

# LTCL4K090-W | DATASHEET

## Telecentric illuminator for line scan cameras, beam dimension 102 x 10 mm, white



### KEY ADVANTAGES

#### Compact design

"Flat" shape for easy integration.

#### High optical throughput and enhanced field depth

When coupled with compatible TC4K telecentric lenses.

#### Dedicated CMMR4K mirrors

Right-angle deflection of the light path for usage in tight spaces.

#### Homogeneity test report with measured values

**LTCL4K telecentric illuminators** are specifically designed to be paired with TC4K telecentric lenses, in order to provide the high optical throughput needed for high-speed line scan measurement applications involving for instance steering components, gear and cam shafts, grinding and turning parts.

### SPECIFICATIONS

#### Lighting specifications

Beam dimension <sup>1</sup>	(mm)	102 x 10
Working distance	(mm)	90 - 300
Light color, peak wavelength <sup>2</sup>		white, 6000 K
Spectral FWHM	(nm)	-

#### Electrical specifications

Supply voltage <sup>3</sup>	(V)	12-24
Max power consumption	(W)	2.5
Led forward voltage typical (max) <sup>4</sup>	(V)	2.8 (-)
Max led forward current <sup>5</sup>	(mA)	350
Max pulse current <sup>6</sup>	(mA)	2000
Connector		M8
Included cable		CB244P1500

#### Mechanical specifications

Length <sup>7</sup>	(mm)	294.4
Width	(mm)	114.0
Height	(mm)	38.5
Mass	(g)	1315

#### Environment

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

#### Eye safety

Risk group (CEI EN 62471:2010)	Risk group 2
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<sup>1</sup> Beam shape is not circular

<sup>2</sup> Opto Engineering recommends green light for high precision measurements application

<sup>3</sup> Tolerance  $\pm 10\%$

<sup>4</sup> At max forward current. Tolerance is  $\pm 0.06V$  on forward voltage measurements

<sup>5</sup> In continuous mode (not pulsed)

<sup>6</sup> At pulse with  $\leq 10ms$  and duty cycle  $\leq 10\%$ . Built in electronics board must be bypassed (see tech info)

<sup>7</sup> Nominal value, with no spacers in place

### 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.

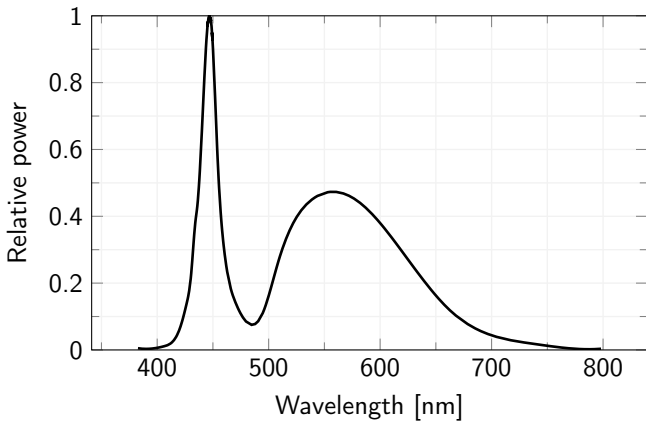
**CONNECTOR PINOUT**



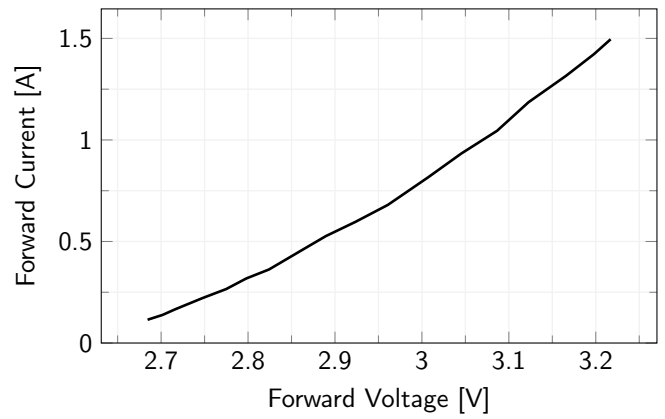
Device side

Pin	Function	Cable color
1	Earth	Yellow/Green
2	Ground	Black
3	Anode	Blue
4	Power supply (+12/24 V)	Brown

**LED color spectrum**



**Forward Current Characteristics**



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