# Professional lighting systems for industrial imaging

# **MINI-DOME-60-RGB**

# **Dome light**

- >> RGB version with separately controllable colors
- >> small, light, compact
- >> well-priced design
- >> extremely homogeneous, diffuse illumination
- >> for continuous, switched and pulsed operation (depending on type)







MINI-DOME-60-RGB switched in mixed colour

# **Technical specifications**

Housing	high-quality plastic, Aluminium		
Total weight	approx. 50g		
Operating / ambient temperature	max. 50°C recommended		
IP protection class	depending on the version		
Connector	M5 plug (4-pin)*		
Supply voltage**	24VDC type: 24VDC		
	SC type: For use in conjunction with a controller		
Number of LEDs	EDs 20		
LED lifetime  The LED lifetime of our lights is very high, but depends on many different factors such as amb temperature, current load, and so on. Further information is available in the <b>Technical inform lifetime</b> .			

<sup>\*</sup> Cable not included in the scope of supply

#### **Characteristics**

LED characteristics		typical characteristics per light				
Col	our *	Wavelength (approx.)	Viewing angle	Current demand (24V type) ** / constant current max. (SC type) [mA]	Pulse current max. (SC type) *** [mA]	Intensity **** [W/m²]
	red	630nm	120°	50 per colour max. 100 total	300 per colour	30
	green	530nm				28
	blue	470nm				67

<sup>\*</sup> other colours and types from UV to infrared on request

<sup>\*\*\*\*</sup> approximately data measured in DC mode; Measuring distance 5mm below housing



Safety note!

LED light systems can produce very intense radiation, which may possibly damage the eyes on improper use. Do not look directly into the light beam with unprotected eyes! Use eye protection!

#### Operating modes

The lights are designed depending on the version for continuous operation at 24VDC. The following operating modes are possible:

- DC operation at an appropriate power supply with 24VDC
- Switched operation with a matching power supply e.g. via PLC, opto-relay or controller (GS or SC series)
- Brightness-controlled operation via controller (GS or SC series) in conjunction with suitable power supply
- Pulsed mode via controller (GS or SC series) in conjunction with suitable power supply. The LED current can be increased in pulse mode up to a factor of 2 to 3.

#### SC type

For pulsed, switched or brightness-controlled operation, the lights are also available as optimized SC versions. They can be used in combination with our controllers of the GS and SC series and provide optimized and maximum current flow, especially in pulsed operation. We will assist you in selecting the right components.

#### Büchner Lichtsysteme GmbH

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<sup>\*\*</sup> more information see section Operating modes

<sup>\*\*</sup> stated current values of the 24V types should be considered approximate values

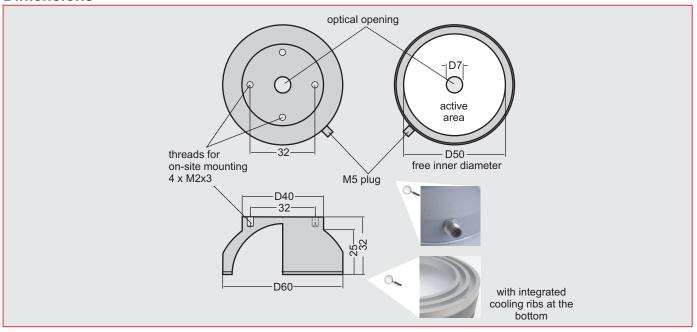
<sup>\*\*\*</sup> depending on the strobe conditions, recommended maximum values for a flash time of 1ms

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# **Dome light**

#### **Dimensions**



### PIN assignment connector

M5 plug 4-pin (Front view on housing)



#### Attention!

The pin assignment of the used M5 connector is not the standard assignment.

#### 24VDC type

PIN	Colour	Function			
4	black	- red			
2	white	- green			
3	blue	- blue			
1	brown	+ 24V			

#### SC type

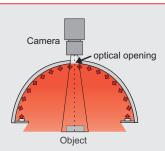
PIN	Colour	Function
1	brown	- red
2	white	- green
3	blue	- blue
4	black	+ common

### **Application notes**

#### Dome application

The optical opening for the camera is located symmetrically on the top of the dome and has a diameter of 7mm. Other diameters on request!

The DOME is typically positioned close to the object.



#### **Technical notes**

The MINI-DOME-60-RGB is designed to be driven with up to 2 activated colours at the same time at full intensity and without any time limit.

#### Operation of the RGB version directly at 24V

By switching on and off the ground lines of the 3 single colors (RGB), the individual colors can be activated and mixed.

#### Continuous/pulsed operation of the RGB version with SC4, SC6 or GS 420

When using 3-channel operation with the listed controllers, any colour mixture can be realised by setting a particular current to the 3 channels (RGB), both in continuous and pulsed operation.

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