

## High power LED pattern projector, blue, 465 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		blue, 465 nm
Spectral FWHM	(nm)	30
Illuminance, continuous <sup>1</sup>	(klux)	202
Irradiance, continuous <sup>1</sup>	(W/m <sup>2</sup> )	9100
Illuminance, strobe <sup>1</sup>	(klux)	224
Irradiance, strobe <sup>1</sup>	(W/m <sup>2</sup> )	13100

#### Electrical specifications

Operating mode		Continuous and strobe
Power supply mode		-
Supply voltage <sup>2</sup>	(V)	24
Current <sup>2</sup>	(A)	1.3
Power consumption <sup>2</sup>	(W)	31.2
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

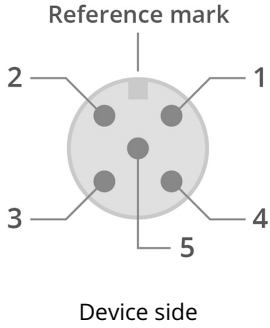
Risk group (CEI EN 62471:2010)		Risk group 3
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<sup>1</sup> At pattern emitting surface.

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

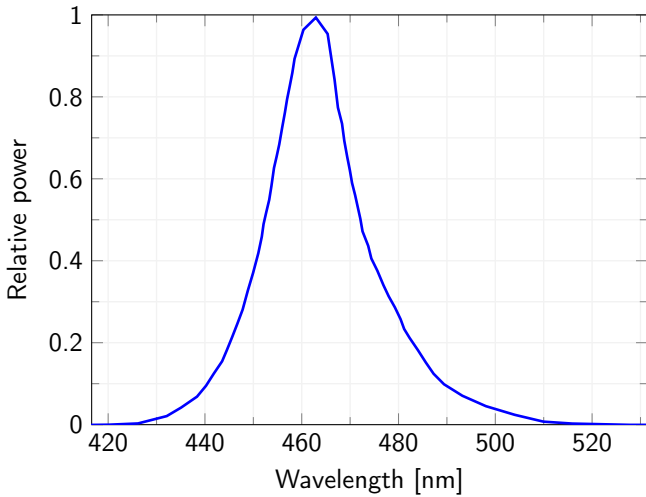
<sup>3</sup> Strobe mode.

**CONNECTOR PINOUT**

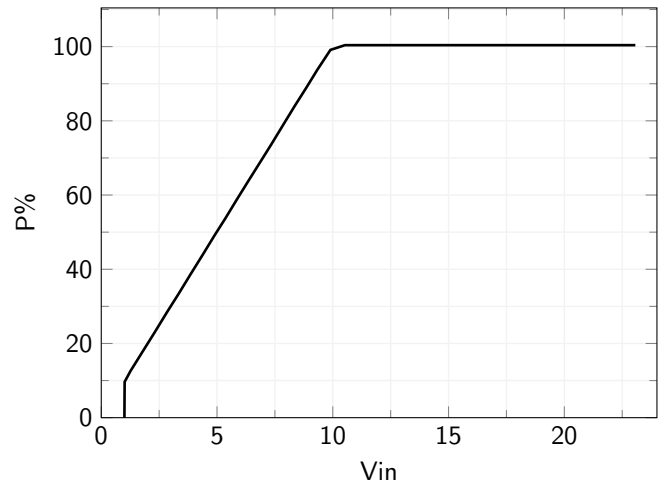


Pin	Function
1	+24Vdc
2	NPN
3	GND
4	PNP
5	Analog dimming (0-10V)

**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.

All product specifications and data are subject to change without notice to improve reliability, functionality, design or other. Photos and pictures are for illustration purposes only. Data are reported by design, actual lens performance may vary due to manufacturing tolerances.