

# LTCLHP096-R

Telecentric HP illuminator, beam diameter 120 mm, red

## SPECIFICATIONS

### Optical specifications

Beam diameter	(mm)	120
Working distance range	(mm)	200 - 350
Light color, peak wavelength (1)		red, 630 nm

### Mechanical specifications

Length (2)	(mm)	322.2
Outer diameter	(mm)	143
Mass	(g)	2161

### Electrical specifications

#### Device power ratings

DC voltage minimum (3)	(V)	12
DC voltage maximum (3)	(V)	24
Power consumption	(W)	< 2.5
Max LED forward current (4)	(mA)	350
Cables		CB244P1500 included

#### LED power ratings

Forward voltage (typical) (5)	(V)	2.4
Forward voltage (max) (5)	(V)	3.00
Max pulse current (6)	(mA)	2000

#### Eye safety

Risk group according to CEI EN 62471:2010	Exempt
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Last update: 2021-06-22

## NOTES

1. Opto Engineering® recommends green light for high precision measurement applications
2. Nominal value, with no spacers in place
3. Tolerance ± 10%
4. Used in continuous (not pulsed) mode
5. At max forward current. Tolerance is ±0.06V on forward voltage measurements
6. At pulse width ≤ 10 ms, duty cycle ≤ 10% condition. Built-in electronics board must be bypassed (see tech info)

## COMPATIBLE PRODUCTS

Despite the efforts made to generate an error-free compatibility list, we always recommend to consult the Opto Engineering® technical support department before purchasing a compatible product. Opto Engineering® shall not be liable for any damage or malfunctioning caused by the incorrect selection of a compatible product.



TC series

Bi-telecentric lenses for sensors up to 2/3"

TC23085	Bi-telecentric lens for 2/3" detectors, magnification 0.104 x, C-mount
TC13096	Bi-telecentric lens for 1/3" detectors, magnification 0.050 x, C-mount
TC12096	Bi-telecentric lens for 1/2" detectors, magnification 0.068 x, C-mount
TC23096	Bi-telecentric lens for 2/3" detectors, magnification 0.093 x, C-mount

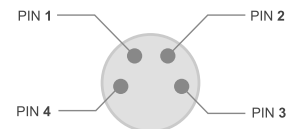


TC CORE series

Compact bi-telecentric lenses for sensors up to 2/3"



## CONNECTION



Device side - male pins

Front view

Pinout reference

Pin	Function
1	Earth
2	GND
3	LED Anode
4	Power supply (+12÷24 V)



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.

TCCR12096	Bi-telecentric CORE lens for 1/2" detectors, magnification 0.068 x, C-mount
TCCR23096	Bi-telecentric CORE lens for 2/3" detectors, magnification 0.093 x, C-mount



TC1MHR-TC4MHR CORE series  
Compact telecentric lenses for sensors up to 4/3"

TCCR2M096-C	Telecentric CORE lens for 1" detectors, magnification 0.137 x, C-mount
TCCR2M096-E	Telecentric CORE lens for 1" detectors, magnification 0.137 x, M42x1 FD=16
TCCR4M096-C	Telecentric CORE lens for 4/3" detectors, magnification 0.186 x, C-mount
TCCR4M096-F	Telecentric CORE lens for 4/3" detectors, magnification 0.186 x, F-mount
TCCR4M096-E	Telecentric CORE lens for 4/3" detectors, magnification 0.186 x, M42x1 FD=16



TC1MHR-TC4MHR series

Telecentric lenses for sensors up to 4/3"

TC1MHR096-C	High resolution telecentric lens for 1/1.2" detectors, magnification 0.114x, C-mount
TC2MHR096-C	High resolution telecentric lens for 1" detectors, magnification 0.137x, C-mount
TC2MHR096-F	High resolution telecentric lens for 1" detectors, magnification 0.137x, F-mount
TC2MHR096-E	High resolution telecentric lens for 1" detectors, magnification 0.137x, mount M42X1 FD=16
TC3MHR096-C	High resolution telecentric lens for 1.1" detectors, magnification 0.153x, C-mount
TC4MHR096-C	High resolution telecentric lens for 4/3" detectors, magnification 0.186x, C-mount
TC4MHR096-F	High resolution telecentric lens for 4/3" detectors, magnification 0.186x, F-mount
TC4MHR096-E	High resolution telecentric lens for 4/3" detectors, magnification 0.186x, mount M42X1 FD=16



TC16M series

Telecentric lenses for sensors up to 43.3 mm and 8k line scan cameras

TC16M096	Telecentric lens for 35 mm detectors, magnification 0.380 x, F-mount
TC16M096-Q	Telecentric lens for 35 mm detectors, magnification 0.380 x, mount M58x0.75 FD = 6.56



TC12M series

Telecentric lenses for sensors up to APS-H and 4k line scan cameras

TC12M096-F	High resolution telecentric lenses, magnification 0.306, WD 256.0, F mount
TC12M096-J	High resolution telecentric lenses, magnification 0.306, WD 256.1, M42x1 FD12



TCDP series

Double port bi-telecentric lens for detector up to 2/3"

TCDP2X096	Double magnification bi-telecentric lens, for detectors up to 2/3"
TCDP4X096	Double magnification bi-telecentric lens, for detectors up to 2/3"



CMMR series

45° first surface mirrors

CMMR096	45° first surface mirror for 143 mm clamping diameter optics
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Accessories

Accessories and add-ons to make the most of Opto Engineering® lenses.

Diffuser cap for LTCLHP illuminators

LED1W-R	Replacement LED source, red
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WI series

Protective windows for lenses

WI096	Protective window for 143 mm clamping diameter optics
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CMHO series

Clamping mechanics for lenses

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CMHO096 Clamping mechanics for TCxx085, TCxx096 lenses and LTCLHP096-X illuminators



LTSCHP series

High-performance replacement LED modules

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LTSCHP1W-R Replacement LED module, red



PS series

Power supplies

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RT-SDR-120-24 24VDC DIN rail power supply



CB series

Cables

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CB244P1500 Power cable, side 1 M8 connector straight, side 2 cable end - 2 m - type 1 labels

CB244P1500L Power cable, side 1 M8 connector angled, side 2 cable end - 2 m - type 1 labels



CMT series

Precision alignment mechanics for lenses

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CMTH096 Precision alignment mechanics for telecentric optics 096



LTIC series

LED lighting controllers

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LTIC1CH-A1-4 Analogue lighting controller unit, 4A, 24V

LTIC1CH-D1-4 Digital lighting controller unit, 4A, 24V

LTICOBUL1000CH1-24VUSTB 24VDC analog lighting controller 1 channel, UK power cord, Illumination cable, side A SM 3 way male connector, side B terminal blocks connector, 24V - 3m

LTICOBUL1000CH1-24VEUTB 24VDC analog lighting controller 1 channel, UK power cord, Illumination cable, side A SM 3 way male connector, side B terminal blocks connector, 24V - 3m

LTICOBUL1000CH1-24VUKTB 24VDC analog lighting controller 1 channel, UK power cord, Illumination cable, side A SM 3 way male connector, side B terminal blocks connector, 24V - 3m

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