



▷ MACHINE VISION ▷ HIGH POWER LED ▷ DOME ILLUMINATION ▷ BI-COLOR RING ▷ 4 INDEPENDENT QUADRANTS ▷ OVERDRIVE ▷ REMOTE CONTROL

## INNOVATIVE LED ILLUMINATION WITH DOME EFFECTS

### 2 SIZES

80 mm

OR

130 mm

### 2X2 COLOURS



OR



### CONTROL

manual

OR

remote



**IP65**



**OVERDRIVE**



**4 QUADRANTS**

The MR-DOME is compound of a bi-colour LED lighting ring (2 sets of colours and 2 dimensions) and a dome reflector.

It has been designed with tough production environments in mind: IP65 as standard, overdrive embedded, simple remote control capability (selection of colours and quadrants).

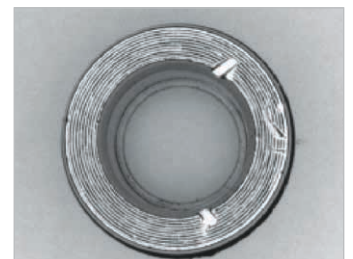
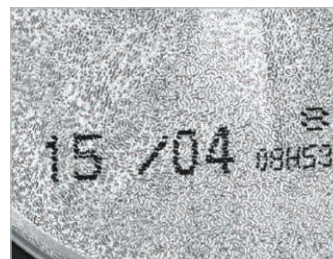
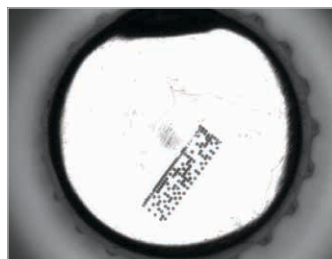
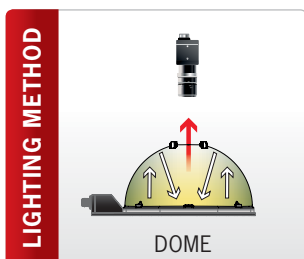
The MR-DOME provides a highly-diffused light source which has no component of direct lighting. The light intensity is lower than with other illumination techniques but will have a high degree of homogeneity.

#### DOME REFLECTED LIGHT CAN BE USED WHEN:

- objects are highly reflective (shiny),
- the target area is subject to shadowing with other light sources,
- the target area has some very un-even surfaces.

The MR-DOME should be mounted close to the object of interest to maximise the effect of the illumination style.

To minimise the «black dot» visible within the image, the diameter of the hole at the top of the dome should also be minimised. This can be done using the supplied plastic caps.



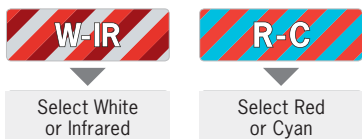
## MANUAL SETTINGS



**SECTORS:** 3 configurations



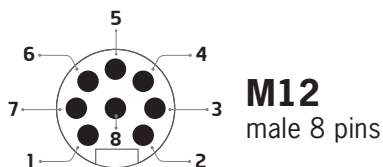
**COLOURS:** 2 sets



**REMOTE control**

**MANUAL control**

## REMOTE SETTINGS



- 1** Activate overdrive
- 2** Change colours
- 3** GND
- 4** Sector 1
- 5** Sector 2
- 6** Sector 3
- 7** Sector 4
- 8** Deactivate manual sector drive

## LIGHTING POWER

	RING 80				RING 130			
	RED (cd)	CYAN (cd)	WHITE (cd)	IR (mW/Sr)	RED (cd)	CYAN (cd)	WHITE (cd)	IR (mW/Sr)
<b>Standard</b> (distance: 0 cm)	43	55	300	150	65	82	445	220
<b>Overdrive</b> (distance: 0 cm)	172	195	1 200	600	260	286	1 830	900

## TECHNICAL SPECIFICATIONS

Dimensions	80mm	130mm
<b>Electronics</b>		
Power Supply	24 VD/C ±10%	
Functioning Mode	Continuous, Strobe, Overdrive, Dimming, Manual Control	
Rising Time	10 µs	
Falling Time	10 µs	
Wiring	5 Pin M12 male connector for manual, 8 Pin M12 male connector for remote control	
Max. consumption Red-Cyan	9W average / 51W peak	11W average / 82W peak
Max. consumption WH-IR	10W average / 42W peak	13W average / 62W peak
<b>Optics</b>		
Colour	Red (625nm) - Cyan (505nm) and White (WHI) - Infrared (860nm)	
Number of LEDs	96	144
<b>Mechanical</b>		
Dimensions (external)	136 x 193 mm	197 x 257 mm
Height	75 mm	106.75 mm
Weight	423 g	673 g
Material	Aluminum & ABS	
Mounting/Fixing	2x M5 Screws	
<b>Environment</b>		
Operating Temperature	-10° to +40°C / 80% of humidity without condensation No thermal shock (max temperature variation: 10°C in 24h)	
Storage Temperature	-20° to +60°C / 80% of humidity without condensation No thermal shock (max temperature variation: 10°C in 24h)	
IP Protection	IP 65	
Labels	RoHS-CE-WEEE	

## HOW TO BUILD YOUR PRODUCT REFERENCE

### REQUIRED SETTINGS

<b>MR</b>	<b>USEFUL DIMENSION</b>	<b>COLOUR</b>	<b>VERSION</b>
	80	WIR	D
	130	RC	DOME

### EXAMPLES :

MR - DOME 80mm white-IR LEDs → **MR-80-WIR-D**  
MR - DOME 130mm red-cyan LEDs → **MR-130-RC-D**

## BINNING INFORMATION

TPL VISION IS EXTREMELY CAREFUL ABOUT BIN SORTING IN THE SELECTION OF LEDS FOR THEIR PRODUCTS.

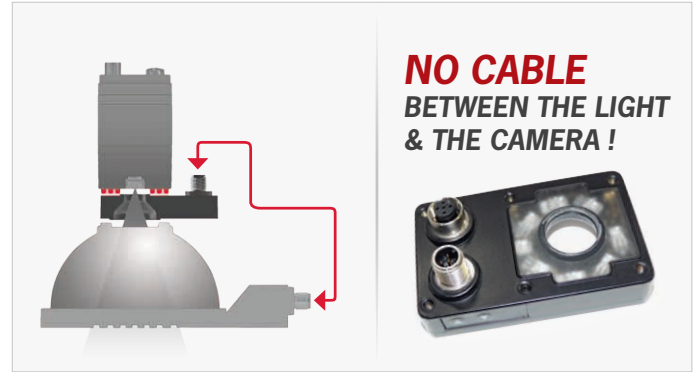
Specifically for the Cyan series on this product, the human eye is very sensitive to colour variations. It may appear to the customer that they do not appear the same between two cyan LED products. Despite any noticeable differences, **the peak wavelength variation DOES NOT EXCEED 10NM.**

Here are the following bandpass camera filters we recommend to fit with the MR - DOME:

- White LEDs: no filter required
- Infrared LEDs: LP 830 (<http://midopt.com/filters/lp830/>)
- Red LEDs: BP 635 (<http://midopt.com/filters/bp635/>)
- Cyan LEDs: BP 505 (<http://midopt.com/filters/bp505/>)

We advise using bandpass filters from MidOpt: [www.midopt.com](http://www.midopt.com)

## OPTICAL TRIGGER



The **Optical Trigger** is an easy solution to connect the MR-DOME to your smart camera, **without a wired connection**. Whenever the camera's **embedded light** is on, the Optical Trigger automatically sends a signal to the external light. Using the Optical Trigger, you can get a perfect **synchronization** of the MR-DOME with the camera software very easily.

## RELATED PRODUCTS: CABLES

M12 female 8 pins cable	
REMOTE CONTROL	
<b>3 meters</b>	Ref: C-M12-8P-3M
<b>5 meters</b>	Ref: C-M12-8P-5M
<b>10 meters</b>	Ref: C-M12-8P-10M

M12 female 5 pins cable	
POWER SUPPLY	
<b>2 meters</b>	Ref: C-M12-5P-2M
<b>5 meters</b>	Ref: C-M12-5P-5M
<b>10 meters</b>	Ref: C-M12-5P-10M

M12 female / male 5 pins cable	
MR - DOME / OPTICAL TRIGGER	
<b>0.3 meters</b>	Ref: RA-M12-FM-5P-0.3M

OTHER PRODUCTS FROM THE **MODULAR RINGLIGHT** PLATFORM



MR - RING



MR - DARK FIELD



MR - LOW ANGLE

Features and presentations liable to modifications without prior notice. B-1 version, 2019/06 Edition

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#### Other available documents :

- PDF, DXF, STEP DRAWINGS (on demand)
- USER GUIDE

MR - DOME

