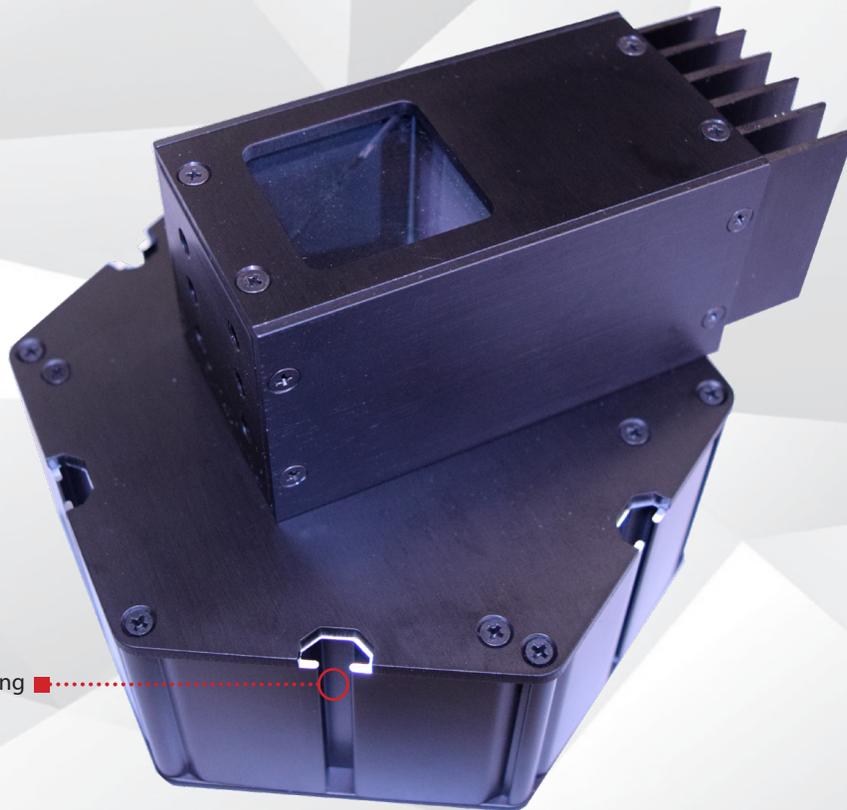


PRODUCT DATA SHEET



Six T-slots for Mounting .....

Warranty
10
YEAR

Compliant
IEC
62471

Compliant
CE
RoHS

Rated
IP
50

Connector
5-PIN
M12

PRODUCT HIGHLIGHTS

- ✓ RGB color select ability - 3 analog channels per axis
- ✓ Built-in driver, no external wiring needed
- ✓ PNP and NPN strobe input
- ✓ 5-pin M12 quick connect



PRODUCT DESCRIPTION

The DADL75-RGB Series is a diffuse dome light with a 75mm viewing area designed to read code and imperfections on rounded or highly reflective products and product inspection with an even, uniform, and repeatable light intensity. The 20 LED design and the constant current regulation the built in driver provides along with the semi-reflective white dome further backs the DADL75-RGB light's performance. The DADL75-RGB was designed with simplicity and functionality in mind. Built in constant ON operation and OverDrive Strobe technology allows for use in either operation depending on wiring method. NPN and PNP strobe operation with a built in 1-10VDC analog intensity control allows for further versatility. The industry standard 5-pin M12 connector makes for easy installation.

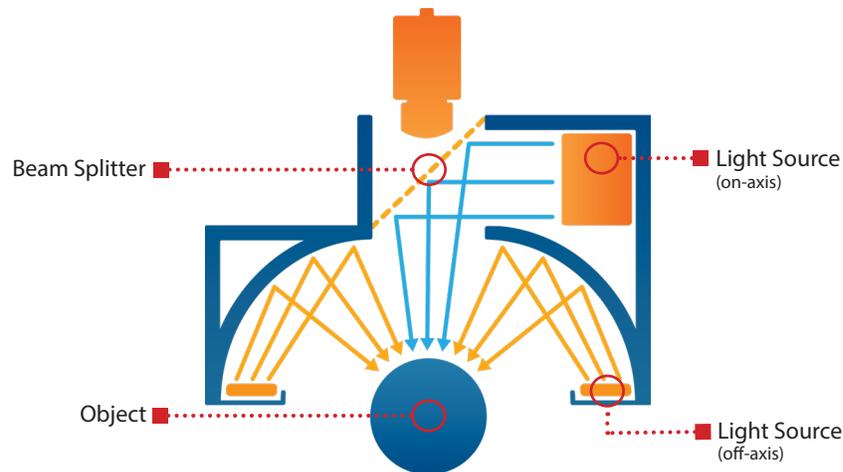


PRODUCT SPECIFICATIONS

	CONTINUOUS OPERATION	
Electrical Input	24VDC +/- 5%	
Input Current	On Axis Max 550 mA	Off AXIS Max. 550mA
Wattage	Max. 27 W	
RGB Analog Intensity	0-1VDC analog – OFF	1-10VDC analog - 10-100% of brightness
Continuous Operation Mode	NPN can be tied to ground OR PNP can be tied to 24VDC (not both)	
On/Off Input	PNP: +4VDC or greater to activate NPN: GND (<1VDC) to activate	
Connection	5-pin M12 connector	
Ambient Temperature	-18°–50° C (0°–122° F)	
IP Rating	IP50	
Weight	134g	
Compliances	CE, RoHS, IEC-62471	



LIGHT OUTPUT ANALYSIS

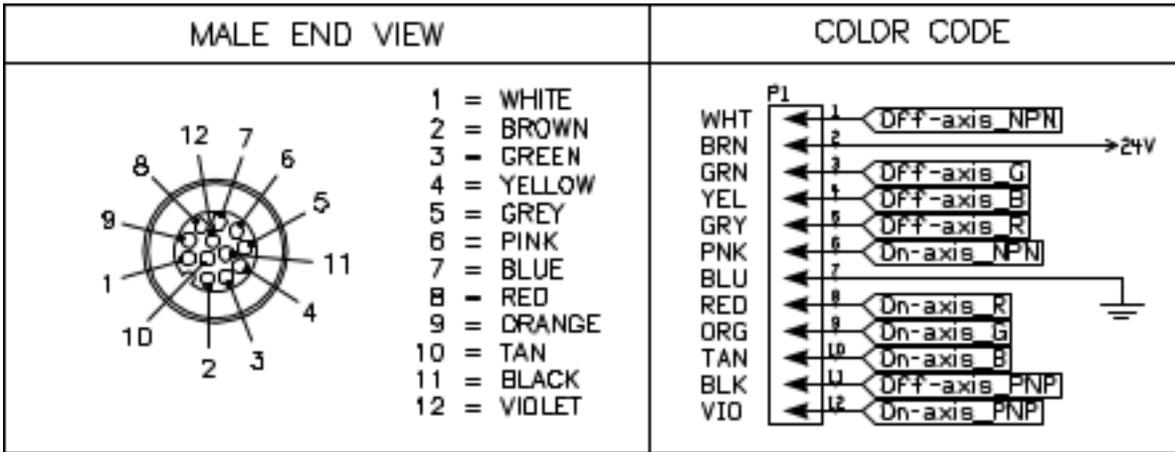


RESOURCE CORNER

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



WIRING CONFIGURATION



LIGHT PATTERNS

Smart Vision Lights recommends the DADL75-RGB be used at a working distance between 25 mm to 100 mm.

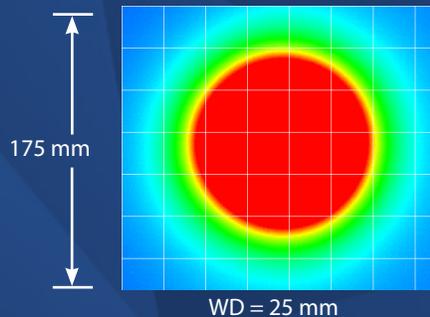
LIGHTING ILLUMINATION FOR THE DADL75-RGB

Continuous Operation Mode	
Typical Output Performance	Illumination (Lux)
Distance = 25 mm	38,500
<i>Illumination measurement taken on White Light - 4800K</i>	
OverDrive™ Mode	
Typical Output Performance	Illumination (Lux)
Distance = 25 mm	192,500
<i>Illumination measurement taken on White Light - 4800K</i>	

The DADL75-RGB light produces a uniform light pattern.

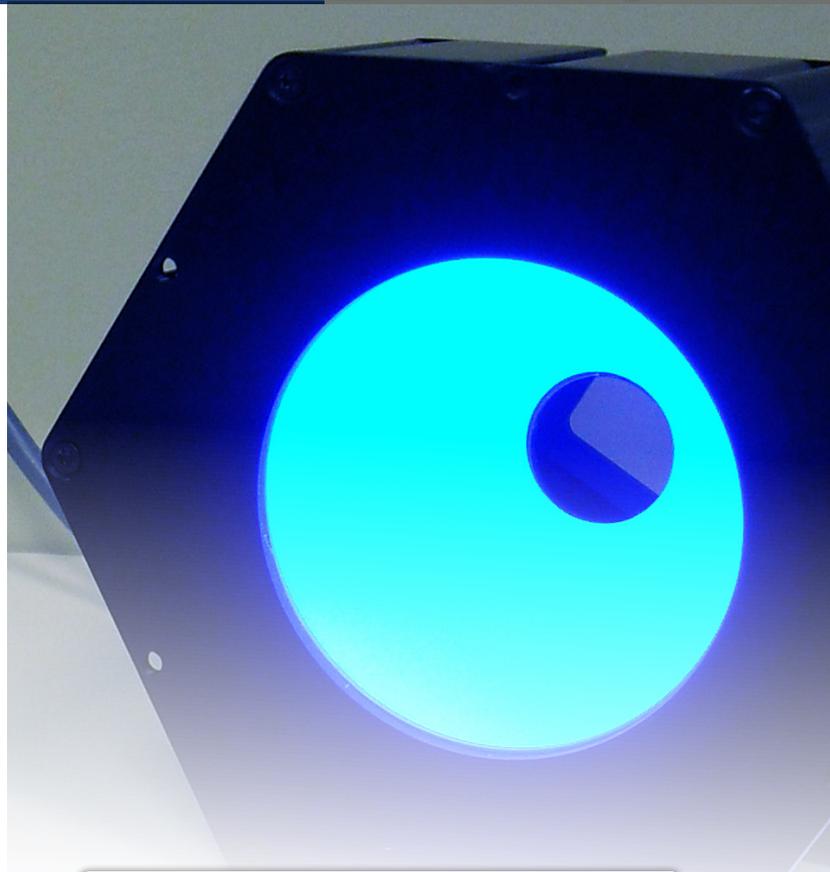
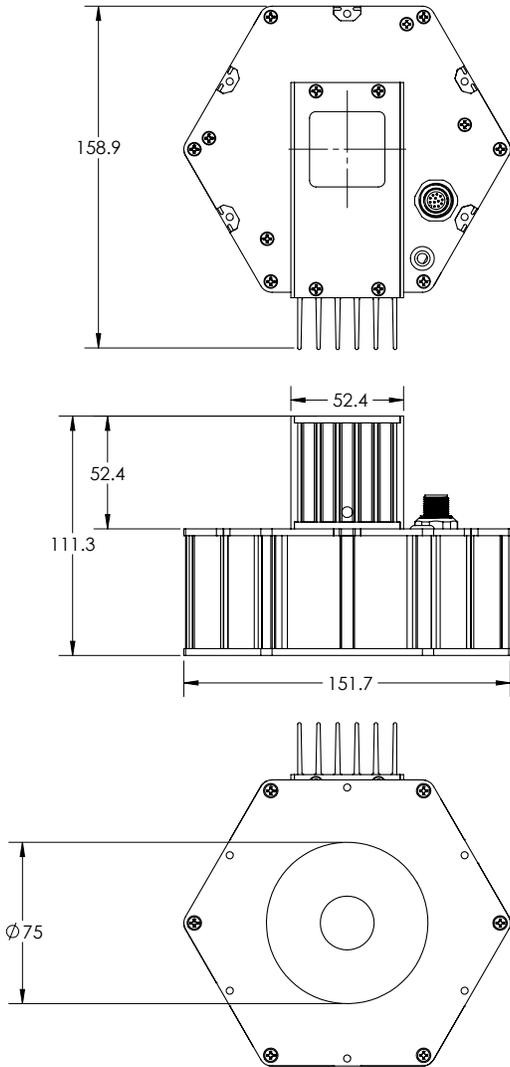
WD = Working Distance

(Grid set to 25 mm x 25 mm)



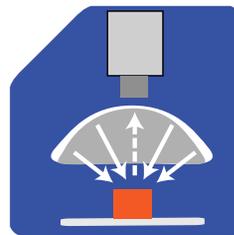
PRODUCT DRAWING

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

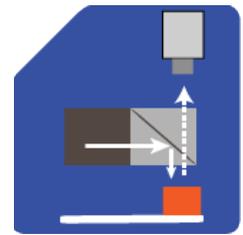


ILLUMINATION

DADL75-RGB Series of Dome Lights works best for:



Dome "Light Tent"



Axial

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.

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, 530, and WHI.



PART NUMBER

DADL75-RGB —



Part Number Examples:

DADL75-RGB-625 (DADL75-RGB, 625 Red Wavelength)

Additional wavelengths available upon request



MOUNTING

Mounting options include six standard industrial T-slots for mounting the DADL75-RGB. There are two M4 threaded holes on the back of the DADL75-RGB for mounting a camera. See Accessories for camera mounting options.



Hardware included with light:

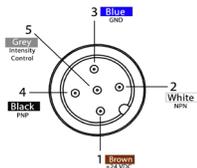
- (2) M5 x 10 mm screws (Hex)
- (2) T-Nuts



DADL75 CONTROLLER



- ✓ 12-pin M12 quick disconnect to light
- ✓ Variable intensity control on each R,G,B Channel
- ✓ Voltage display for Precise Tuning
- ✓ RGB color select ability - 3 analog channels per axis
- ✓ both ON and OFF- axis illumination options



Pin layout for controller (Male Connector)

Pins	Function	Signal	Wire Color
1	Power In	+24 V DC	BROWN
2	NOT USED	NOT USED	WHITE
3	GND	Ground	BLUE
4	NOT USED	NOT USED	BLACK
5	NOT USED	NOT USED	GREY*

NOTE

For power to the controller, only +24VDC and Ground will be used.

Electrical Input	24VDC +/- 5%
Curent	On Axis - Max. 550 mA Off Axis - Max. 550mA
Wattage	Max. 27W
Continuous Mode	Light will be in continuous mode by leaving +24V and GND applied
RGB Analog intensity	0-1VDC analog - OFF 1-10VDC analog - 10-100% of brightness
Connection	12-pin M12 connector
Lifespan	100,000 hrs
Ambient Temp	-20° - 50° C (-4° - 122° F)
IP Rating	IP50
Compliances	CE and RoHS



ACCESSORIES

Camera Mount	
	
Description	Part Number
Right Angle Mount	BKT0004

Camera Mount	
	
Description	Part Number
Adjustable Point Mount	BKT0007

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

Power Adapters *	
	
Description	Part Number
AC, 24 Volt, 1.7 Amp	T1 Power Supply

* European Versions Available (Add -EURO to end of T1. Example T1-EURO Power Supply)

T1 Power Supply is **only recommended** when using light in continuous operation.



GLOSSARY

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 Light stays on continuously.

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

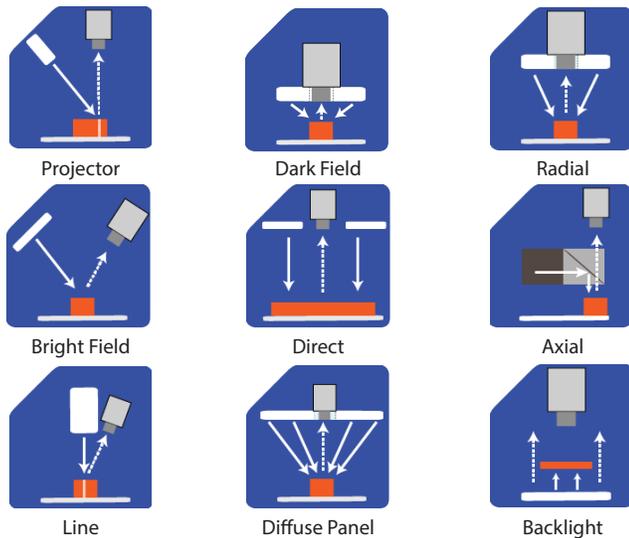
Built-in Driver The built-in driver allows full function without the need of an external controller.

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.

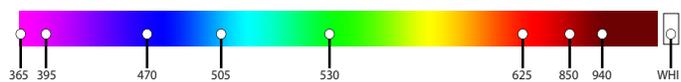
Diffusers Used to widen the angle of light emission, reduce reflections and increase uniformity.

TYPES OF ILLUMINATIONS



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.



Short Wave Infrared LEDs are available in 1050 nm, 1200 nm, 1300 nm, 1450 nm, and 1550 nm.