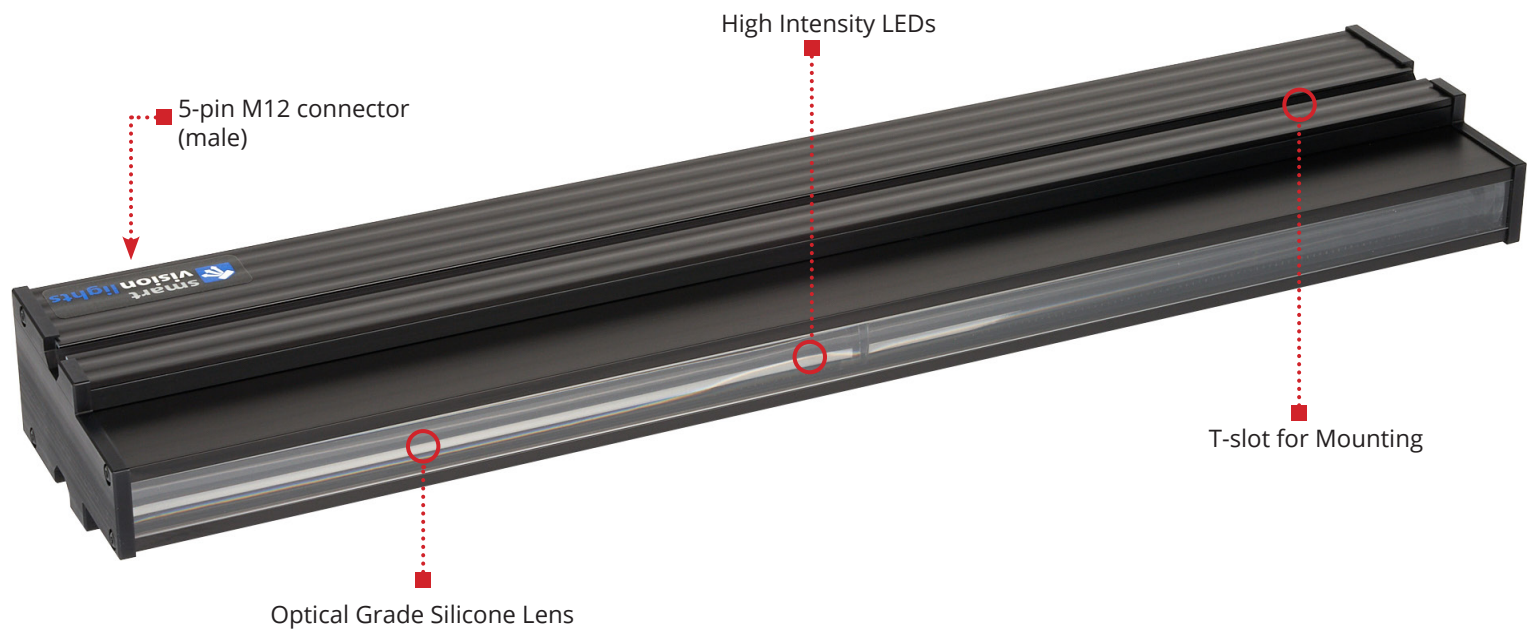


# LCHPX SERIES High Power Line Scan

## LOW-COST



The LCHPX is a low-cost, high-powered line scan light that is capable of over 800,000 lux. This light can achieve high lux output without the need for internal fans. The LCHPX is fully enclosed and can be mounted using standard T-slot mounting hardware.

## LCHPX HIGHLIGHTS

Warranty <b>3 YEAR</b>	Tested <b>IEC 62471</b>	Compliant <b>CE ROHS</b>	Rated <b>IP 50</b>	Connector <b>5-PIN M12</b>
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- ✓ Capable of over 800,000 lux
- ✓ Passive cooling
- ✓ 5-Pin M12 connector
- ✓ Available in visible, IR, and UV wavelengths
- ✓ Durable optical grade silicone lenses

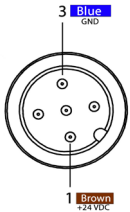
## SPECIFICATIONS

<b>Electrical Input</b>	24 VDC +/- 5%
<b>Input Current</b>	Max. 1.6 A per 300 mm section
<b>Input Power</b>	Max. 38.4 W per 300 mm section
<b>Connection</b>	5-pin M12 connector
<b>Operating Temperature</b>	-10° to 40° C (14° - 104° F)   RH max 80% non-condensing humidity
<b>Storage Temperature</b>	-20° to 70° C (-4° - 158° F)   RH max 80% non-condensing humidity
<b>IP Rating</b>	IP50
<b>Weight</b>	~4.4 lbs   ~2 kgs per 300 mm segment
<b>Compliances</b>	CE, FCC, RoHS, REACH, WEEE
<b>Warranty</b>	3 years*

\*See [SmartVisionLights.com/warranty](http://SmartVisionLights.com/warranty) for details

## WIRING CONFIGURATION

### CONTINUOUS OPERATION MODE



Pin layout for light (Male Connector)

Pins	Function	Signal	Wire Color
1	Power In	+24VDC	BROWN
2	Not Applicable	Not Applicable	WHITE
3	GND	Ground	BLUE
4	Not Applicable	Not Applicable	BLACK
5	Not Applicable	Not Applicable	GREY*

## LIGHTING PATTERNS

\*NOTE – Lens positions are set at Smart Vision Lights and are not user serviceable. See the following part number information for details. The following patterns are based on the LCHPX300.

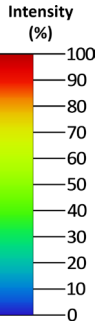
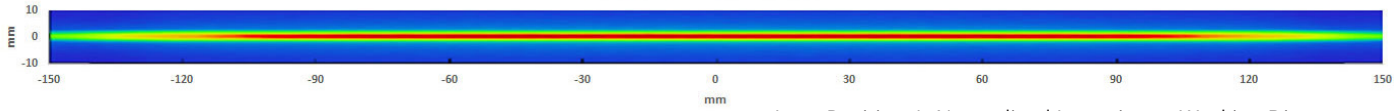
Lens Position	Working Distance (mm)	Beam Width (mm)	Illuminance (Lux) Values
1	35	2.5	805,000
2	50	3	644,000
3	100	4.5	290,000
4	100	8	274,000

**Illumination measurement taken on white light, 5700 K**

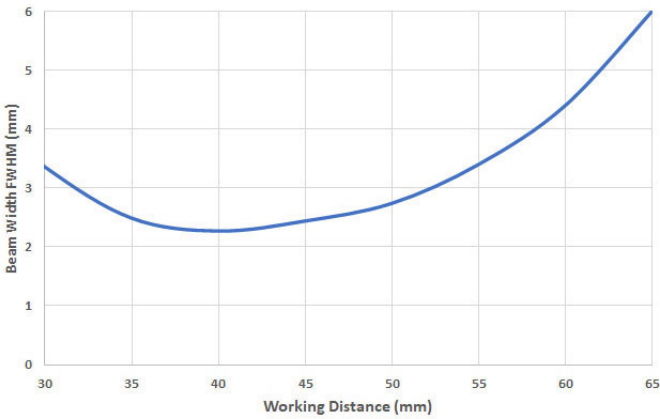
# LIGHTING PATTERNS (CONTINUED)

## LENS POSITION 1

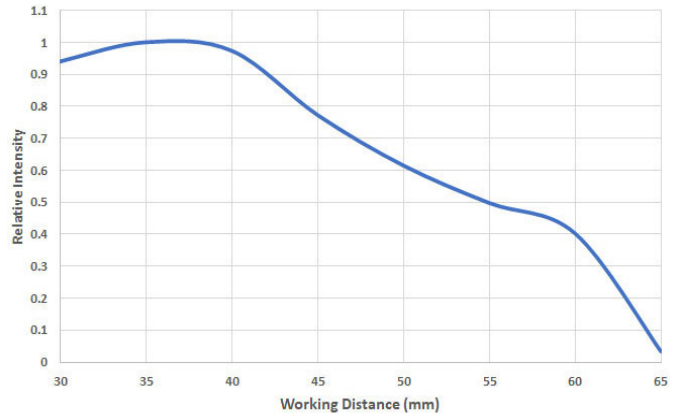
Intensity Map (at 35 mm Working Distance)



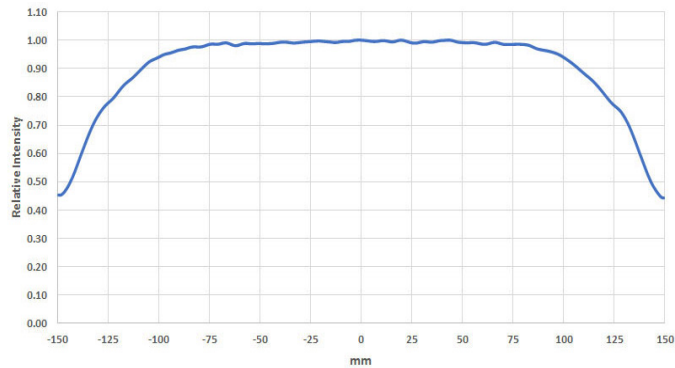
Lens Position 1: Beam Width vs. Working Distance



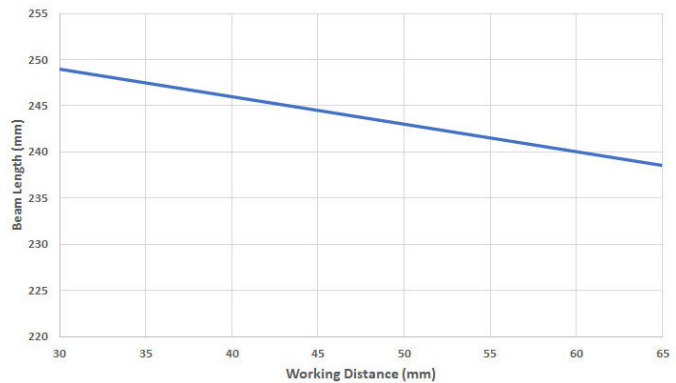
Lens Position 1: Normalized Intensity vs. Working Distance



Lens Position 1: Horizontal Beam Profile at 35 mm Working Distance



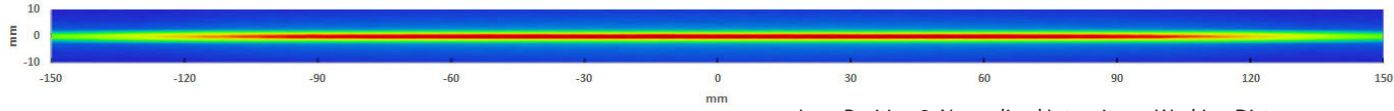
Lens Position 1: Beam Length (80% max) vs. Working Distance



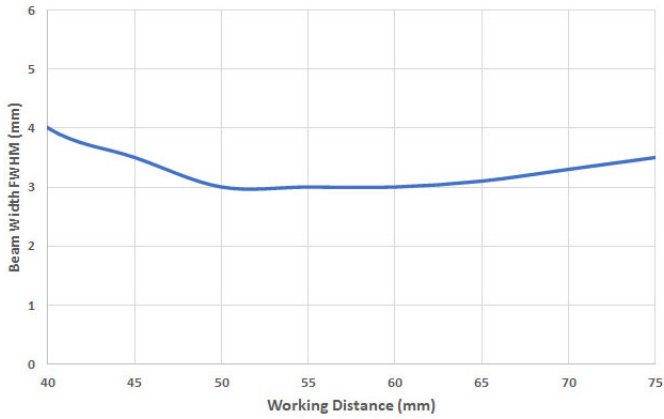
# LIGHTING PATTERNS (CONTINUED)

## LENS POSITION 2 (FACTORY DEFAULT)

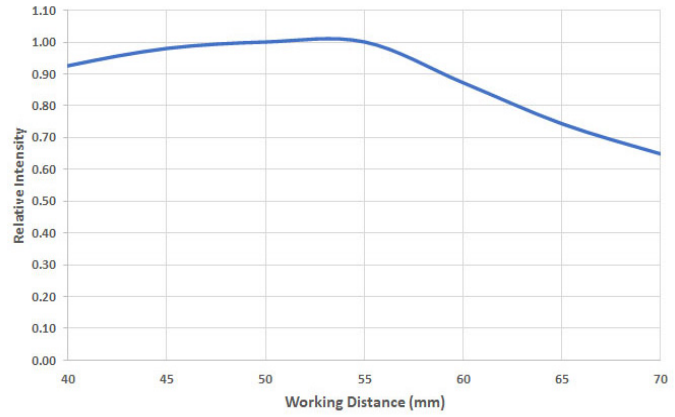
Intensity Map (at 50 mm Working Distance)



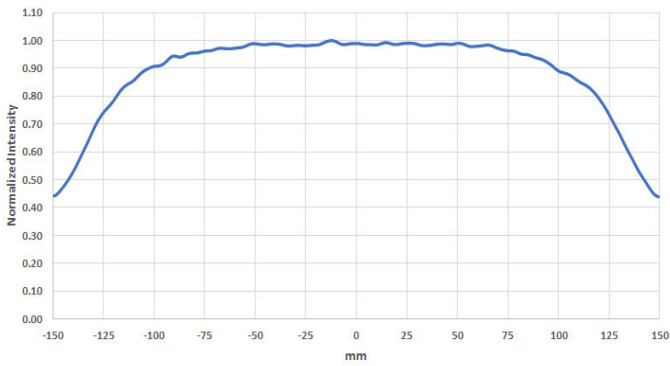
Lens Position 2: Beam Width vs. Working Distance



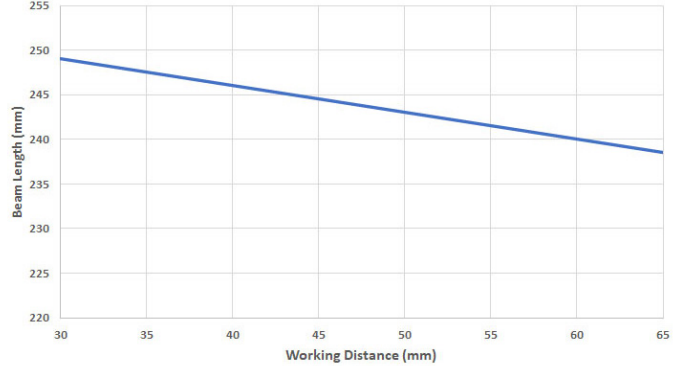
Lens Position 2: Normalized Intensity vs. Working Distance



Lens Position 2: Horizontal Beam Profile at 50 mm Working Distance



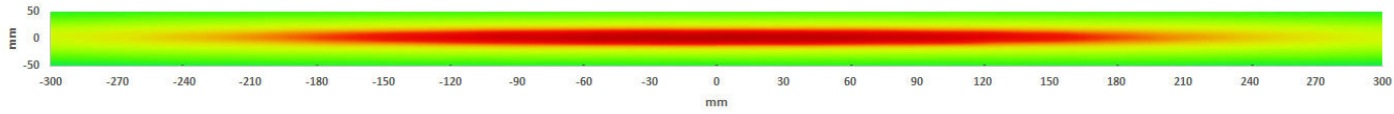
Lens Position 2: Beam Length (80% max) vs. Working Distance



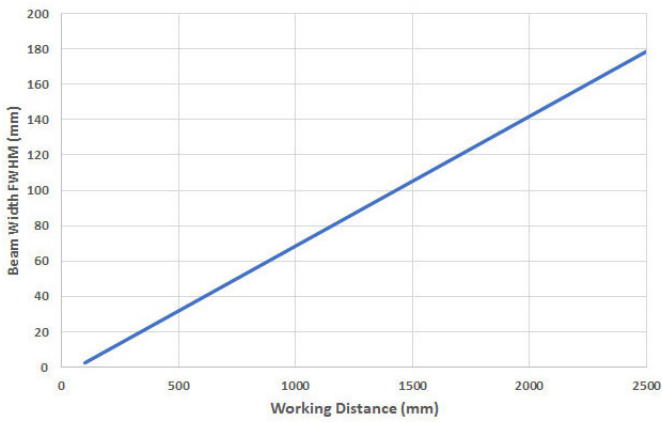
# LIGHTING PATTERNS (CONTINUED)

## LENS POSITION 3

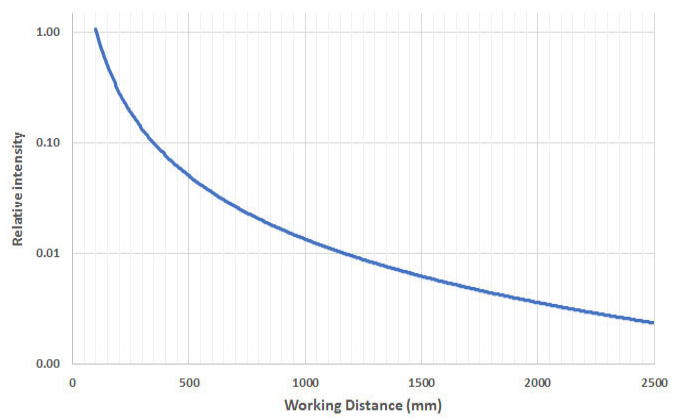
Intensity Map (at 1000 mm Working Distance)



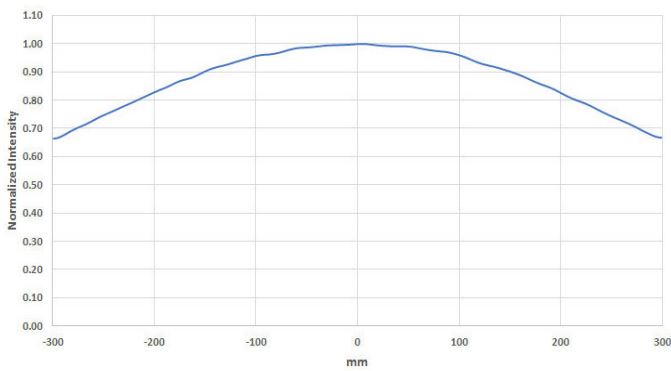
Lens Position 3: Beam Width vs. Working Distance



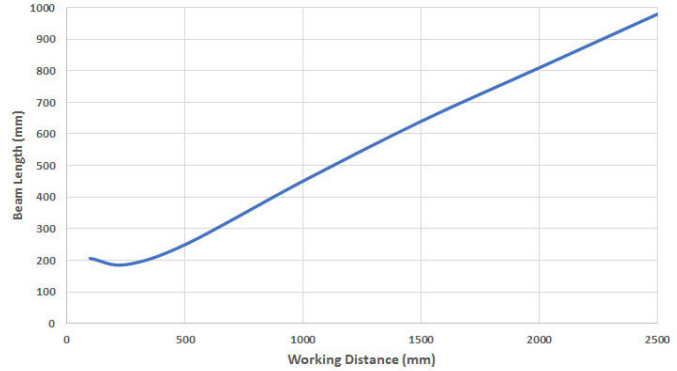
Lens Position 3: Normalized Intensity vs. Working Distance



Lens Position 3: Horizontal Beam Profile at 1000 mm Working Distance



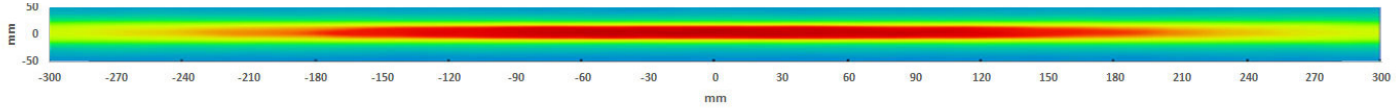
Lens Position 3: Beam Length (80% max) vs. Working Distance



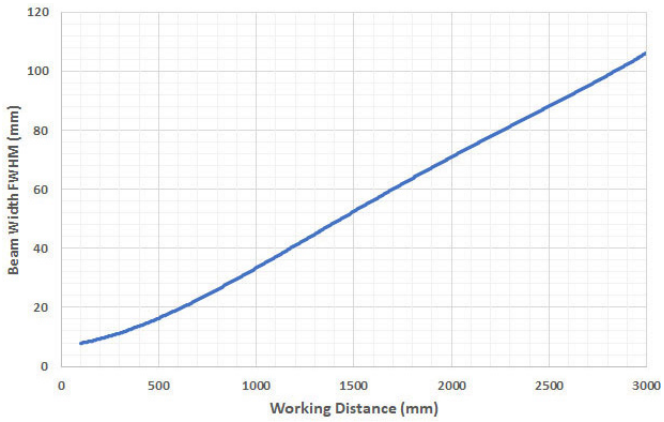
# LIGHTING PATTERNS (CONTINUED)

## LENS POSITION 4

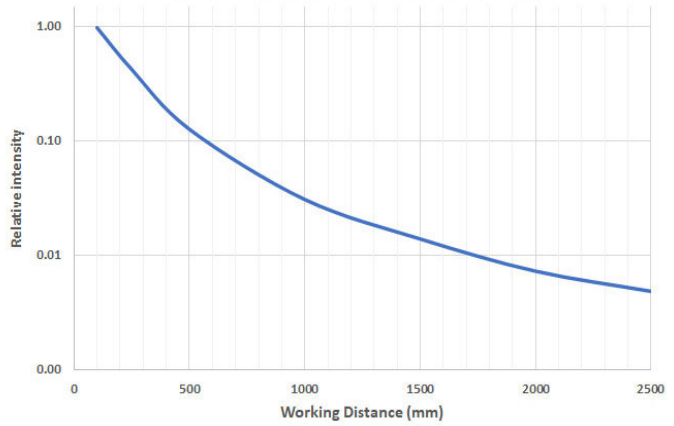
Intensity Map (at 1000 mm Working Distance)



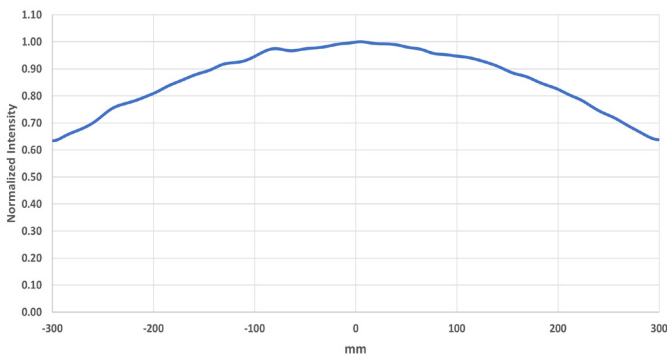
Lens Position 4: Beam Width vs. Working Distance



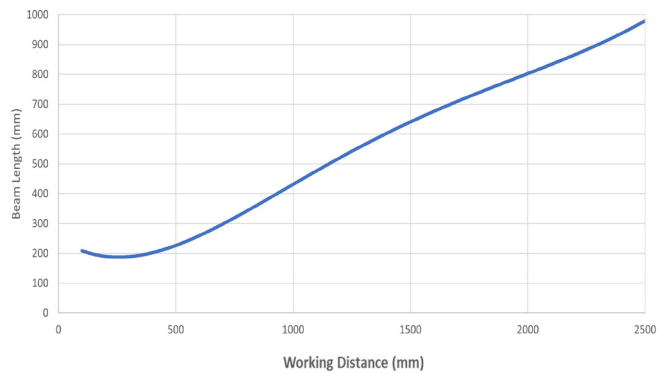
Lens Position 4: Normalized Intensity vs. Working Distance



Lens Position 4: Horizontal Beam Profile at 1000 mm Working Distance



Lens Position 4: Beam Length (80% max) vs. Working Distance



## PART NUMBER GUIDE

**LCHPX**          -        -   

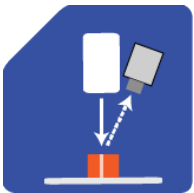
<b>SIZE:</b>	<b>COLOR:</b>	<b>LENS POSITION:</b>
300 mm 600 mm 900 mm 1200 mm		1 2 (Factory Default) 3 4

**Part Number Example:**  
**LCHPX300-625-4** LCHPX, 300 mm, 625 (red) Wavelength, Lens Position 4

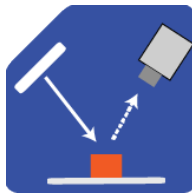
*\* Additional wavelengths and lens options available upon request.  
 Every 300mm section comes with two screws and two T-nuts for mounting*

## ILLUMINATION

LCHPX Series of Line Scan Lights works best for:



Line



Bright Field

## EYE SAFETY

According to IEC 62471:2006. Full documentation available upon request.

**Notice**

**Exempt Group:** No photobiological hazard to eyes or skin even for continuous, unrestricted use. Applicable for wavelength 625.

**Caution**

**Risk Group 1:** Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to eyes. Safe for most applications except prolonged exposure. Applicable for wavelength WHI.

**Caution**

**Risk Group 2:** Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes. Applicable for wavelength 470.

**Warning**


**Risk Group 3:** UV emitted from this product. Avoid eye and skin exposure to unshielded product. Applicable for wavelength 365.

## MOUNTING

The LCHPX uses a T-slot mounting system. Two M5 screws and two T-nuts come with each 300mm section



## ACCESSORIES

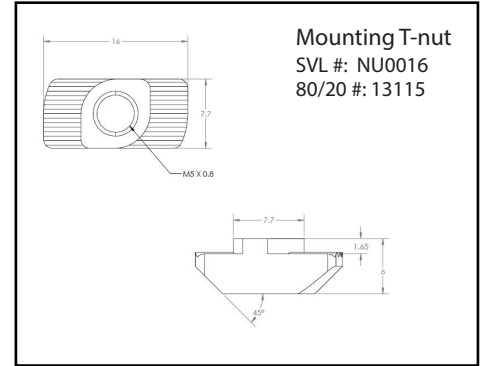
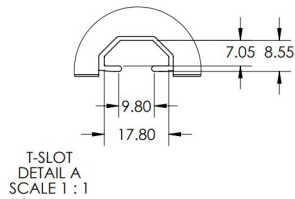
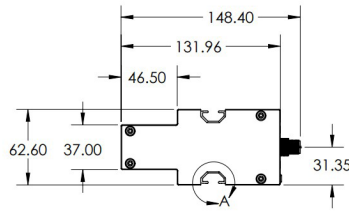
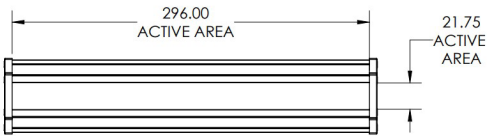
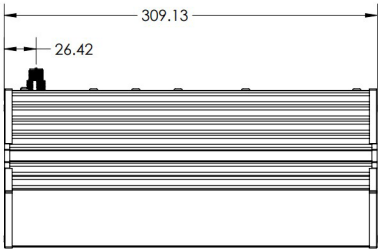
Mounting Kit	
	
Part Number	Description
SC0045	M5 X 8x10 mm screws
NU0016	T-nuts (80/20 part number 13115)

Light comes with two screws and two T-nuts per light per 300 mm section.



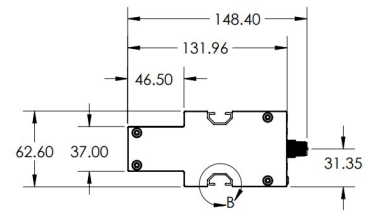
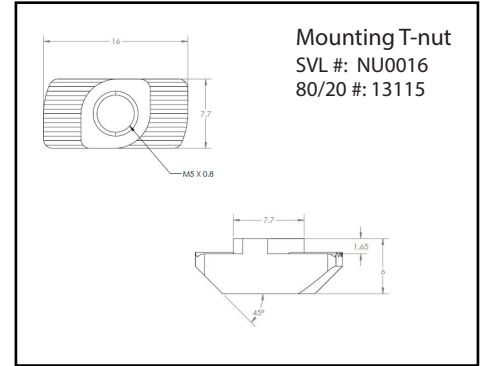
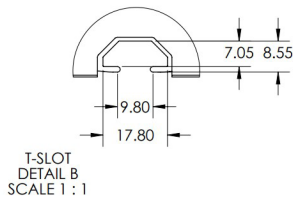
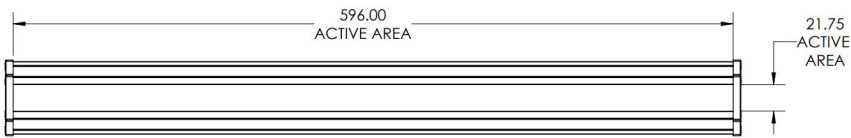
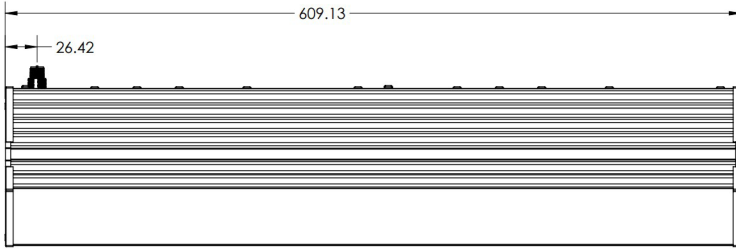
# PRODUCT DRAWINGS (LCHPX300)

\*CAD files available on our website  
 Drawings are in mm



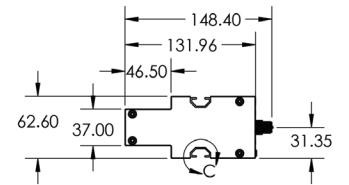
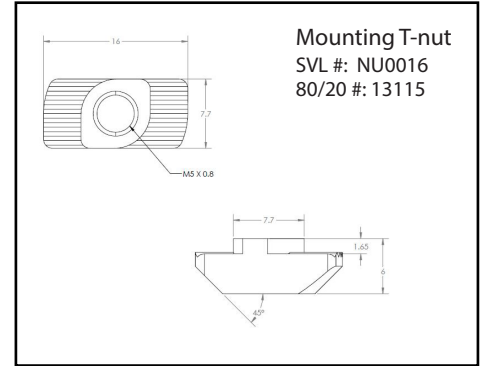
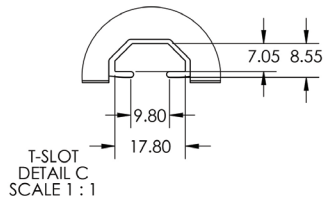
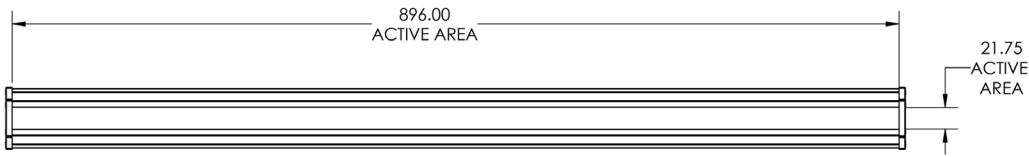
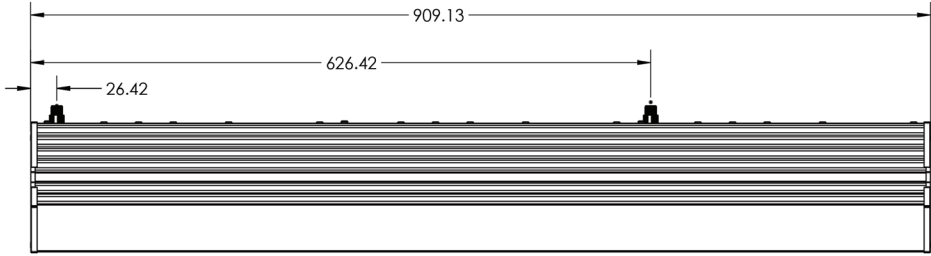
# PRODUCT DRAWINGS (LCHPX600)

\*CAD files available on our website  
 Drawings are in mm



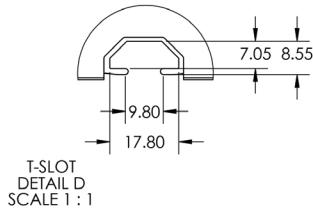
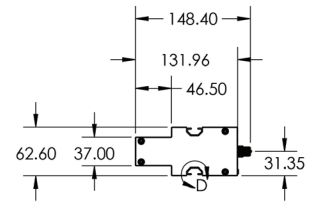
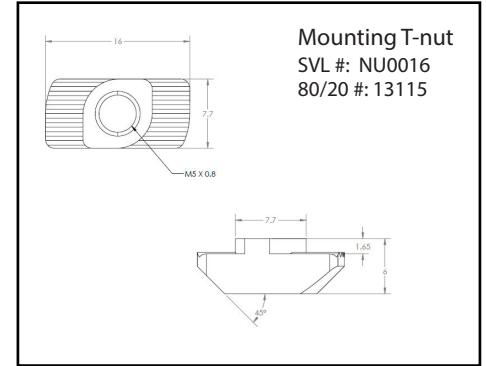
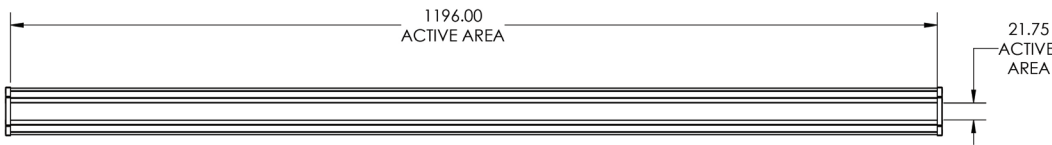
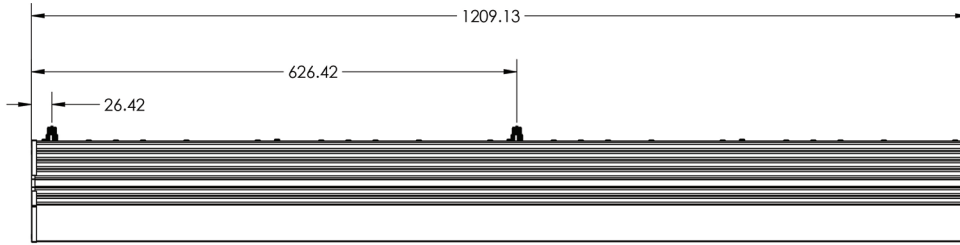
# PRODUCT DRAWINGS (LCHPX900)

\*CAD files available on our website  
 Drawings are in mm



# PRODUCT DRAWINGS (LCHPX1200)

\*CAD files available on our website  
 Drawings are in mm



## GLOSSARY

This glossary covers all Smart Vision Lights product families; some content in this section may not apply to this specific light.

### TERMINOLOGY

**Continuous Operation** The light stays on continuously.

**OverDrive™** Integrated driver that produces a high-current strobe to the LEDs to drive them beyond their nominal continuous operation output.

**Multi-Drive™** Integrated driver that combines continuous operation and OverDrive™ strobe mode

**NanoDrive™** Integrated driver that provides fast switching where the light can go from off to on in less than 500 ns.

**Built-in Driver** The driver contained within the light that controls the current to the LEDs and provides PNP, NPN, and analog dimming controls.

**SmartVisionLink™** Integrated feature that enables lighting control through the Bluetooth module and app.

**Camera to Light** Connect the light directly to the camera, without the need for additional controllers or equipment.

**Polarizers** Filters that reduce reflections on specular surfaces.

**Diffusers** Widens the angle of emission by scattering light in all directions.

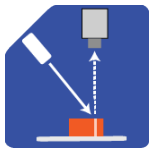
**Pattern Area Lighting** Modulated lighting pattern placed over a backlight's surface used to enhance defect detection on transparent and glossy surfaces

**SafeStrobe** Limiter to keep the light in safe working parameters.

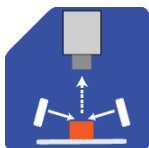
**Direct Connect** Connect lights in a series without the use of cables.

**Daisy-Chain** Connect lights in a series with the use of cables.

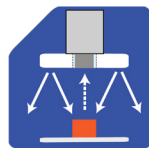
### TYPES OF ILLUMINATION



Projector



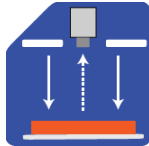
Dark Field



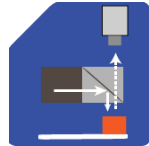
Radial



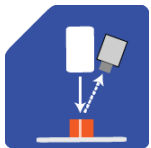
Bright Field



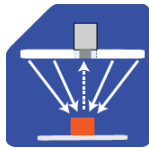
Direct



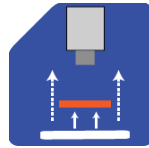
Axial



Line



Diffuse Panel



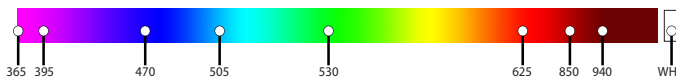
Backlight



Dome  
"Light Tent"

### COMMON COLOR / WAVELENGTHS LEGEND

Wavelengths options range from 365 nm to 1650 nm.\*  
Additional wavelengths available for many light families.



\*See Part Number section for **this light's** available standard wavelengths.



Shortwave Infrared LEDs are available in 1050 nm, 1200 nm, 1300 nm, 1450 nm, 1550 nm, and 1650 nm.\*

\*Check Part Number section to see if **this light** is available in SWIR wavelengths.



ISO 9001:2015 Certified QMS