smart vision lights

SW75 *Brick Light*
S P O T   L I G H T
W A S H D O W N

P R O D U C T   D A T A   S H E E T
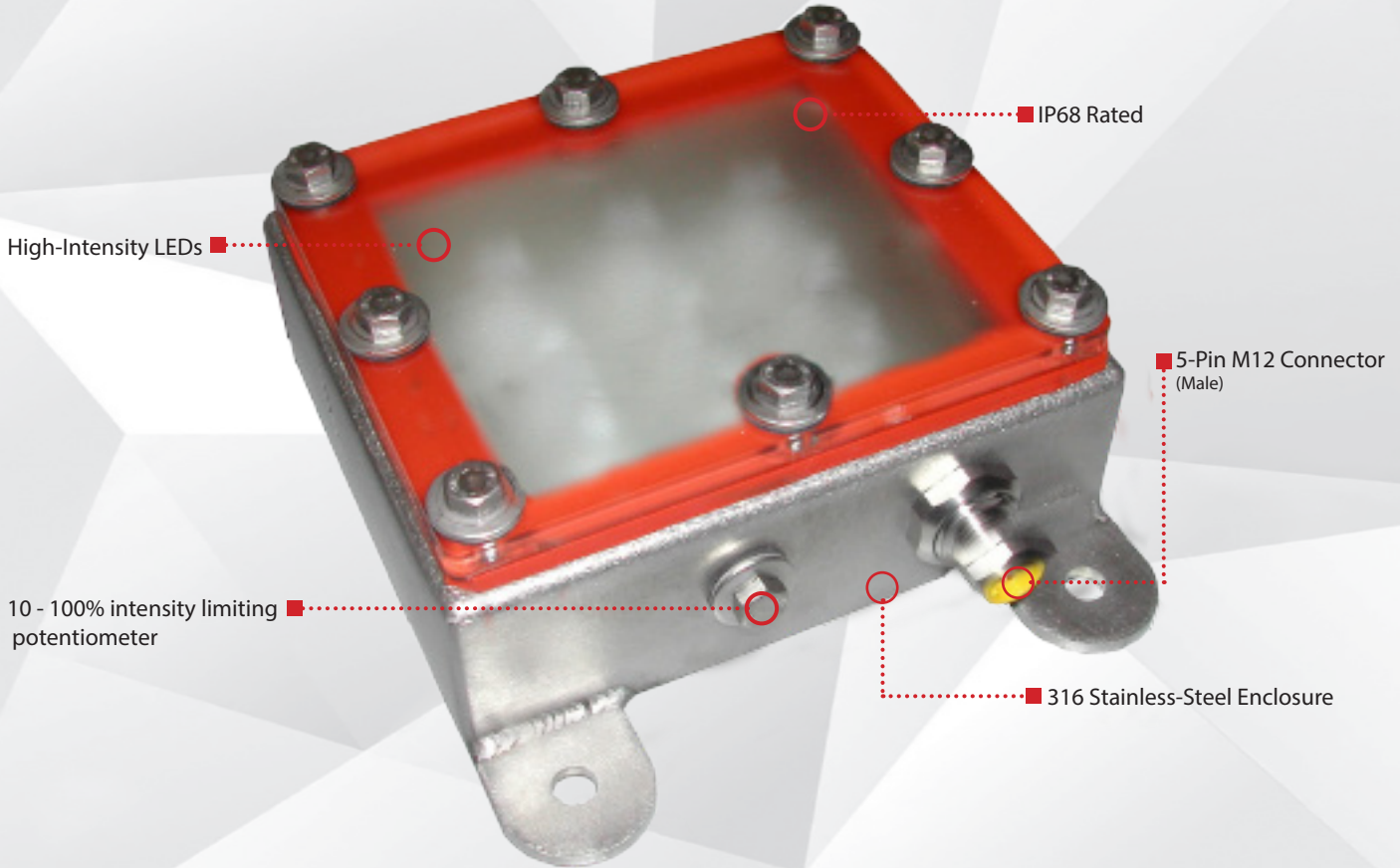
IP68 Rated

High-Intensity LEDs

5-Pin M12 Connector
(Male)

10 - 100% intensity limiting potentiometer

316 Stainless-Steel Enclosure

Warranty	Tested	Compliant	Rated	Connector
10 YEAR	**IEC** 62471	**CE** RoHS	**IP 68**	5-PIN M12

PRODUCT HIGHLIGHTS

- ✓ IP68
- ✓ Stainless-steel 316 housing with a silicone gasket
- ✓ Acrylic (default) and polycarb window options
- ✓ PNP and NPN trigger signal input
- ✓ FDA compliant for food manufacturing and corrosive environments

PRODUCT INTRODUCTION

The SW75 Brick Light spot light features a stainless-steel IP68 rated enclosure specially designed for food industry and washdown environments where water and harsh detergents are present. NPN or PNP trigger signals can be used to control the pulse of the light. The light's intensity can be controlled via 1–10VDC analog signal line or by adjusting the built-in manual potentiometer.

PRODUCT SPECIFICATIONS

Electrical Input	24VDC +/–5%
Input Current	Max. 400 mA
Input Power	Max. 9.6 W
PNP Trigger	2.8 mA @ 4VDC │ 8.8 mA @ 12VDC │ 17.6 mA @ 24VDC
NPN Trigger	14.4 mA @ Ground (0 VDC)
Trigger Input	PNP > +4 VDC (24 VDC max.) to activate **or** NPN ≥ GND <1VDC to activate **(not both)**
Intensity Limit	270º turn pot — intensity control of 10%–100%. Turn clockwise to increases intensity.
Analog Intensity	The output is adjustable from 10%–100% of intensity limit by a 1–10VDC signal. (Jumpering pin 5 to pin 1 will provide maximum intensity.)
Connection	5-pin M12 connector
Operating Temperature	-10° to 40° C (14° to 104° F) │ RH max 80% non-condensing humidity
Storage Temperature	-10° to 40° C (14° to 104° F) │ RH max 80% non-condensing humidity
IP Rating	IP68
Weight	~760 g
Compliances	CE, RoHS, IEC 62471
Warranty	UV LEDs have a 2 year warranty, all other LEDs have a 10 year warranty. For complete warranty information, visit smartvisionlights.com/warranty.

WIRING CONFIGURATION
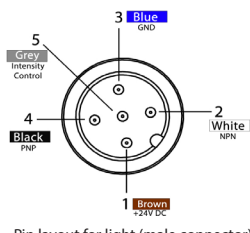
Pin	Function	Signal	Wire Color
1	Power In	+24VDC	BROWN
2	NPN	Sinking Signal	WHITE
3	GND	Ground	BLUE
4	PNP	Sourcing Signal	BLACK
5	Intensity Control	1–10VDC	GREY*

Pin layout for light (male connector)

* 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%.
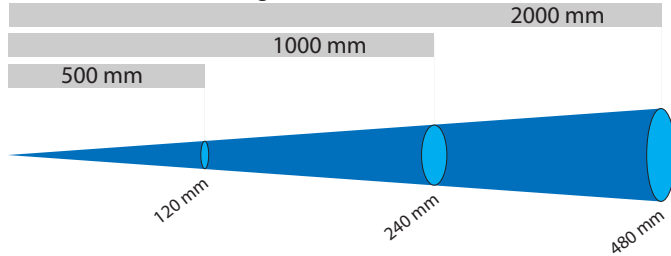
RESOURCE CORNER

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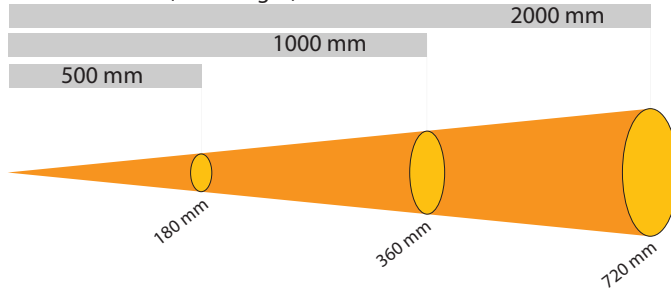
LIGHT PATTERNS

Smart Vision Lights recommends that the SW75 be used at a working distance between 300 mm and 4000 mm.
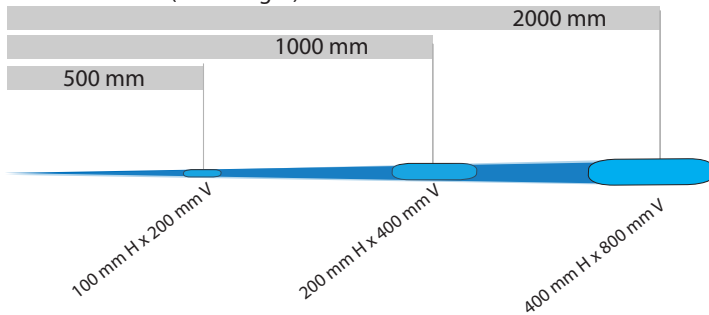
Beam Diameter (White Light)—5700K

2000 mm
1000 mm
500 mm

120 mm
240 mm
480 mm

LIGHTING PATTERN FOR THE SW75 with Narrow (Standard) Lenses

Working Distance mm (inches)	Pattern (80%–100% measured intensity) mm (inches)
500 mm (19.7")	120 mm (~4.7") D
1000 mm (39.4")	240 mm (~9.4") D
2000 mm (78.8")	480 mm (~18.9") D

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	7250
Illuminance measurement taken on White Lights—5700K	

## Beam Diameter (White Light)—5700K

2000 mm
1000 mm
500 mm

180 mm
360 mm
720 mm

LIGHTING PATTERN FOR THE SW75 with Wide (W) Lenses

Working Distance mm (inches)	Pattern (80%–100% measured intensity) mm (inches)
500 mm (19.7")	180 mm (~7") D
1000 mm (39.4")	360 mm (~14.2") D
2000 mm (78.8")	720 mm (~28.3") D

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	6500
Illuminance measurement taken on White Lights—5700K	

Beam Diameter (White Light)—5700K

2000 mm
1000 mm
500 mm

100 mm H x 200 mm V
200 mm H x 400 mm V
400 mm H x 800 mm V

LIGHTING PATTERN FOR THE SW75 with Line (L) Lenses

Working Distance mm (inches)	Pattern (80%–100% measured intensity) mm (inches)
500 mm (19.7")	100 mm (~3.9") H x 200 mm (~7.8") V
1000 mm (39.4")	200 mm (~7.8") H x 400 mm (~15.7") V
2000 mm (78.8")	400 mm (~15.7") H x 800 mm (~31.5") V

Typical Output Performance	Illuminance (Lux)
Distance = 500 mm	9800
Illuminance measurement taken on White Lights—5700K	

The SW75 Brick Light produces a uniform light pattern.

Working distance = 500 mm   Grid set to 25 mm x 25 mm

175 mm

Narrow

Wide

Line
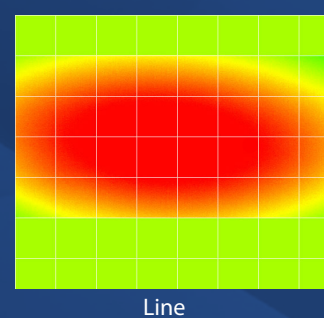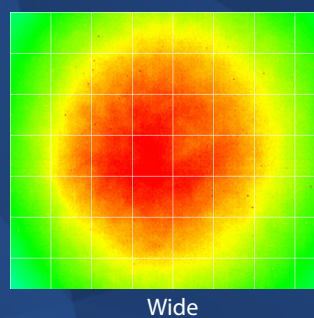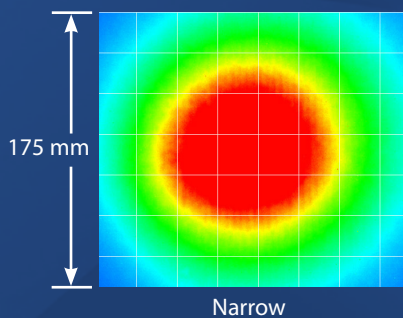
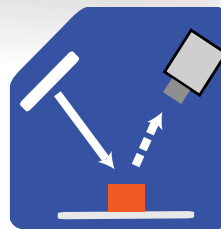## PRODUCT DRAWING

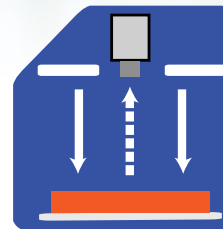CAD files available on our website.
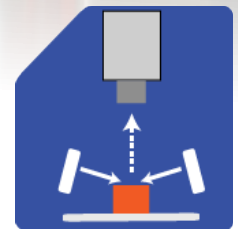Dimensions are in mm.
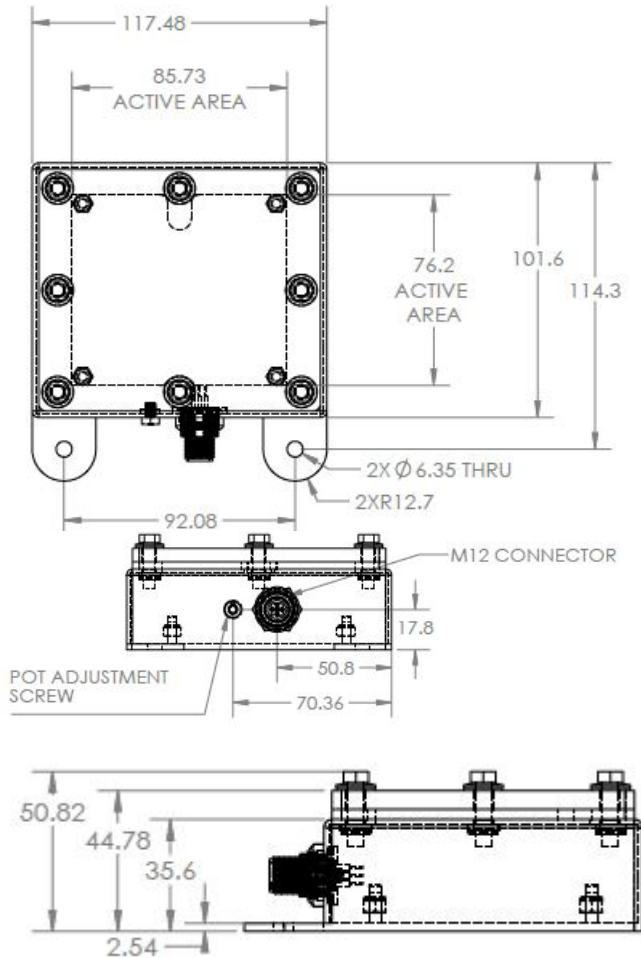
ILLUMINATION

SW75 Series of Brick Lights works best for:

Bright Field · Direct Lighting · Dark 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 wavelengths 625, 850, 940, 1050, 1200, 1300, 1450, 1550, and 1650.

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.

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 and 395

PART NUMBER

SW75 – ☐☐☐ **–** ☐

COLOR:

WHI · 365/395 · 470 · 505 · 530 · 625 · 850/940

LENS:

Leave blank for Standard (Narrow)

W = Wide

L = Line

Additional wavelengths options available upon request.

Part Number Examples:

SW75-625	SW75, 625 nm Red Wavelength, Standard (Narrow) Lens
SW75-WHI-L	SW75, White, Line Lens

LENS OPTICS

NARROW (STANDARD)
Narrow, 10° angle-cone lenses are standard. Standard lenses project a narrow beam of illumination and are used for long working distances.

WIDE
Wide, 25° angle-cone lenses project a large area of illumination. They create a floodlight effect, can be used for short working distances.

LINE
Line, with a 10° width and a 50° fan-angle projects a thin, narrow beam of illumination.

Additional lens options available upon request.

10°

25°

10° / 50°
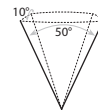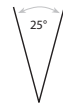
ACCESSORIES

Power Cables	
Length	Part Number
5 m	5PM12-5
10 m	5PM12-10
15 m	5PM12-15

Power Cables (Washdown)	
Length	Part Number
15 m	W5PM12-15

*Washdown cable has a
316 Stainless-steel connector.*

GLOSSARY

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

TERMINOLOGY

OverDrive™ Light includes an integrated high-current strobe driver for complete LED light control.

Continuous Operation Light stays on continuously.

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

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

Camera to Light Connect the light directly to the camera, without the need for additional controllers or equipment.
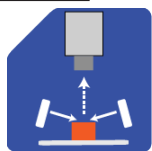
Polarizers Filters that reduce reflections on specular surfaces.

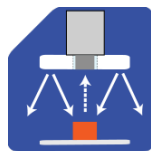**Diffuser** Used to widen the angle of light emission, reduce reflections, and increase uniformity.
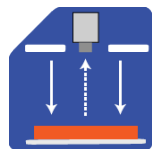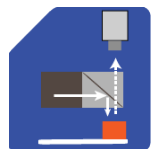
TYPES OF ILLUMINATIONS
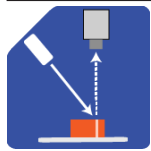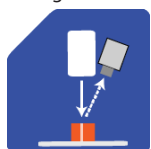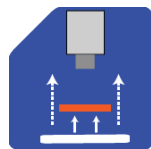
Projector Dark Field Radial
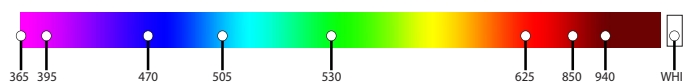Bright Field Direct Axial
Line Diffuse Panel Backlight

COLOR/WAVELENGTHS LEGEND

Wavelength options range from 365 nm to 1550 nm.
Additional wavelengths available for many light families.

365 395 470 505 530 625 850 940 WHI

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

SWIR SHORTWAVE INFRARED

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.*