



Brightening your ideas

- *Sturdy aluminium industrial IP65 housing with M8 connector*
- *Different versions available (Line, Area, Ring, Spot and Backlight)*
- *Built-in LED driver (350mA) with strobe option or external led driver*
- *Different beam angles and colours available on demand*

SIL SERIES

The solid-state illuminator **SIL** series of Datasensor has been developed to offer a complete range of industrial lighting solutions for machine vision or general harsh environment industrial lighting applications.

The illuminators of the **SIL** series are fully integrated devices: optics, electronics and LED driver unit are built inside the same housing, thus easing the device installation.

Many different **SIL** models are available according to the format (Line, Area, Ring, Spot and Backlight), the LEDs (red, white, IR, blue, green) and the emission angle (Spot, Flood, Diffuse, Line).

Easy electrical connections are ensured thanks to standard M8 4 pole male connectors, continuous lighting or logical input easy-selectable strobe operation.

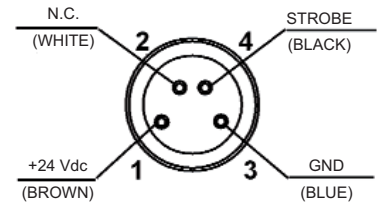
The **SIL** illuminators are particularly suitable for machine vision applications, barcode and datamatrix readers, microscope lightening.

TECHNICAL DATA

Description:	Designed to provide low angle of incidence illumination over a long, wide area, SIL LINE delivers very high intensity, non-diffused illumination. Built-in power LED driver (350mA) current regulator.				
Applications:	Dark-field (creating shadows and reflection) or bright-field lighting for diffused surfaces. Illumination of large areas for robot guiding. Packaging & Package sorting. Strobe option for fast moving objects.				
Power supply:	24 Vdc \pm 20%				
Strobe signal (required):	5-24 Vdc				
Colour:	Red Infrared White <i>On demand: blue, green</i>				
Light intensity:	LED	@250mm	@500mm	@750mm	@1000
	Red (Lux)	2.550	1.050	520	305
	White (Lux)	6.962	2.888	1.427	847
	Infrared (W/m ²)	35,3	14,8	7,3	4,3
Emission angle:	25° 45° (only for white and red LEDs) <i>On demand: 6°, 45°, 10x30°</i>				
Housing dimensions:	252x46x54 mm				
Housing material:	Black anodized aluminium				
Connections:	M8 4-pole male connector				
Mechanical protection:	IP65				
Operating temperature:	-10°...+40°				
Storage temperature:	-25°...+70°				

CONNECTIONS

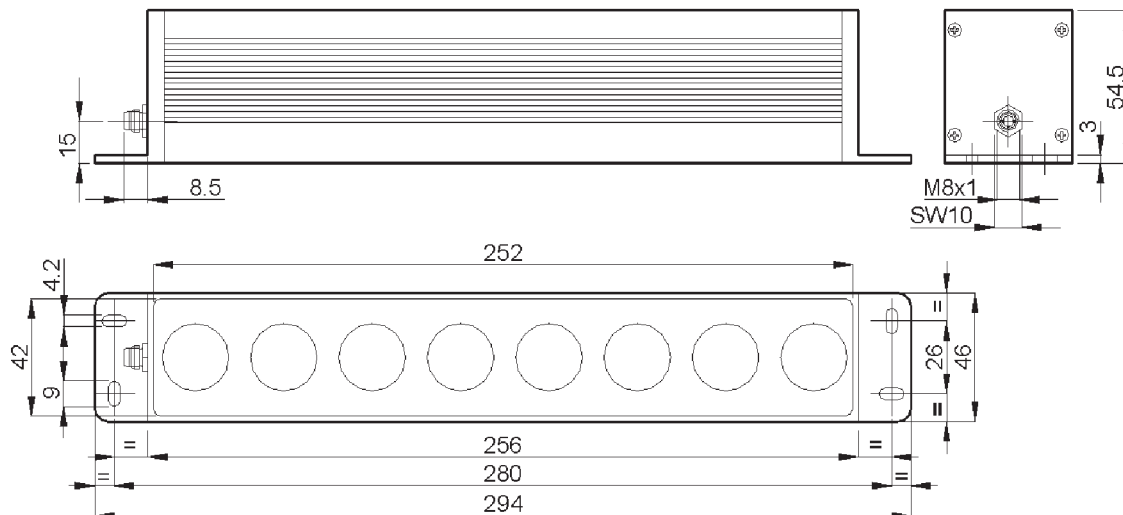
M8 4-POLE CONNECTOR



- | | |
|-----------|---------------------|
| 1 = brown | = +24 Vdc |
| 2 = white | = Not connected |
| 3 = blue | = GND |
| 4 = black | = Strobe TTL signal |



DIMENSIONS



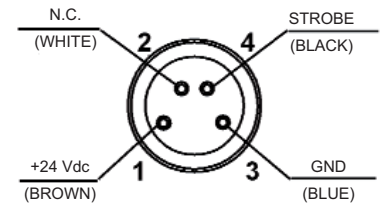
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TECHNICAL DATA

Description:	Designed to provide low angle incidence illumination over a wide rectangular area, SIL AREA delivers very high intensity, non-diffused illumination. Built-in power LED driver (350mA) current regulator.																				
Applications:	Dark-field (creating shadows and reflection) or bright-field lighting for diffused surfaces. Illumination of large areas for robot guiding. Packaging & Package sorting. Strobe option for fast moving objects.																				
Power supply:	24 Vdc \pm 20%																				
Strobe signal (required):	5-24V																				
Colour:	Red Infrared White <i>On demand: blue, green</i>																				
Light intensity:	<table border="1"> <thead> <tr> <th>LED</th> <th>@250mm</th> <th>@500mm</th> <th>@750mm</th> <th>@1000</th> </tr> </thead> <tbody> <tr> <td>Red (Lux)</td> <td>2.050</td> <td>550</td> <td>245</td> <td>138</td> </tr> <tr> <td>White (Lux)</td> <td>6.878</td> <td>1.837</td> <td>807</td> <td>456</td> </tr> <tr> <td>Infrared (W/m²)</td> <td>33,6</td> <td>8,8</td> <td>3,9</td> <td>2,2</td> </tr> </tbody> </table>	LED	@250mm	@500mm	@750mm	@1000	Red (Lux)	2.050	550	245	138	White (Lux)	6.878	1.837	807	456	Infrared (W/m ²)	33,6	8,8	3,9	2,2
LED	@250mm	@500mm	@750mm	@1000																	
Red (Lux)	2.050	550	245	138																	
White (Lux)	6.878	1.837	807	456																	
Infrared (W/m ²)	33,6	8,8	3,9	2,2																	
Emission angle:	25° <i>On demand: 6°, 45°, 10x30°</i>																				
Housing dimensions:	84x84x55 mm																				
Housing material:	Black anodized aluminium																				
Connections:	M8 4-pole male connector																				
Mechanical protection:	IP65																				
Operating temperature:	-10°...+40°																				
Storage temperature:	-25°...+70°																				

CONNECTIONS

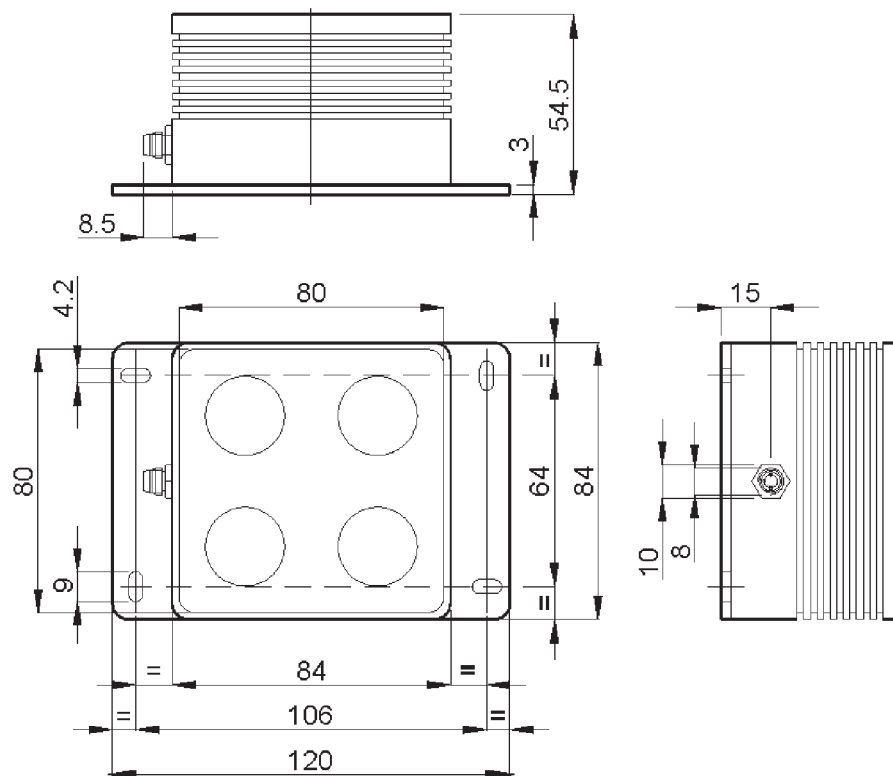
M8 4-POLE CONNECTOR



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DIMENSIONS



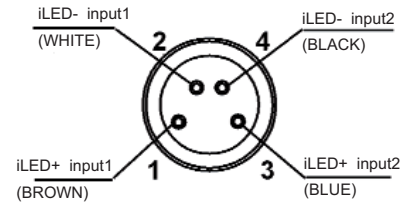
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TECHNICAL DATA

Description:	Axial light source for general purpose applications.				
Applications:	Bright-field lighting for non-specular objects. Strobe option for fast moving objects.				
Power supply:	External LED driver current regulator 2x350 mA±5%				
Colour:	Red Infrared White <i>On demand: blue, green</i>				
Light intensity:	LED	@250mm	@500mm	@750mm	@1000
	Red (<i>Lux</i>)	1.965	746	371	193
	White (<i>Lux</i>)	4.600	1.770	943	480
	Infrared (<i>W/m²</i>)	35	12	6	3
Emission angle:	25° 45° (<i>only for white LEDs</i>) <i>On demand: 6°, 45°, 10x30°</i>				
Housing dimensions:	Ø130x25 mm				
Housing material:	Black anodized aluminium				
Connections:	M8 4-pole male connector				
Mechanical protection:	IP65				
Operating temperature:	-10°...+40°				
Storage temperature:	-25°...+70°				

CONNECTIONS

M8 4-POLE CONNECTOR

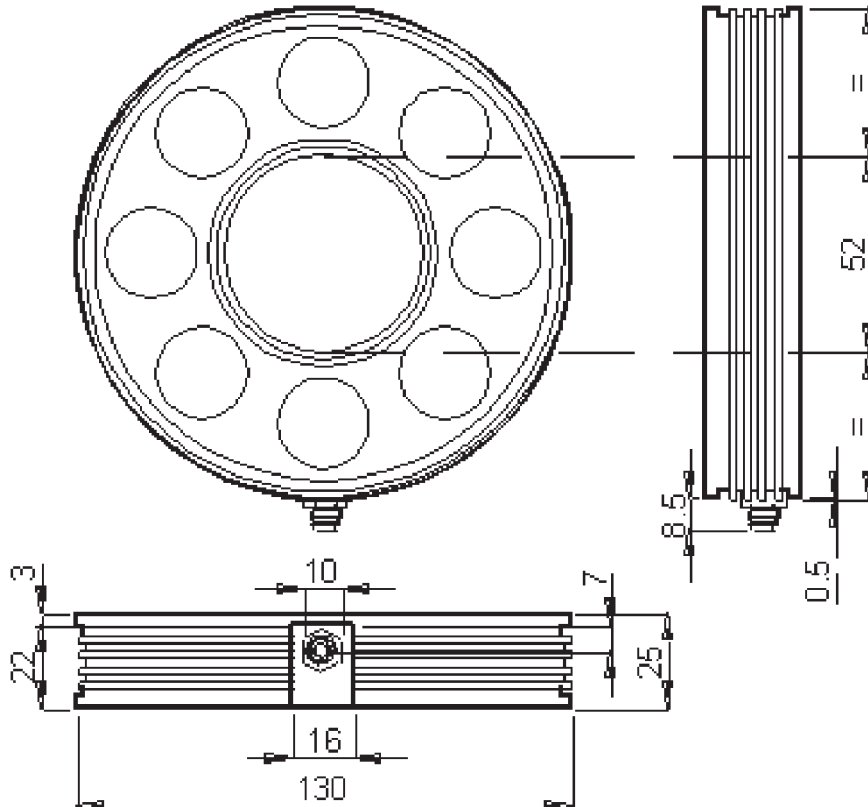


- 1 = brown = iLED+ input1
- 2 = white = iLED- input1
- 3 = blue = iLED+ input2
- 4 = black = iLED- input2

EXTERNAL LD2 LED DRIVER REQUIRED



DIMENSIONS



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LD2 LED DRIVER

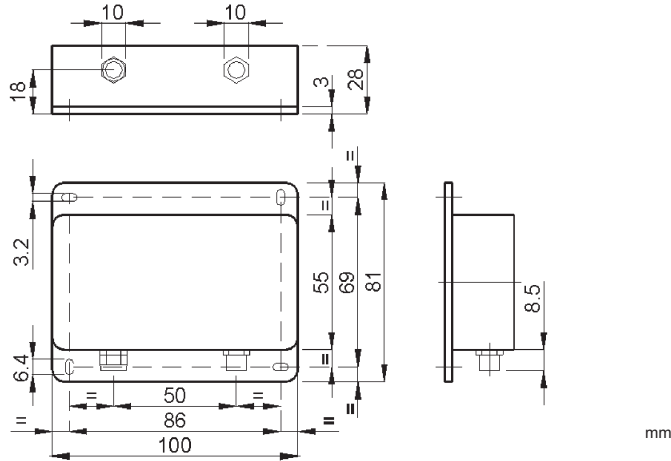
TECHNICAL DATA

LD2 TWO CHANNELS

Description:	External LED driver suitable for SIL-RING (8 power LEDs)
Input power supply voltage:	24 Vdc \pm 20%
Output power supply current:	2x350 mA \pm 5% constant current
Strobe signal (required):	5-24 Vdc
Housing dimensions:	100x81x28 mm
Connections:	2 M8 4-pole connectors
Operating temperature:	-10°...+40°
Storage temperature:	-25°...+70°

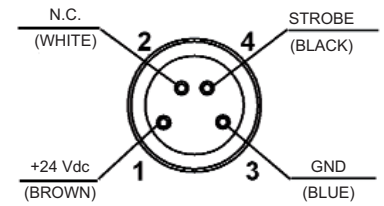


DIMENSIONS



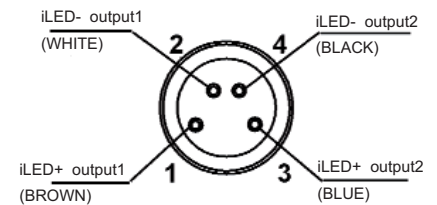
CONNECTIONS

INPUT M8 4-POLE MALE CONNECTOR



- | | |
|-----------|---------------------|
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| 4 = black | = Strobe TTL signal |

OUTPUT M8 4-POLE FEMALE CONNECTOR



- | | |
|-----------|-----------------|
| 1 = brown | = iLED+ output1 |
| 2 = white | = iLED- output1 |
| 3 = blue | = iLED+ output2 |
| 4 = black | = iLED- output2 |

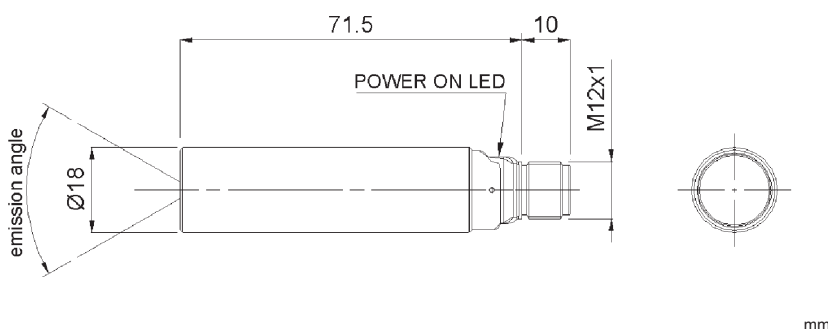
SIL LASER LINE

TECHNICAL DATA

Description:	Laser line illuminator
Applications:	Profiling Metal working Wood working
Power supply:	24 Vdc \pm 10%
Laser class:	Red Laser Class 3A
Emission angle:	90°
Housing dimensions:	\varnothing 18 x 81,5 mm
Housing material:	Black anodized aluminium
Connections:	M12 4-pole male connector
Mechanical protection:	IP65
Operating temperature:	-10 ... 55°C
Storage temperature:	-25 ... 70°C

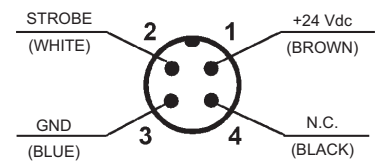


DIMENSIONS



CONNECTIONS

M12 4-POLE MALE CONNECTOR



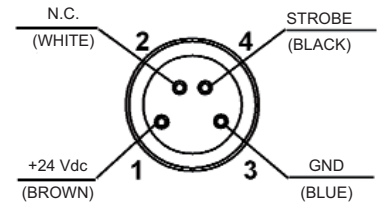
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| 4 = black | = Not connected |

TECHNICAL DATA

Description:	High intensity focused illumination for detail enhancement.				
Applications:	Bright field and dark field applications. Non diffused illumination. Strobe option for fast moving objects.				
Power supply:	24 Vdc ± 20%				
Strobe signal (required):	5-24 Vdc				
Colour:	Red Infrared White <i>On demand: blue, green</i>				
Light intensity:	LED	@250mm	@500mm	@750mm	@1000
	Red (<i>Lux</i>)	435	117	54	31
	White (<i>Lux</i>)	1.200	326	149	86
	Infrared (<i>W/m²</i>)	8	2,1	0,9	0,6
Emission angle:	25° 6° (<i>only for red LEDs</i>) <i>On demand: 6°, 45°, 10x30°</i>				
Housing dimensions:	Ø40x89 mm				
Housing material:	Black anodized aluminium				
Connections:	M8 4-pole male connector				
Mechanical protection:	IP65				
Operating temperature:	-10°...+40°				
Storage temperature:	-25°...+70°				

CONNECTIONS

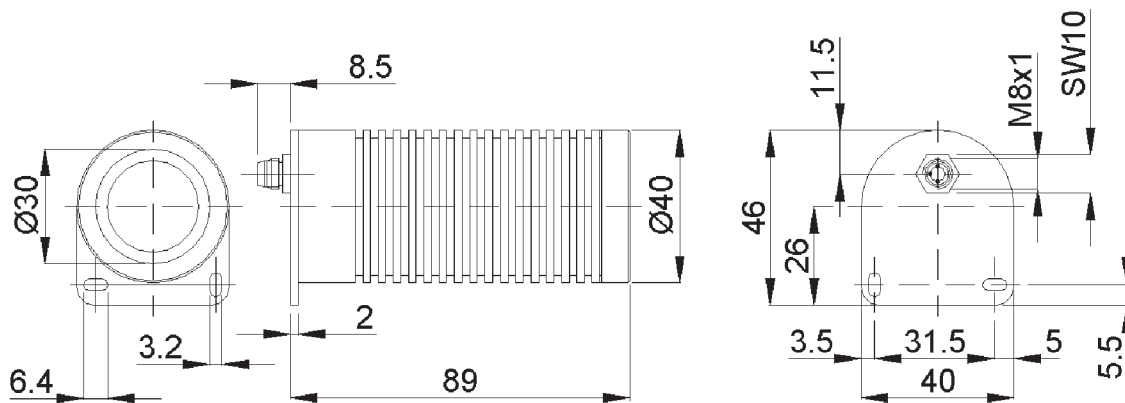
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DIMENSIONS



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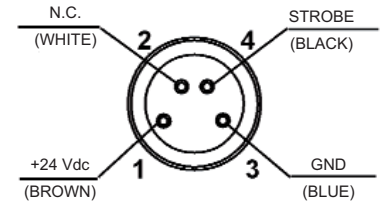
SIL BACK

TECHNICAL DATA

Description:	Small and versatile rectangular backlight that provides high output diffused illumination.
Applications:	SIL Back provides sharp contrast to outline parts shape, hide clear housings, and view openings such as drilled holes. Strobe option for fast moving objects.
Power supply:	24 Vdc \pm 20%
Colour:	Red White <i>On demand: blue, green, IR</i>
Light intensity:	150 cd/m ²
Housing dimensions:	131x116x32 mm
Housing material:	Black anodized aluminium
Connections:	M8 4-pole male connector
Mechanical protection:	IP65
Operating temperature:	-10°...+40°
Storage temperature:	-25°...+70°

CONNECTIONS

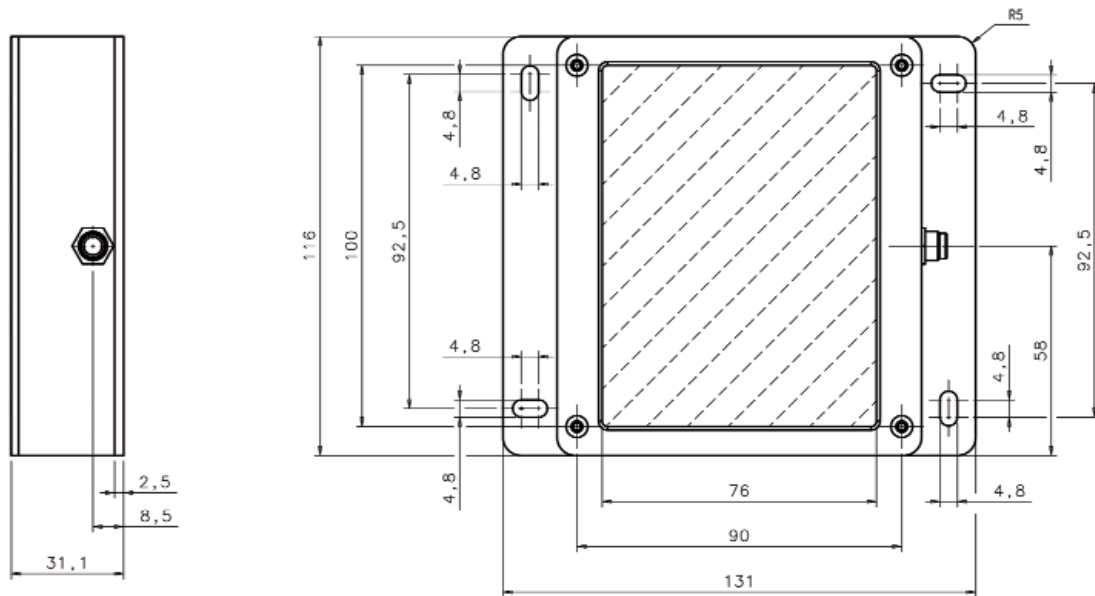
M8 4-POLE CONNECTOR



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DIMENSIONS



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MODEL SELECTION AND ORDER INFORMATION

DESCRIPTION	COLOUR	EMISSION ANGLE	ORDER N°
SIL-LINE-RED-FLOOD	red	25° (Flood Power Optics)	95A901180
SIL-LINE-RED-DIFFUSE	red	45° (Diffuse Power Optics)	95A901550
SIL-LINE-IR-FLOOD	infrared	25° (Flood Power Optics)	95A901500
SIL-LINE-WHITE-FLOOD	white	25° (Flood Power Optics)	95A901260
SIL-LINE-WHITE-DIFFUSE	white	45° (Diffuse Power Optics)	95A901440
SIL-AREA-RED-FLOOD	red	25° (Flood Power Optics)	95A901190
SIL-AREA-IR-FLOOD	infrared	25° (Flood Power Optics)	95A901520
SIL-AREA-WHITE-FLOOD	white	25° (Flood Power Optics)	95A901270
SIL-RING-RED-FLOOD	red	25° (Flood Power Optics)	95A901200
SIL-RING-IR-FLOOD	infrared	25° (Flood Power Optics)	95A901470
SIL-RING-WHITE-FLOOD	white	25° (Flood Power Optics)	95A901280
SIL-RING-WHITE-DIFFUSE	white	45° (Diffuse Power Optics)	95A901450
SIL-Laserline	red (Laser)	90°	95A901160
SIL-SPOT-RED-FLOOD	red	25° (Flood Power Optics)	95A901220
SIL-SPOT-RED-SPOT	red	6° (Spot Power Optics)	95A901460
SIL-SPOT-IR-FLOOD	infrared	25° (Flood Power Optics)	95A901510
SIL-SPOT-WHITE-FLOOD	white	25° (Flood Power Optics)	95A901300
SIL-BACK-RED-CONT	red	-	95A901210
SIL-BACK-WHITE-CONT	white	-	95A901290

LED DRIVERS

LD2 (for SIL SPOT-RING)	-	-	95A901250
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Customised illuminators can be manufactured on request according to the following options:

Emission colour (OSRAM Dragon Power LEDs)	Blue Green
Emission Angle (Datasensor Power Optics)	Spot 6° Diffuse 45° Line 10x30°

ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
CS-B1-02-G-03	3 m cable with 4-pole M8 straight female connector	95A251420
CS-B1-02-G-05	5 m cable with 4-pole M8 straight female connector	95A251430
SCS-B1-02-G-01	1 m cable with two 4-pole M8 straight male/female connectors	95A901070
SCS-AB1-02-B-01	1 m M8/M12 cable for SIL Laserline	95A901130

Distributed by:



HEADQUARTERS

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ILLUMINATORS