PRODUCT HIGHLIGHTS

- 45mm industrial extrusion
- 5-pin M12 quick connect
- Driver built-in
- Most intense and diffuse area light available
PRODUCT DESCRIPTION

The AL Area Light connects directly to an external controller. Features an industry standard 5-pin M12 connector. Heat is dissipated through the aluminum heat-sinks which allows the AL Series to be run at a higher current allowing for greater intensity.

PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Electrical Input</th>
<th>24VDC +/-5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Current</td>
<td>150x150: Max. 0.82 A</td>
</tr>
<tr>
<td>Wattage</td>
<td>150x150: Max. 19.68 W</td>
</tr>
<tr>
<td>On/Off Input</td>
<td>PNP : +3VDC or greater to activate</td>
</tr>
<tr>
<td>PNP Line</td>
<td>3.7 mA @ 3VDC</td>
</tr>
<tr>
<td>NPN Line</td>
<td>22 mA @ Ground (0VDC)</td>
</tr>
<tr>
<td>Continuous Mode</td>
<td>NPN can be tied to ground OR PNP can be tied to 24VDC (not both)</td>
</tr>
<tr>
<td>Analog Intensity</td>
<td>The output is adjustable from 10%–100% of brightness by a 1–10VDC signal. (Jumpering pin 5 to pin 1 will provide maximum intensity.)</td>
</tr>
<tr>
<td>Connection</td>
<td>5-pin M12 connector</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>-20ºC–50ºC (-4ºF–122ºF)</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP50</td>
</tr>
<tr>
<td>Weight</td>
<td>150x150: 2.22kg</td>
</tr>
<tr>
<td>Compliances</td>
<td>CE, RoHS, IEC 6247-1</td>
</tr>
<tr>
<td>Warranty</td>
<td>10 years. For complete warranty information, visit smartvisionlights.com/warranty.</td>
</tr>
</tbody>
</table>

WIRING CONFIGURATION

<table>
<thead>
<tr>
<th>Pin</th>
<th>Function</th>
<th>Signal</th>
<th>Wire Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power In</td>
<td>+24VDC</td>
<td>BROWN</td>
</tr>
<tr>
<td>2</td>
<td>NPN</td>
<td>Sinking Signal</td>
<td>WHITE</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
<td>Ground</td>
<td>BLUE</td>
</tr>
<tr>
<td>4</td>
<td>PNP</td>
<td>Sourcing Signal</td>
<td>BLACK</td>
</tr>
<tr>
<td>5</td>
<td>Intensity Control</td>
<td>1–10VDC</td>
<td>GREY</td>
</tr>
</tbody>
</table>

* Some cables use green/yellow for pin 5
For maximum intensity, tie pin 5 to pin 1 at +24VDC.
For continuous mode: Tie PNP (pin 4) can be tied to +24VDC (pin 1) or tie NPN (pin 2) can be tied to Ground (pin 3).

OPTIONAL

For maximum intensity, connect pin 5 to pin 1 at 24VDC.
Potentiometer intensity needs to be set to 100%.

RESOURCE CORNER

Additional resources, including CAD files, videos, and application examples are available on our website.

smartvisionlights.com
PRODUCT DRAWING

AL 150x150

AL 300x150

AL 300x300

CAD files available on our website.
Dimensions are in mm.

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 wavelengths: 625, 850, and 940.

**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 wavelengths: 470, 505, 530, and WHI.

**Notice**

**Risk Group 1:** UV emitted from this product. Minimize exposure to eyes and skin. Use appropriate shielding. Safe for most applications except prolonged exposures. Applicable for wavelengths: 395

**Caution**

**Risk Group 2:** UV emitted from this product. Eye or skin irritation may result from exposure. Use appropriate shielding. Does not pose optical hazard if aversion responses limit exposure. Applicable for wavelengths: 365
PART NUMBER

**AL** – [ ] [ ] [ ] [ ]

**SIZE:**
(L x W)
150 x 150
300 x 150
300 x 300

**COLOR:**
- WHI
- 365
- 395
- 470
- 505

Part Number Examples:
- AL-150x150-625 AL, 150 x 150 mm, 625 nm Red Wavelength
- AL-300x150-WHI AL, 300 x 150 mm, White
- AL-300x300-470 AL, 300 x 300 mm, 470 nm Blue Wavelength

* The 5-pin M12 Connector is located on the width side of the light. Additional Wavelengths available upon request.

MOUNTING

Smart Vision Lights recommends using drop-in T-nuts for mounting a AL Area Light. T-Slot size on AL extrusion is Bosch size 10 T-nut channel.

**NOTE**
Removing cover cubes of light may result in voiding of warranty.

AREA LIT

Each AL has LEDs placed to dispense an even light flow throughout the lighted surface area.

150 mm x 150 mm shown
(LED size and spacing not shown to scale)

ILLUMINATION

AL Series of Area Lights works best for:

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

**TERMINOLOGY**

**OverDrive™** Lights include an integrated high-pulse driver for complete LED light control.

**Continuous Operation** Lights stay on continuously.

**Multi-Drive™** Combines continuous operation and OverDrive™ strobe (high-pulse operation) mode into one easy-to-use light.

**Built-In Driver** The built-in driver allows full function without the need of an external controller.

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

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

**Diffuser** Used to widen the angle of light emission, reduce reflections, and increase uniformity.

**TYPES OF ILLUMINATION**

**COMMON COLOR/WAVELENGTHS LEGEND**

Wavelengths options range from 365 nm to 1550 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, and 1550 nm.*

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