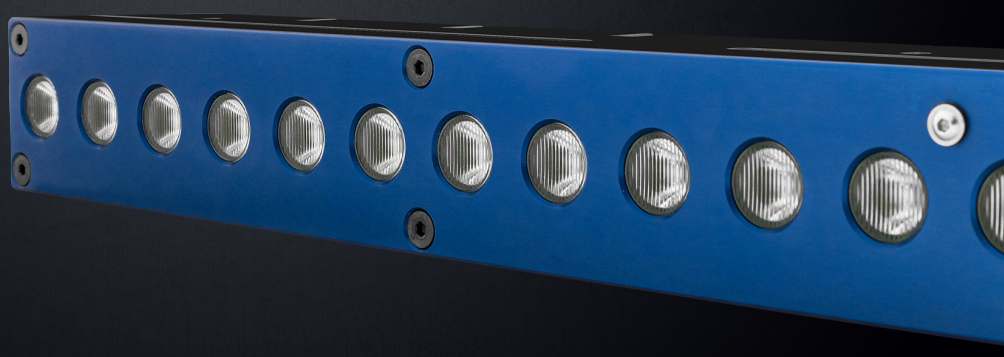
SmartView

LENS BAR
LIGHT

LL-300

Strong, direct, exchangeable-optics illumination of distant surfaces. Allows the use of Dark and Bright Field sources depending on the distance and angle towards the scanned object.



- 3 TYPES OF EXCHANGEABLE OPTICS
- STROBE FUNCTION
- LIGHT SOURCE INTENZITY REGULATION

LIGHT OPERATING MODES

PERMANENT ILLUMINATION MODE

This light is designed for both the permanent and light-triggering mode. For permanent illumination bring the voltage of 10-24 V to the pin number 4 (black wire). The light is ON during the time when the 24 V EN signal is activated. Use a PCL, camera or another binary signal source. For the light intensity control, please see the text bellow.

LIGHT TRIGGERING MODE

Light triggering mode saves energy and extends the lifetime of the light. Trigger operation mode is recommended when a parallel operation of 2 or more lights might affect the quality of the acquired image. To start using a triggering mode, bring the pin number 4 (black wire) to a 10-24 V signal. The light is ON when a voltage of 24 V is present at pin number 4 then. Use a PCL, camera, or another binary signal source for triggering. For the light intensity control, please see the text bellow.

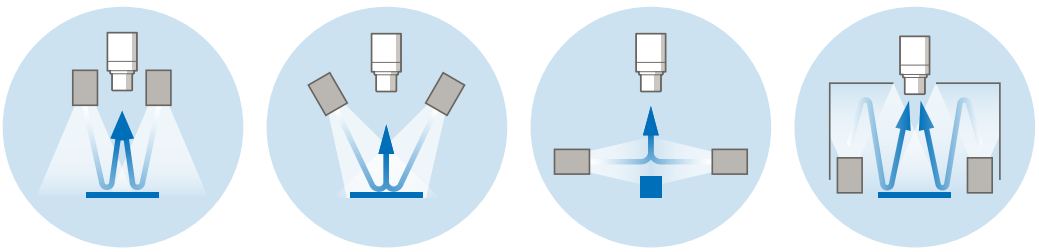
STROBE MODE

Strobe function significantly multiplies the maximum intensity of the light. The strobing function saves energy, extends the light lifetime and in many cases improves the stability of the entire inspections system. Pin number 2 (white wire) of the M8 connector is used to activate the strobe function. The maximum strobe pulse time is 10ms, while the light idle time must be at least 10 times longer, which in this case makes 100 ms. Bringing a permanent logical 1 signal (10-24 V voltage) to a light strobe input, the light standardly operates in a 10 ms ON and 100 ms OFF cycle. The strobe operation pulse might be chosen in the time span of 1-10 ms. Please do not use a trigger mode during strobing function, do not bring a voltage to the pin number 3.

LIGHT SOURCE INTENZITY REGULATION

The light intensity might be regulated by an analogue voltage, PWM signal or an external controller. In case of using an analogue signal, the light intensity might be regulated in a linear way at a pin number 4 by the voltage span of 2.7 -10 V. Bringing a voltage of 10-24 V to the pin number 4, the light works at its maximum intensity. The maximum PWM frequency is ≤ 40 kHz.

WAYS OF USE



CONFIGURATION

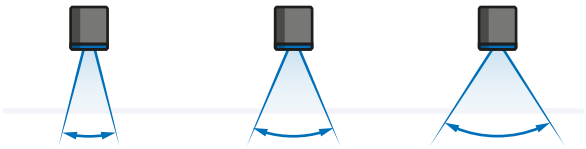
example of the ordering code

LL	-	300	B	-	L	-	S
Linear Light		Light Length	Wavelength		Optics		Strobe Function

OPTICS

different types of light optics

L Line	N Narrow	B Broad



CONFIGURATION

Model	Wavelength [nm]	Light Length [mm]
LL-300W	CTR 5000 k	300
LL-300HIR	940	300
LL-300IR	850	300
LL-300R	625	300
LL-300G	528	300
LL-300B	470	300

ELECTRIC PARAMETERS

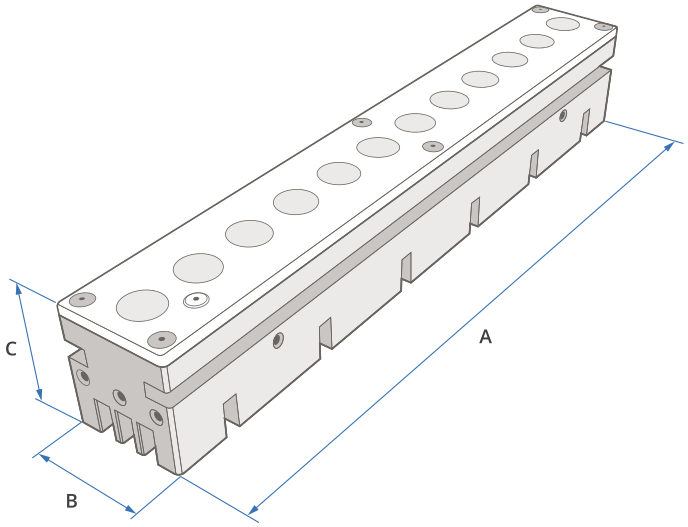
Model	LL-300W	LL-300HIR	LL-300IR	LL-300R	LL-300G	LL-300B
U_n Voltage Span	22-28 V	22-28 V	22-28 V	22-28 V	22-28 V	22-28 V
U_{jm} Nominal Voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
I_{jm} Nominal Current	1050 mA	1050 mA	1050 mA	1050 mA	1050 mA	1050 mA
P Input	25.2 W	25.2 W	25.2 W	25.2 W	25.2 W	25.2 W

U_{trig}	Trigger Voltage	≥ 10 - 24 V	2	I_{trig}	Trigger Current	2.3 mA	2	U_{EN} Analogue Dimming	≥ 2.7 .. ≤ 10 V	2
U_{str}	Strobe Voltage	3 - 24 V	3	I_{str}	Strobe Current	1.9 mA	3	I_{EN} PWM Dimming	> 10 V .. ≤ 24 V	1

1 *PWM maximal rate is ≤ 40 kHz* 2 *EN (Enable) trigger signal values, M8 connector – pin number 4* 3 *Driving voltage and current M8 connector - pin number 2*

DIMENSIONS & WEIGHT

A	Length [mm]	300
B	Width [mm]	45
C	Height [mm]	49
	Weight [g]	1 252



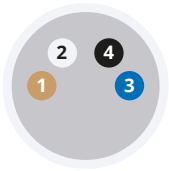
For more details please see **our 2D drawings**.

TECHNICAL DATA

IP Category: **IP60** | Protection Category: **III** | Ambient Temperature: **-20 - +40 °C** | Isolation Resistance: **500 V** | Housing Material: **Aluminium alloy**

CONNECTOR M8-4PIN ASSIGNMENT

light connector front view



1	Brown	+	+24 V
2	White		EN
3	Blue	−	0 V
4	Black		EN

• • • 2 **ENABLE - strobe mode (+24 V)**

• • • 4 **ENABLE**

- A permanent lighting or trigger signal (10-24 V)
- B light intensity regulation: analogue signal 2.7-10 V or PWM ≤ 40 kHz

ACCESSORIES

- ✓ Angular Cable M8-4PIN **(5 m)**
- ✓ Optics from **Optional Accessories**

OPTIONAL ACCESSORIES

- + Straight Cable M8-4PIN **(5 m)**
- + Line optics
- + Broad optics
- + Narrow optics
- + Controller **Smart Light CT-SL4D**
- + Controller **CM-01**
- + IP Category **IP67**

SmartView

YOUR VISION PARTNER

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