



# LTCLHP048-B

Telecentric HP illuminator, beam diameter 60 mm, blue

## SPECIFICATIONS

### Optical specifications

Beam diameter	(mm)	60
Working distance range	(mm)	90 - 180
Light color, peak wavelength (1)		blue, 460 nm

### Mechanical specifications

Length (2)	(mm)	187.2
Outer diameter	(mm)	75
Mass	(g)	585

### 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)	3.3
Forward voltage (max) (5)	(V)	4.00
Max pulse current (6)	(mA)	2000

### Eye safety

Risk group according to CEI EN 62471:2010	Risk group 2
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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"

TC13048	Bi-telecentric lens for 1/3" detectors, magnification 0.098 x, C-mount
TC12048	Bi-telecentric lens for 1/2" detectors, magnification 0.134 x, C-mount
TC23048	Bi-telecentric lens for 2/3" detectors, magnification 0.184 x, C-mount

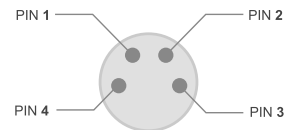


TC CORE series

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.

TCCR12048 Bi-telecentric CORE lens for 1/2" detectors, magnification 0.134 x, C-mount

TCCR23048 Bi-telecentric CORE lens for 2/3" detectors, magnification 0.184 x, C-mount



TC1MHR-TC4MHR CORE series

Compact telecentric lenses for sensors up to 4/3"

TCCR2M048-C Telecentric CORE lens for 1" detectors, magnification 0.268 x, C-mount

TCCR2M048-E Telecentric CORE lens for 1" detectors, magnification 0.268 x, M42x1 FD=16

TCCR4M048-C Telecentric CORE lens for 4/3" detectors, magnification 0.369 x, C-mount

TCCR4M048-F Telecentric CORE lens for 4/3" detectors, magnification 0.369 x, F-mount

TCCR4M048-E Telecentric CORE lens for 4/3" detectors, magnification 0.369 x, M42x1 FD=16



TC1MHR-TC4MHR series

Telecentric lenses for sensors up to 4/3"

TC1MHR048-C High resolution telecentric lens for 1/1.2" detectors, magnification 0.222x, C-mount

TC2MHR048-C High resolution telecentric lens for 1" detectors, magnification 0.268x, C-mount

TC2MHR048-F High resolution telecentric lens for 1" detectors, magnification 0.268x, F-mount

TC2MHR048-E High resolution telecentric lens for 1" detectors, magnification 0.268x, mount M42X1 FD=16

TC3MHR048-C High resolution telecentric lens for 1.1" detectors, magnification 0.303x, C-mount

TC4MHR048-C High resolution telecentric lens for 4/3" detectors, magnification 0.369x, C-mount

TC4MHR048-F High resolution telecentric lens for 4/3" detectors, magnification 0.369x, F-mount

TC4MHR048-E High resolution telecentric lens for 4/3" detectors, magnification 0.369x, mount M42X1 FD=16



TC16M series

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

TC16M048 Telecentric lens for 35 mm detectors, magnification 0.751 x, F-mount

TC16M048-Q Telecentric lens for 35 mm detectors, magnification 0.751 x, mount M58x0.75 FD =6.56

TC16M048-K Telecentric lens for 45.72 mm detectors, magnification 0.75 x, M58x0.75 FD 12.96-mount



TC12M series

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

TC12M048-F High resolution telecentric lenses, magnification 0.635, WD 131.1, F mount

TC12M048-J High resolution telecentric lenses, magnification 0.635, WD 131.2, M42x1 FD12



CMBS series

45° beam splitters

CMBS048 45° beam splitter with mount for 75 mm clamping diameter optics



Accessories

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

LED1W-B Replacement LED source, blue

Diffuser cap for LTCLHP illuminators



CMMR series

45° first surface mirrors

CMMR048 45° first surface mirror for 75 mm clamping diameter optics



WI series

Protective windows for lenses

WI048 Protective window for 75 mm clamping diameter optics

CMHO series



Clamping mechanics for lenses

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[CMHO048](#) Clamping mechanics for TCxx048 lenses and LTCLHP048-X illuminators

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LTSCHP series

High-performance replacement LED modules

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[LTSCHP1W-B](#) Replacement LED module, blue

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PS series

Power supplies

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[RT-SDR-120-24](#) 24VDC DIN rail power supply

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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

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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 5M 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 5M 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 5M 3 way male connector, side B terminal blocks connector, 24V - 3m

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