



OPTO ENGINEERING



INSTRUCTIONS MANUAL

LTPRXP series

HP LED pattern projector



LIGHTING

Table of contents

1. Product overview.....	3
2. Instruction for use.....	4
2.1. Operation options.....	4
2.2. LTPRXP pattern positioning instructions	8
3. CE conformity.....	13

1. Product overview

LTPRXP series consists of different LED pattern projectors available with a 10W power intensities and four wavelengths designed for the most demanding structured light applications including 3D profilometry, stereovision, and alignment.

Unlike laser sources, our LED pattern projectors ensure sharp edges and homogeneous light without scattering and diffraction effects. Several projections patterns can be easily interchanged to project any kind of shape. Additionally LTPRXP features built in phase-adjustment for easy alignment of the pattern. Any C-mount optics can be interfaced with LTPRXP series to project areas with different sizes.

2. Instruction for use

2.1. Operation options

LTPRXP LED modules can be operated in only one way:

- **standard** usage option: through the built-in electronics

Part number	Light color, wavelength peak	Device power ratings			Max LED forward current (mA) ²	Compatibility
		DC Voltage ¹		Power consumption (W)		
		Minimum (V)	Maximum (V)			
LTPRXP-R	red, 630 nm	24	24	< 13	700	EN2MP series, EN5MP series, CB244P1500, CB244P1500L, PTPR series
LTPRXP-G	green, 520 nm	24	24	< 13	700	
LTPRXP-B	blue, 460 nm	24	24	< 13	700	
LTPRXP-W	white	24	24	< 13	700	

¹ Tolerance $\pm 10\%$

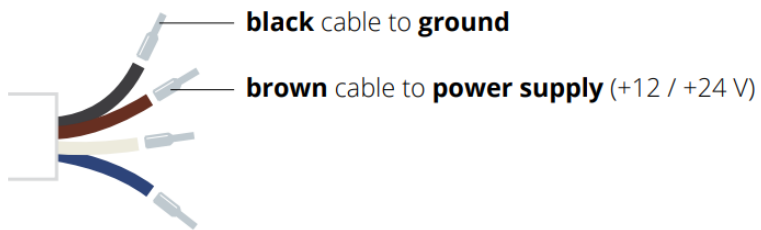
² Max continuous LED driving current is supplied through the built-in electronics. No external controller is required.

2.1.1 STANDARD usage option (LED control through built-in electronics)

Only continuous mode (constant voltage) is allowed.

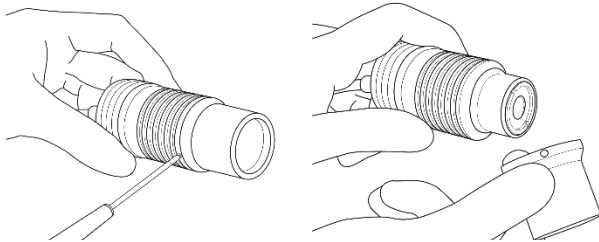
Connections

Connect the black and brown cables to your +12 / +24 V power supply.

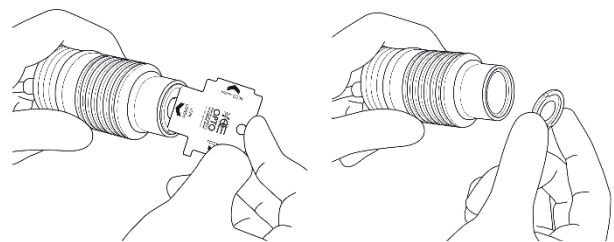


2.2. LTPRXP pattern positioning instructions

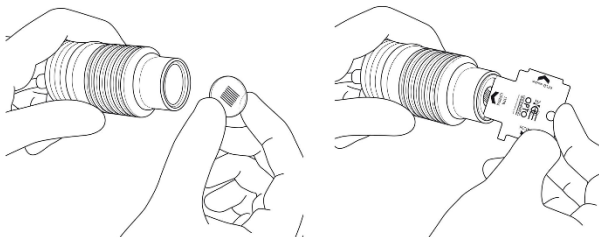
By default, LTPRXP pattern projector units are provided without any projection pattern inside. A PTPR series projection pattern can be easily mounted inside the unit by the user following these instructions, which apply to the following:



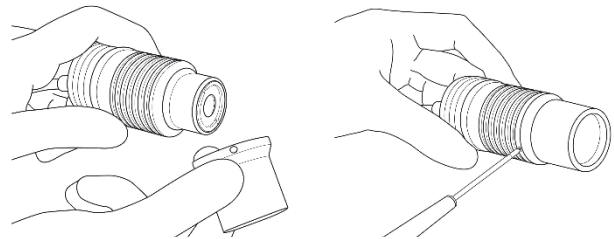
Loosen the socket head set-screws by means of an M1.5 or M2 Allen key and remove the C-mount adaptor.



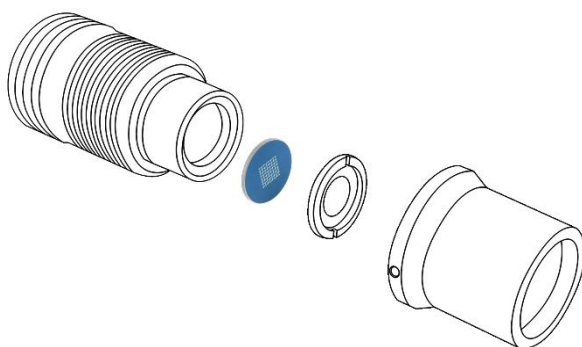
Remove the retaining ring using the provided PTOOL instrument.



Fix the projection pattern in place by screwing the retaining ring with the provided PTOOL.



Insert back in place the C-mount adaptor and fix it by tightening the socket head set-screws with an M1.5 Allen key.



Uncoated surface towards light source

Coated surface towards projection lens



Make sure to perform this procedure in a clean, non-dusty environment in order to prevent dust or other particles from entering the lens

3. CE conformity

Opto Engineering declares the products of the LTPRXP compliant with the provisions of the Community Directive 2014/30/UE EN 61326-1 (measuring devices and control laboratory) including all applicable amendments, and that all standards and/or technical specifications mentioned below have been applied:

Method	Title
CEI EN 61326-1:2013-07	Electrical equipment for measurement, control and laboratory use EMC requirements. Part1: General requirements
CEI EN 61000-4-2	Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques- Electrostatic discharge immunity test
CEI EN 61000-4-3	Electromagnetic compatibility (EMC) Part 4-3 : Testing and measurement techniques - Electromagnetic field immunity test
CEI EN 61000-4-4	Electromagnetic compatibility (EMC) Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
CEI EN 61000-4-5	Electromagnetic compatibility (EMC) Part 4-5: Testing and measurement techniques - Surge immunity test
CEI EN 61000-4-6	Electromagnetic compatibility (EMC) Part 4-6: Testing and measurement techniques - Electrical fast transient/burst immunity test

Products LTPRXP Series are classified into risk groups according to CEI-EN-62471 (Photobiological Safety of Lamps and lamp Systems).



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