

## High power LED pattern projector, IR, 850 nm, integrated electronics



### KEY ADVANTAGES

**High efficiency LEDs** for sharp edges, superior homogeneity and contrast

#### 5 PIN M12 Connector

Compatible with standard **C-mount lenses up to 1.1"**

**Automatic shutdown** in case of overheating

**Interchangeable projection patterns**

**LTPRUP series** features high-power LED pattern projectors designed for inline or offline applications including quality control, 3D reconstruction, dimensional measurement, planarity control, robot guidance and alignment applications.

### SPECIFICATIONS

#### Lighting specifications

Active area diameter	(mm)	17.6
Light color, peak wavelength		IR, 850 nm
Spectral FWHM	(nm)	35
Illuminance, continuous <sup>1</sup>	(klux)	0.885
Irradiance, continuous <sup>1</sup>	(W/m <sup>2</sup> )	4850
Illuminance, strobe <sup>1</sup>	(klux)	2.7
Irradiance, strobe <sup>1</sup>	(W/m <sup>2</sup> )	13300

#### Electrical specifications

Operating mode		Continuous and strobe
Power supply mode		-
Supply voltage <sup>2</sup>	(V)	24
Current <sup>2</sup>	(A)	0.62
Power consumption <sup>2</sup>	(W)	14.9
Peak power consumption <sup>3</sup>	(W)	45.6
Max led forward current <sup>3</sup>	(A)	3
Min pulse duration	(μs)	2
Max pulse duration	(ms)	10
Max duty cycle	(%)	10
Typical pulse delay	(%)	400
Typical jitter	(%)	100
I/O interface	PNP logic input, NPN logic input, analog dimming input	
Connector	1x M12 straight plug male connector	
Included cable	not included	

#### Mechanical specifications

Mount		C
Phase adj availability		Yes
Length	(mm)	100.7
Width	(mm)	59.1
Height	(mm)	59.1
Mass	(g)	332

#### Environment

Operating temperature	(°C)	0-40
Storage temperature	(°C)	0-50
Operating relative humidity	(%)	20-85, non condensing
Installation		Indoor use only
IP rating		IP30

#### Eye safety

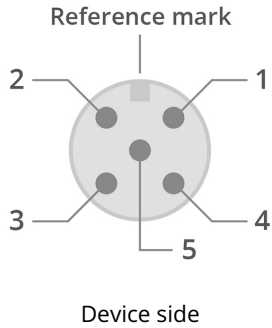
Risk group (CEI EN 62471:2010)		Risk group 2
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<sup>1</sup> At pattern emitting surface.

<sup>2</sup> Continuous mode, using the integrated electronic driver.

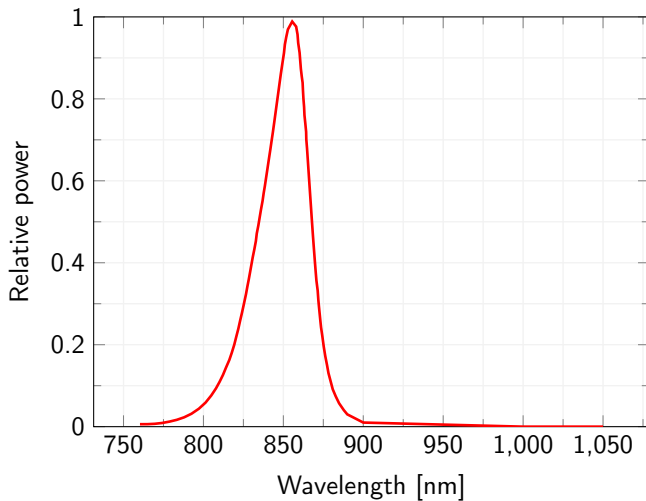
<sup>3</sup> Strobe mode.

### CONNECTOR PINOUT

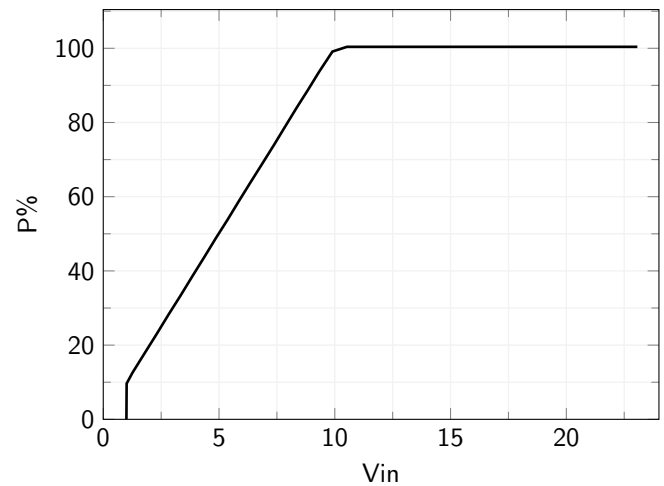


Pin	Function
1	+24Vdc
2	NPN
3	GND
4	PNP
5	Analog dimming (0-10V)

### LED color spectrum



### Analog input specification



### RECOMMENDED ACCESSORIES

Opto-Engineering® suggests the following accessories to power the camera:

- **CBLTM12-5P-2M**, Illumination cable PVC black, Side 1 M12 female connector 5 poles, Side 2 cable end - 2 m
- **CBLTM12-5P-5M**, Illumination cable PVC black, Side 1 M12 female connector 5 poles, Side 2 cable end - 5 m
- **CBLTM12-5P-10M**, Illumination cable PVC black, Side 1 M12 female connector 5 poles, Side 2 cable end - 10 m

### COMPATIBLE PRODUCTS

Full list of compatible products available [here](#).



A wide selection of innovative machine vision components.