

# LTCLHP023-R | DATASHEET

## Telecentric HP illuminator, beam diameter 16 mm, red



### SPECIFICATIONS

#### Lighting specifications

Beam diameter	(mm)	16
Working distance	(mm)	45 - 90
Light color, peak wavelength <sup>1</sup>		red, 625 nm
Spectral FWHM	(nm)	20

#### Electrical specifications

Supply voltage <sup>2</sup>	(V)	12-24
Max power consumption	(W)	2.5
Led forward voltage typical (max) <sup>3</sup>	(V)	2.4 (3)
Max led forward current <sup>4</sup>	(mA)	350
Max pulse current <sup>5</sup>	(mA)	2000
Connector		M8
Included cable		CB244P1500

#### Mechanical specifications

Front Diameter	(mm)	28.0
Length <sup>6</sup>	(mm)	96.8
Mass	(g)	152

### KEY ADVANTAGES

#### Complete light coupling

All the light emitted by a LTCLHP source is collected by a telecentric lens and transferred to the camera detector, ensuring very high signal-to-noise ratios.

#### Border effects removal

Diffused back-illuminators often make objects seem smaller than their actual size because of light reflections on the object sides, while collimated rays are typically much less reflected.

#### Field depth and telecentricity improvement

Collimated illumination geometry increases a telecentric lens natural field depth and telecentricity far beyond its nominal specs.

#### Homogeneity test report with measured values

**LTCLHP series** are high-performance telecentric illuminators specifically designed to back illuminate objects imaged by telecentric lenses.

#### 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)	Exempt
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<sup>1</sup> Opto Engineering recommends green light for high precision measurements application

<sup>2</sup> Tolerance  $\pm 10\%$

<sup>3</sup> At max forward current. Tolerance is  $\pm 0.06V$  on forward voltage measurements

<sup>4</sup> In continuous mode (not pulsed)

<sup>5</sup> At pulse with  $\leq 10ms$  and duty cycle  $\leq 10\%$ . Built in electronics board must be bypassed (see tech info)

<sup>6</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.

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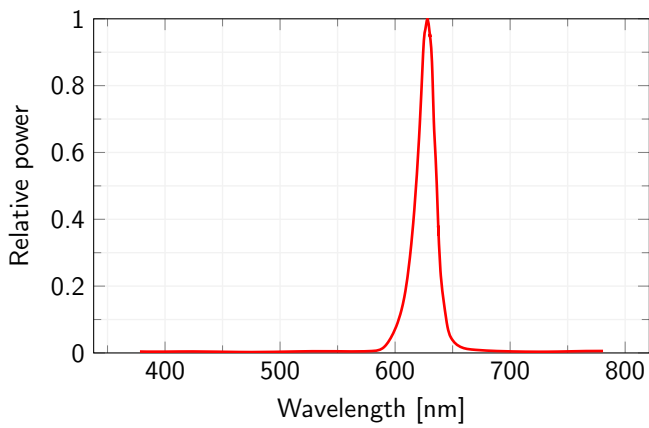
**CONNECTOR PINOUT**



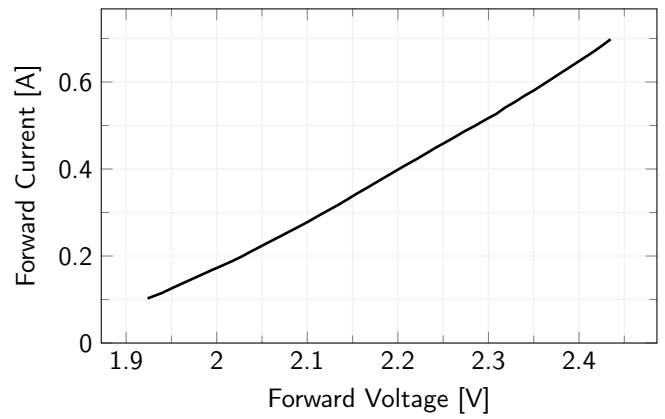
Device side

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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