

LTCLHP023-W | DATASHEET

Telecentric HP illuminator, beam diameter 16 mm, white



SPECIFICATIONS

Lighting specifications

Beam diameter	(mm)	16
Working distance	(mm)	45 - 90
Light color, peak wavelength ¹		white, 6000 K
Spectral FWHM	(nm)	-

Electrical specifications

Supply voltage ²	(V)	12-24
Max power consumption	(W)	2.5
Led forward voltage typical (max) ³	(V)	2.8 (-)
Max led forward current ⁴	(mA)	350
Max pulse current ⁵	(mA)	2000
Connector		M8
Included cable		CB244P1500

Mechanical specifications

Front Diameter	(mm)	28.0
Length ⁶	(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)	Risk group 2
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¹ Opto Engineering recommends green light for high precision measurements application

² Tolerance $\pm 10\%$

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

⁴ In continuous mode (not pulsed)

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

⁶ 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.

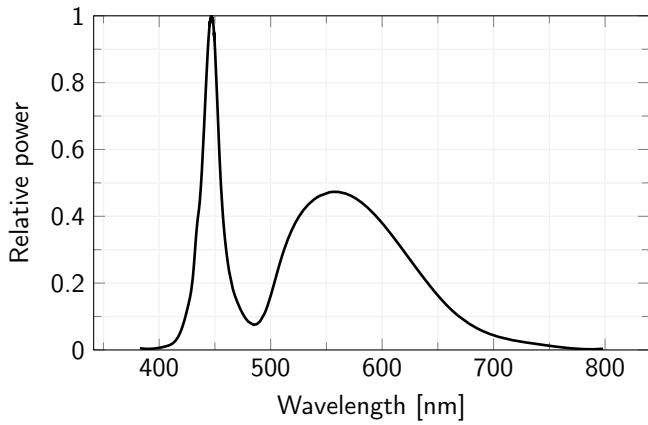
CONNECTOR PINOUT



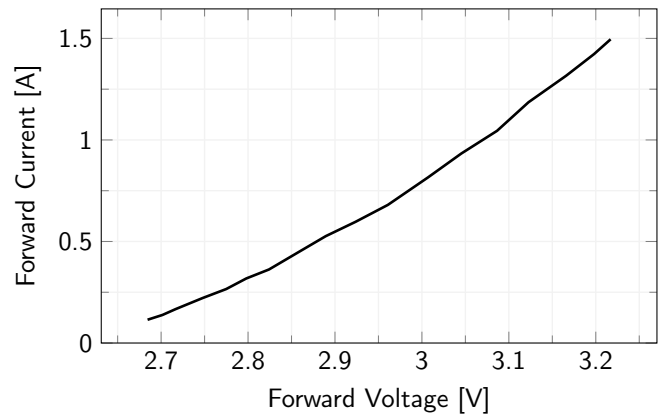
Device side

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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