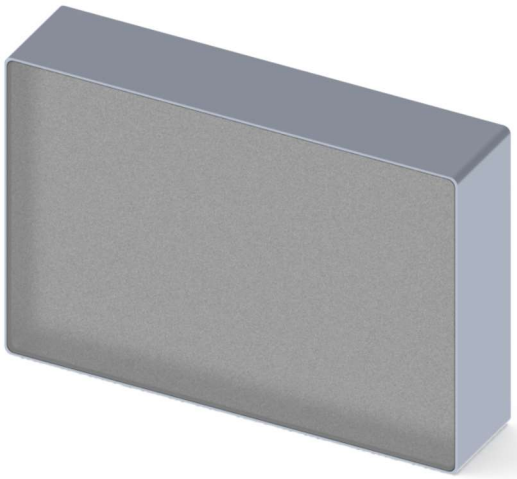
KPL300-30x20

LED backlight / LED frontlight for Cognex In-Sight systems

Version 1.1

Features

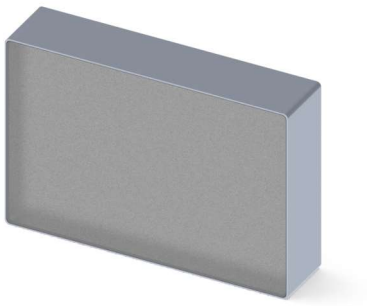
- Very high light intensity
- 600 high-power LEDs (30 x 20)
- Direct triggering by the camera
- Flashmode in overcurrent range
- Can be used up to a distance of 1.5 meters
- Flash duration between 16 µs[1] and 10 ms
- Closed compact industrial housing
- Simple mounting on the rear panel
- Protection class IP65



[1] depends on camera model

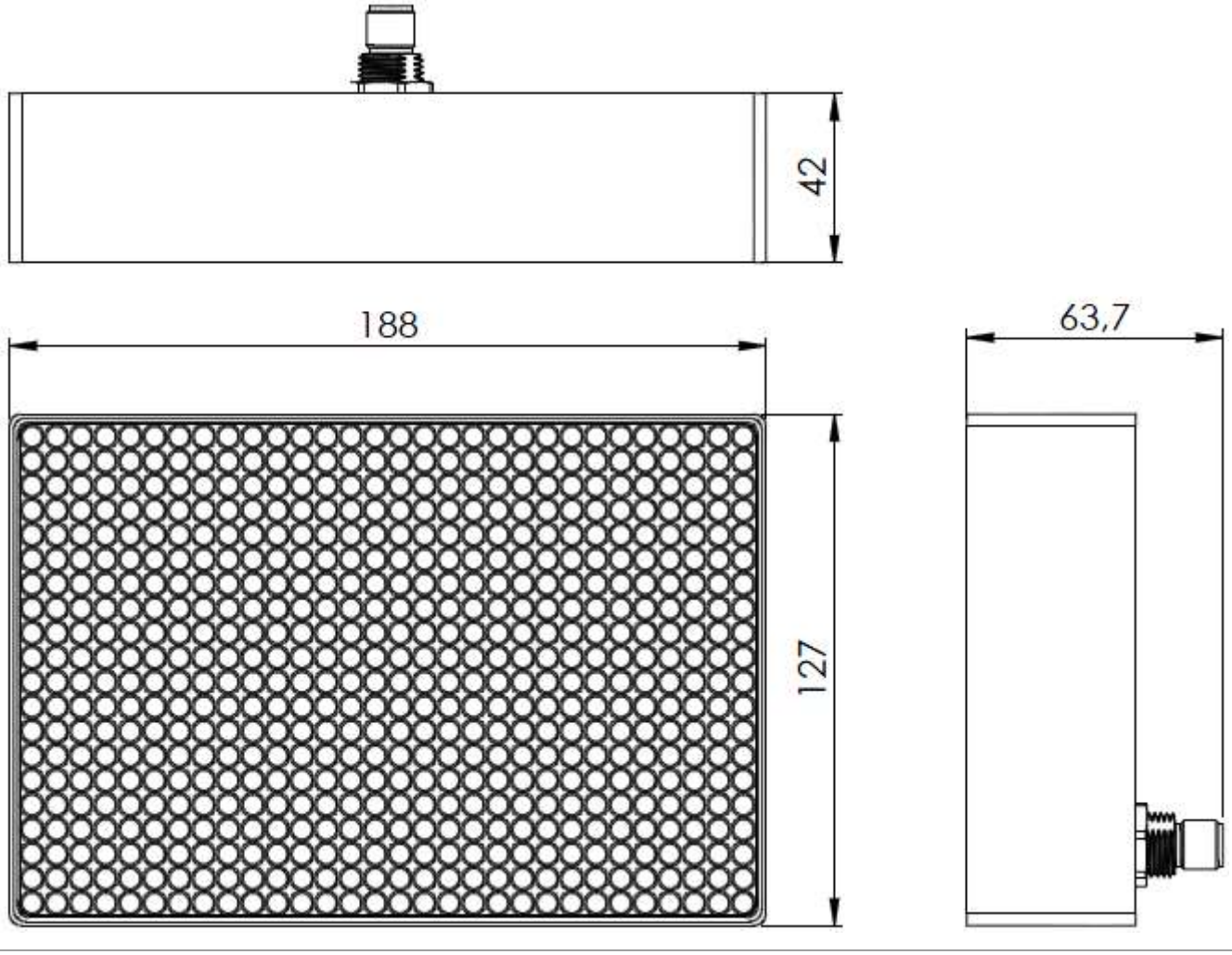
Description

The KPL300 has been specially developed for applications that require intensive LED backlight or LED frontlight. The illumination can be used, for example, for completeness checks, fill level checks or presence checks. The lighting has been designed to save space. The In-Sight system is controlled via the supplied cable. The flash mode achieves a high light intensity and prevents the LEDs from overheating.



Due to the large number of LEDs and the possibility of very short pulse times, an almost complete independence from ambient light influences can be ensured, even at longer distances. The housing milled from solid material and the bonded protective pane guarantee protection class IP65, making it suitable for use in harsh environments.

Dimensions (mm)



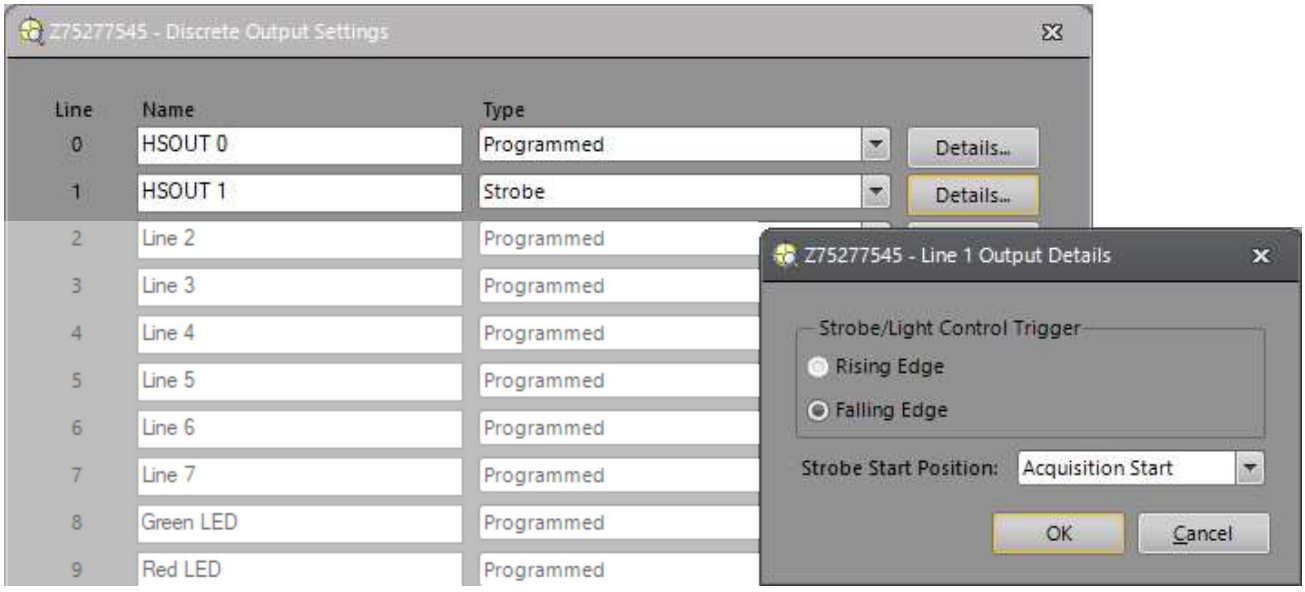
Assembly instruction

The KPL300 lighting can be mounted in different ways using M6x8 screws. Connection cables with straight or angled plugs are available for flexible and individual installation.

The 4-pole connection cable is connected to the housing plug of the KPL300. The supply voltage, trigger and active signal are connected via the connection cable.

Configuration in the In-Sight Explorer

In-Sight Explorer Menu: Sensor/Discrete Output Settings/Output 1

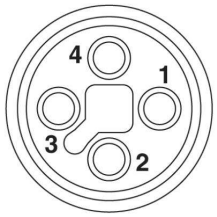


Technical data

Operating voltage	24 VDC
Current consumption	max. 8 A (pulse)
Trigger level low	0 ... ≤ 10 V
Trigger level high	≥ 14 ... 25 V
Operating temperature	0 to 45 °C
Protection class	IP 65
Storage temperature	- 40 to 85 °C
Maximum trigger time	Pulse width ≤10 ms and duty cycle ≤10 % The pulse time is monitored by an internal protective circuit.

Pin assignment

Connection socket
(M12 female)



Female socket view

PIN	Signal	Cable color	Connection
1	VDC (+24 VDC)	brown	+24 VDC
2	TRG (Trigger)	white	HSOUT 1 In-Sight System
3	GND (Ground)	blue	Ground
4	ACT (Active)	black	+24 VDC if LED active, else Ground

Warnings and safety instructions

Do not stare into beam.

This device produces light of high intensity. It may be harmful if exposed to prolonged exposure.

Ensure sufficient heat convection.

Clean the device reguarly and do not cover it.

Do not disassemble the device and do not operate it without the protective screen.

Heavily contaminated glass prevents the light emission and increases the heat generation.

If the temperature of the lighting is permanently too high, the lifetime of the LEDs may be reduced.

Always adjust the flash duration according to the application.

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