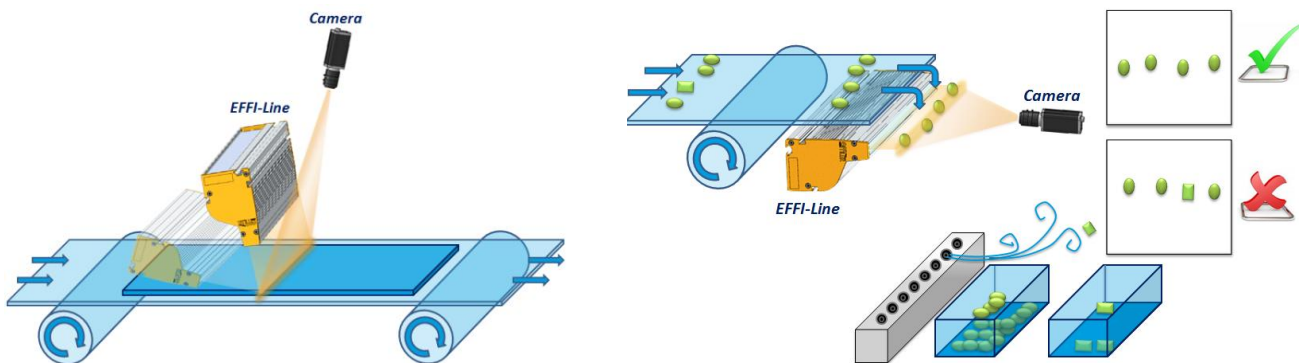


EFFI-Line : High power LED linescan illumination system

- **Very intense and uniform** illuminated area
- **Optimize** cooling system
- **Full range of colors:** from UV to IR, white
- **Long lifetime** and few maintenance
- **Available** from 0.1 to **6 meters**



APPLICATION:



Application: Frontlight and backlight for web inspection

- Quality control
- Surface inspection (wood, plastic, tires, cold steel, aluminum, mirror, solar panel)
- Inspection of documents, prints and printing boards
- Road inspection

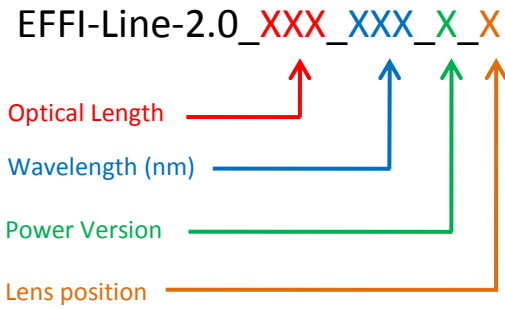
OVERVIEW OF THE CHARACTERISTICS

Electronics	<i>Power supply</i>	24V DC
	<i>Illumination mode</i>	Continuous with a DIM process [0-24V]
	<i>Connectors</i>	Standard connector / Power connector
	<i>Power consumption</i>	Depends on the amount of LEDs
Optics	<i>Wavelength</i>	Various wavelengths (from UV to IR, white)
	<i>Illuminance</i>	Up to 1 300 000 lux at 10mm
Mechanics	<i>Width and height</i>	76.5 mm x 123 mm
	<i>Fastener</i>	3 fastening profiles: → 1 T-nut 8 on the back aligned with optical axis → 2 additional nut M6 profiles on both sides
	<i>Material</i>	Device body : Aluminum alloy ; Window: Acrylic
Thermal	<i>Passive heat exchanger</i>	Fin
	<i>Active heat exchanger</i>	Air or water cooling
Environment	<i>Working temperature</i>	0°C to 50°C
	<i>IP code</i>	IP40 (option IP65)



TECHNICAL CHARACTERISTICS

How to create the EFFI-Line ?



Available wavelengths:

- White: **000**
- Near UV: **405**
- Blue: **465**
- Green: **525**
- Red: **625**
- Far Infrared: **850**

Other wavelengths are available upon request

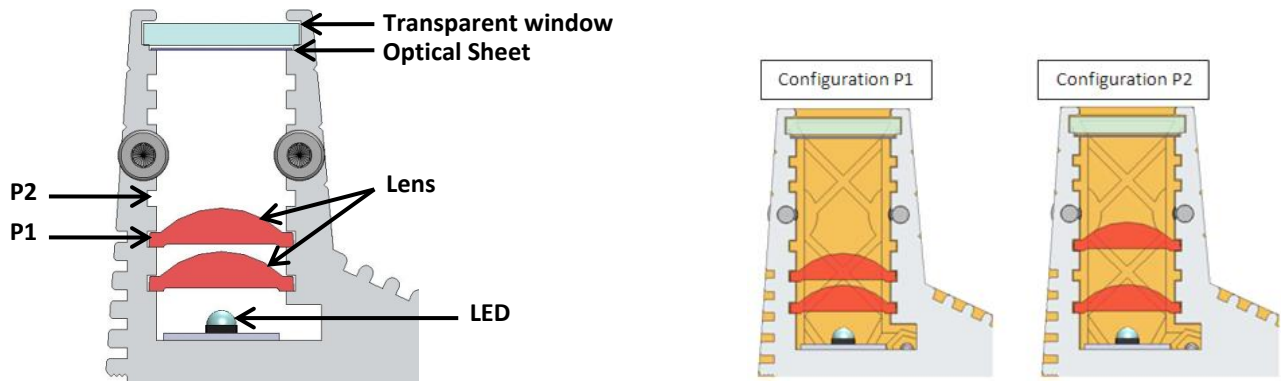
Power Version :

- S : Standard - Passive Cooling
- P : Power - Fan Cooling
- HP : High Power - Water Cooling

Lens position :

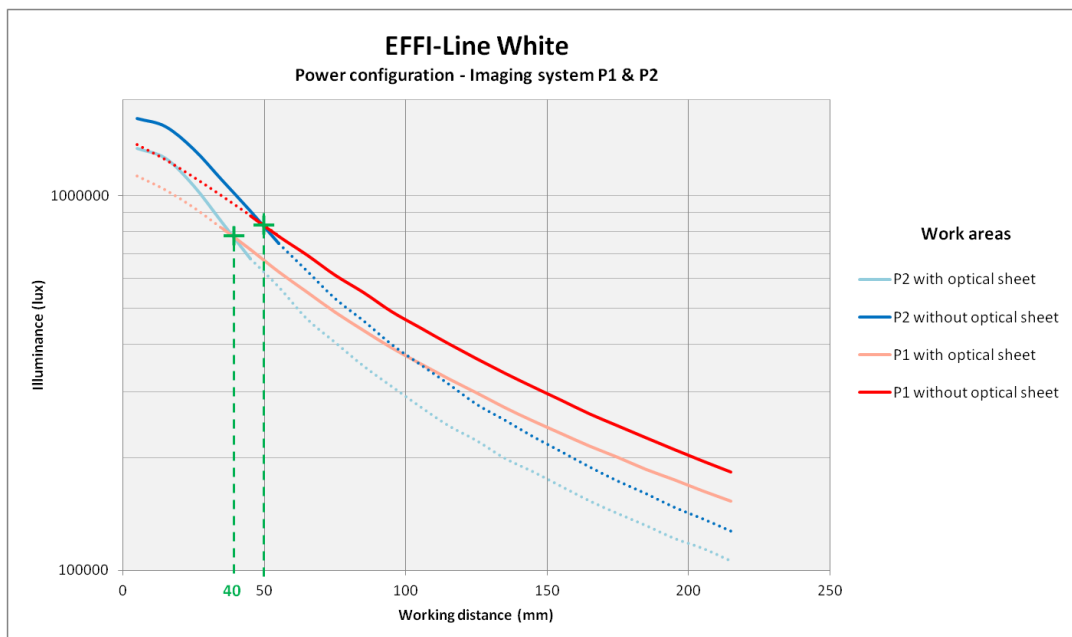
- 2 : Working distance 10 – 40 mm
- 1 : Working distance 40 – 200 mm

How to use the EFFI-Line ?



Optical characteristics

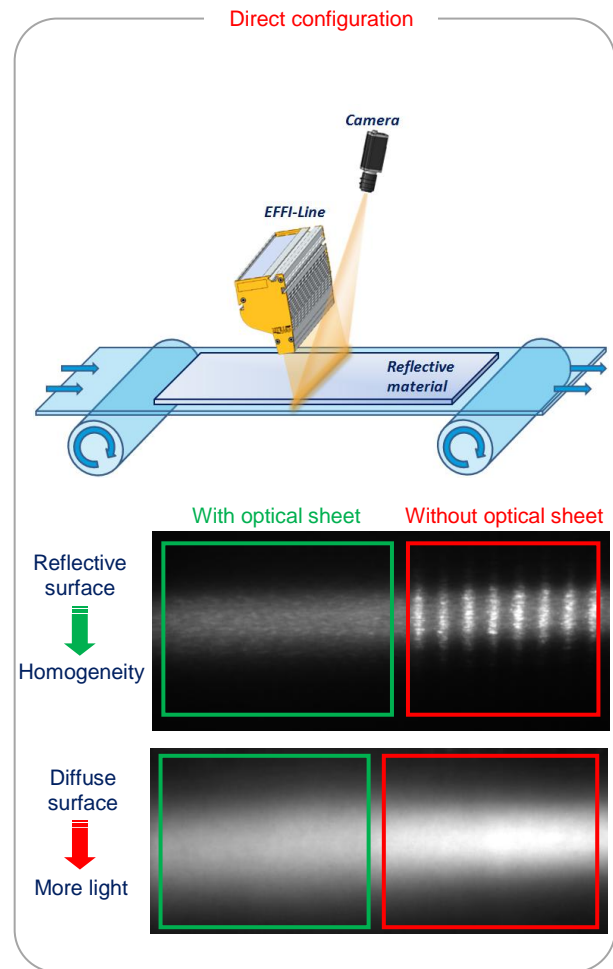
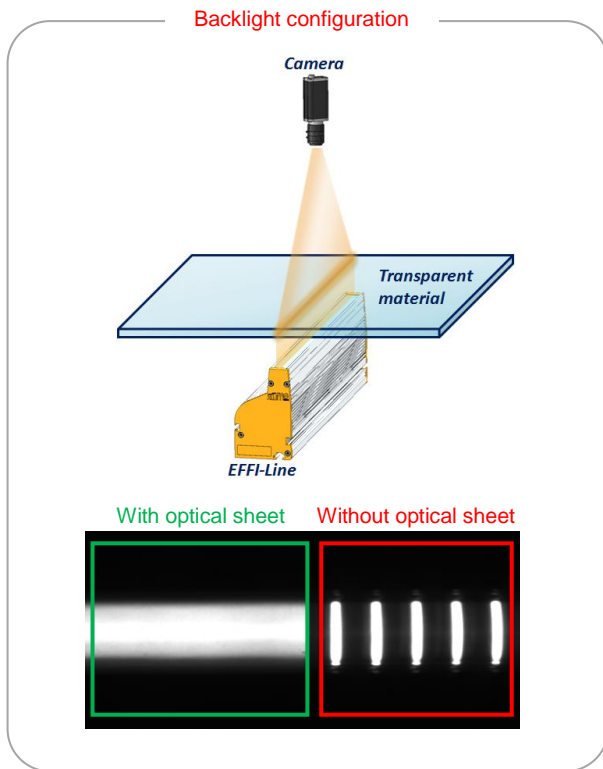
Illumination versus working distance



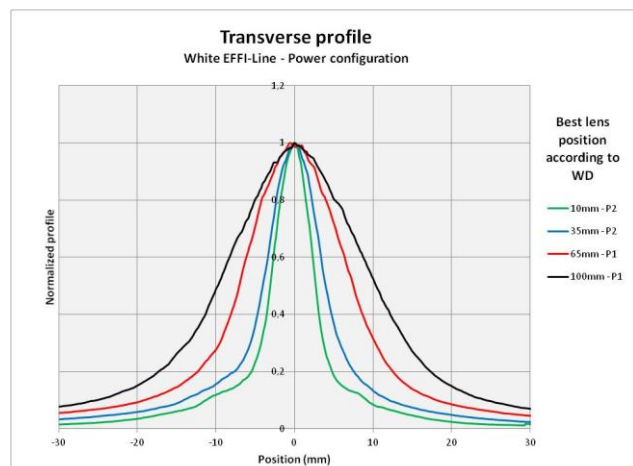
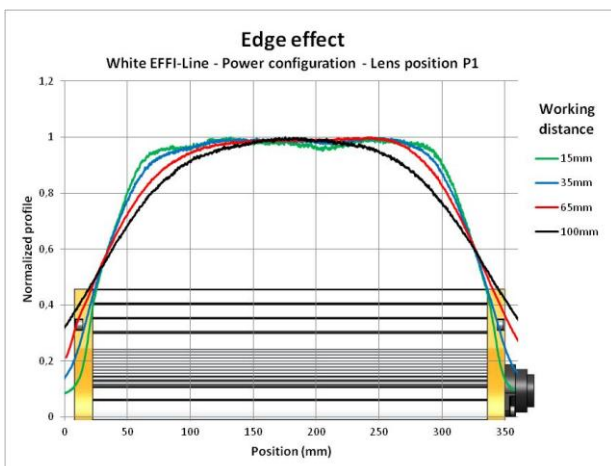
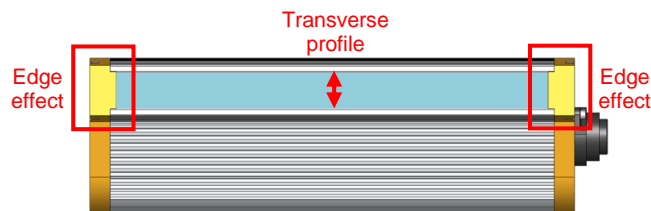
From 20% to 30% more light without optical sheet



Interest of the optical sheet

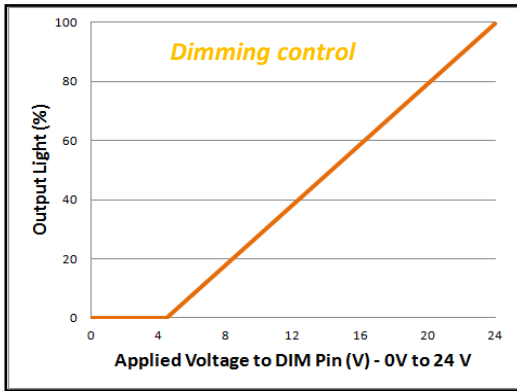


Profile description



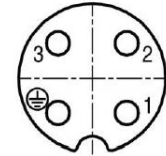


Electrical characteristics



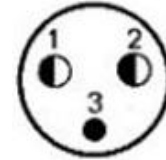
Standard connector

Pin number	Cable number	Designation
1	1	+24V
2	2	DIM – max 24V
3	3	GND
4	Yellow / Green	n.a.



Power connector

Pin number	Cable color	Designation
1	Brown	+24V
2	Blue	GND
3	Black	DIM – max 24V



The EFFI-Line-2.0 is supplied with a 24V constant voltage source. Using the DIM pin, the light intensity can be linearly increased:

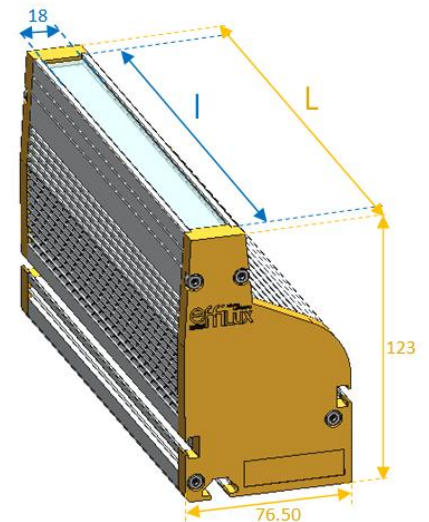
- 0V – OFF
- 24V – Full ON

Formulas to determine the electrical power & the current connector of your lighting

Configuration	Electrical Power (W)	Choice of connector (A)
Standard	$P = \frac{3.5V \cdot 0.35A}{0.9} \cdot \frac{\text{optical length in mm}}{10}$	$I_{\text{connector}} = \frac{P}{24V}$
Power	$P = \frac{3.5V \cdot 0.7A}{0.9} \cdot \frac{\text{optical length in mm}}{10} + P_{\text{fans}} \cdot \text{amount of fans}$	
High Power	$P = \frac{3.5V \cdot 0.7A}{0.9} \cdot \frac{\text{optical length in mm}}{5}$	

Type and amount of connectors

Designation	L (mm)	l (mm)	Optical Length (mm)	Type / Amount of connectors		
				Standard	Power	High Power
EFFI-Line-2.0_100_XXX_X_X	132	114	100			
EFFI-Line-2.0_200_XXX_X_X	232	214	200			
EFFI-Line-2.0_300_XXX_X_X	332	314	300			
EFFI-Line-2.0_400_XXX_X_X	432	414	400			
EFFI-Line-2.0_500_XXX_X_X	532	514	500			
EFFI-Line-2.0_600_XXX_X_X	632	614	600			
EFFI-Line-2.0_700_XXX_X_X	732	714	700			
EFFI-Line-2.0_800_XXX_X_X	832	814	800			
EFFI-Line-2.0_900_XXX_X_X	932	914	900			
EFFI-Line-2.0_1000_XXX_X_X	1032	1014	1000			
EFFI-Line-2.0_1100_XXX_X_X	1132	1114	1100			
EFFI-Line-2.0_1200_XXX_X_X	1232	1214	1200			
EFFI-Line-2.0_1300_XXX_X_X	1332	1314	1300			
EFFI-Line-2.0_1400_XXX_X_X	1432	1414	1400			
EFFI-Line-2.0_1500_XXX_X_X	1532	1514	1500			
EFFI-Line-2.0_2000_XXX_X_X	2032	2014	2000			
EFFI-Line-2.0_2500_XXX_X_X	2532	2514	2500			
EFFI-Line-2.0_3000_XXX_X_X	3032	3014	3000			
EFFI-Line-2.0_3500_XXX_X_X	3532	3514	3500			
EFFI-Line-2.0_4000_XXX_X_X	4032	4014	4000			
EFFI-Line-2.0_4500_XXX_X_X	4532	4514	4500			
EFFI-Line-2.0_5000_XXX_X_X	5032	5014	5000			
EFFI-Line-2.0_5500_XXX_X_X	5532	5514	5500			
EFFI-Line-2.0_6000_XXX_X_X	6032	6014	6000			



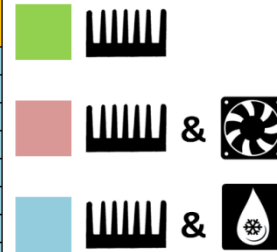
- x 1
- x 2 OR x 1
- x 2
- CUSTOM



Electrical power & cooling system

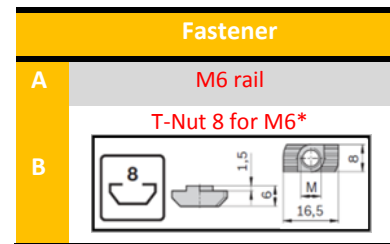
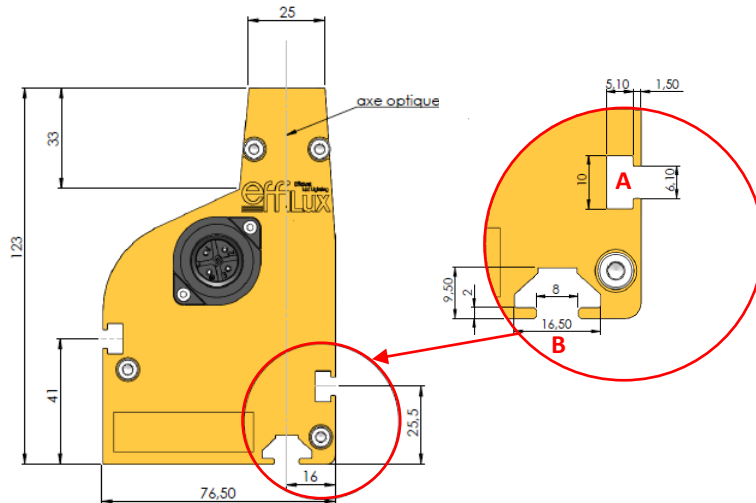
Designation	L (mm)	l (mm)	Optical Length (mm)	Electrical Power (W)		
				Standard	Power	High Power
EFFI-Line-2.0_100_XXX_X_X	132	114	100	15	35	55
EFFI-Line-2.0_200_XXX_X_X	232	214	200	30	65	110
EFFI-Line-2.0_300_XXX_X_X	332	314	300	45	90	165
EFFI-Line-2.0_400_XXX_X_X	432	414	400	55	125	220
EFFI-Line-2.0_500_XXX_X_X	532	514	500	70	150	275
EFFI-Line-2.0_600_XXX_X_X	632	614	600	85	180	330
EFFI-Line-2.0_700_XXX_X_X	732	714	700	100	210	385
EFFI-Line-2.0_800_XXX_X_X	832	814	800	110	240	440
EFFI-Line-2.0_900_XXX_X_X	932	914	900	125	270	490
EFFI-Line-2.0_1000_XXX_X_X	1032	1014	1000	140	300	545
EFFI-Line-2.0_1100_XXX_X_X	1132	1114	1100	150	325	600
EFFI-Line-2.0_1200_XXX_X_X	1232	1214	1200	165	355	655
EFFI-Line-2.0_1300_XXX_X_X	1332	1314	1300	180	390	710
EFFI-Line-2.0_1400_XXX_X_X	1432	1414	1400	195	415	765
EFFI-Line-2.0_1500_XXX_X_X	1532	1514	1500	205	445	820
EFFI-Line-2.0_2000_XXX_X_X	2032	2014	2000	275	590	1090
EFFI-Line-2.0_2500_XXX_X_X	2532	2514	2500	345	740	1365
EFFI-Line-2.0_3000_XXX_X_X	3032	3014	3000	410	885	1635
EFFI-Line-2.0_3500_XXX_X_X	3532	3514	3500	480	1030	1910
EFFI-Line-2.0_4000_XXX_X_X	4032	4014	4000	545	1180	2180
EFFI-Line-2.0_4500_XXX_X_X	4532	4514	4500	615	1325	2450
EFFI-Line-2.0_5000_XXX_X_X	5032	5014	5000	685	1470	2725
EFFI-Line-2.0_5500_XXX_X_X	5532	5514	5500	750	1620	2995
EFFI-Line-2.0_6000_XXX_X_X	6032	6014	6000	820	1765	3270

COOLING SYSTEM



Power Configuration			
Optical Length (mm)	Amount of Fans	Optical Length (mm)	Amount of Fans
100	2	1300	10
200	2	1400	10
300	2	1500	11
400	4	2000	14
500	4	2500	18
600	5	3000	21
700	6	3500	24
800	6	4000	28
900	7	4500	31
1000	8	5000	34
1100	8	5500	38
1200	9	6000	41

Mechanical considerations (in mm)



* Available for M4 and M5

ACCESSORIES

	EFFILUX reference	Description
Mechanics	EFFV-Bolt_0011	 T-nut 8 to insert in the slot – For M6 screw



	<p>EFFM_1_0017</p>	<p>Bracket to fasten the EFFI-BL (no ridge) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	<p>EFFM_1_0019</p>	<p>Bracket to fasten the EFFI-BL (1 ridge) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	<p>EFFM_1_0021</p>	<p>Bracket to fasten the EFFI-BL (2 ridges) <i>Delivered with 2 EFFV-Bolt_0011, 2 screws and 2 flat washers</i></p>
	<p>EFFM_1_0002</p>	<p>Fastener used to simplify the projector integration (orientation) <i>Delivered with EFFV-Bolt_0011 and 2 M6x14 screws</i></p>
	<p>EFFM- Therm_0001 Stäubli : CBI06.1152/IA/JE</p>	<p>Socket male tread</p>
	<p>EFFM-Therm_0002 Stäubli : CBI06.7152/IA/JE</p>	<p>Plug BSP male thread with 60° cone and integrated sealing</p>
<p>Electronics</p>	<p>EFFC-Cable_RD24_0001 Binder : 79 0232 20 04</p>	<p>Female Cable RD24 connector – straight – 4 pins – 2m long</p>
	<p>EFFC-Cable_RD24_0002 Binder : 79 0234 20 04</p>	<p>Female Cable RD24 connector – angled – 4 pins – 2m long</p>
	<p>EFFC-Connector_Jaeger_0001 Jaeger 0429 530 06</p>	<p>Female Jaeger connector – angled – 3 pins</p>