

MODULAR RINGLIGHT

MACHINE VISION & CODE READING APPLICATIONS

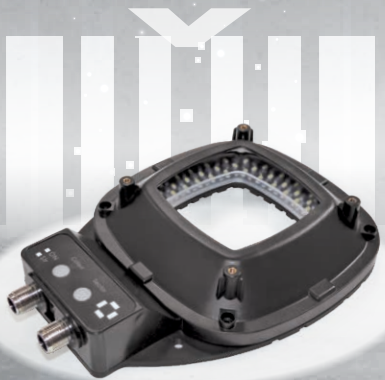


MR-RING



ACCESSORIES

The **MODULAR LIGHT** is a **high-brightness, flexible illumination platform** for various factory inspection applications. It is **highly modular**, enabling users to quickly identify optimal illumination setups, especially in dynamic production environments.



MR-LOW ANGLE



MR-DOME



MR-DARK FIELD

- ✓ DESIGNED FOR HIGH SPEED PRODUCTION LINES
- ✓ STEREOGRAPHIC IMAGING WITH SECTOR CONTROL
- ✓ SHORT LEAD TIMES
- ✓ MANUAL OR REMOTE CONTROL
- ✓ MANY ILLUMINATION STYLES
- ✓ MODULARITY REDUCES INVENTORY
- ✓ MULTIPLE WAVELENGTH WITH SECTOR CONTROL



ACHIEVING THE **BEST** CONTRAST IN ANY APPLICATION

CODE READING APPLICATIONS

- ✓ TEXT PRINT CODES
- ✓ BARCODES
- ✓ QR CODES
- ✓ DATA MATRIX CODES
- ✓ DOT PEEN MARKING
- ✓ LASER ETCHED CODES

MACHINE VISION APPLICATIONS

- ✓ DEFECTS IN MATERIAL
- ✓ FILL LEVEL
- ✓ PCB INSPECTION
- ✓ REFLECTIVE SURFACES
& more...



MODULAR RINGLIGHT: AN **INDUSTRIAL** PLATFORM

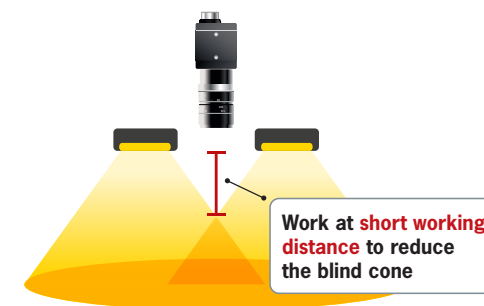


■ 4 SECTORS:

The 4 sectors can be controlled **manually** (in pairs) or **remotely** (individually) by **discrete I/O**.



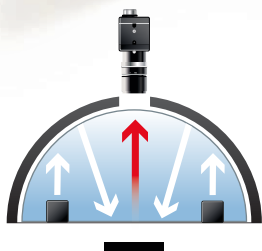
■ BLIND CONE:



	Distance minimum in Ring configuration
Size 80	60 mm
Size 130	50 mm

DOME ACCESSORY: FEATURES OVERVIEW

MR-DOME



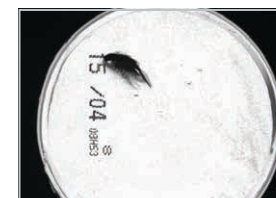
The **DOME ACCESSORY** turns the Modular Ringlight into a **high performance, bright dome light**, providing homogeneous illumination even on highly reflective surfaces.

■ TESTING OF VARIOUS SHINY AND UN-HOMOGENEOUS SURFACES:

The Modular Ringlight equipped with the **Dome accessory** is the perfect tool to read inkjet or laser markings on shiny and/or uneven surfaces.



TABLET



LID



LASER CODE

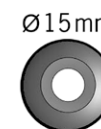
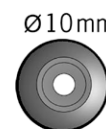
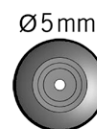


LID

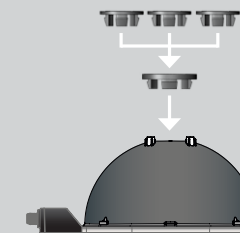


COVER

■ SIZES OF THE HOLE APERTURE ADAPTERS*:



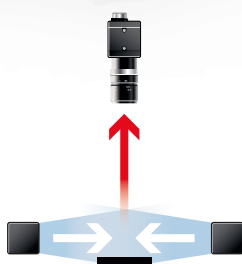
* Included in scope of delivery with all Dome options.



DARK FIELD ACCESSORY: FEATURES OVERVIEW

MR-DARK FIELD

NEW



By directing light towards the subject at a shallow angle of incidence, **DARK FIELD LIGHTING** can be used to create contrast in which the **highlighted features appear bright** against a dark background.

■ TESTING OF VARIOUS SHINY AND UN-HOMOGENEOUS SURFACES:



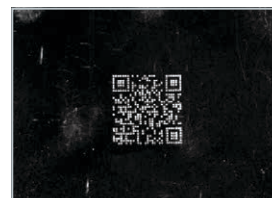
PULL TAB



GLASS EMBOSSING



PET



DPM CODE



CAN



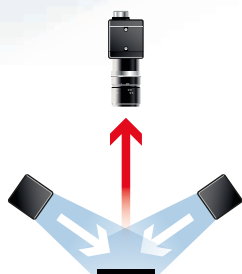
COIN

■ ADVANTAGE OF DARK FIELD:

- ✓ **High contrast ratios** on shiny features with edges
- ✓ **High intensity** (possible for use down to **<100µs** exposure time)
- ✓ Protection: **IP65 rating**
- ✓ **Large working distance** range (0-500mm)

LOW ANGLE ACCESSORY: FEATURES OVERVIEW

MR-LOW ANGLE



Using the **LOW ANGLE** accessory with a **short working distance**, the Modular Ringlight creates **a diffuse light source** with an angle of incidence at 45°.

■ TESTING OF VARIOUS SHINY AND UN-HOMOGENEOUS SURFACES:



PCB



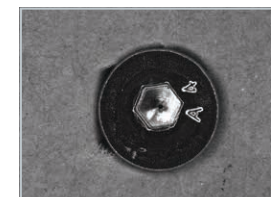
WATCH CASING



MEDICINE PACKET



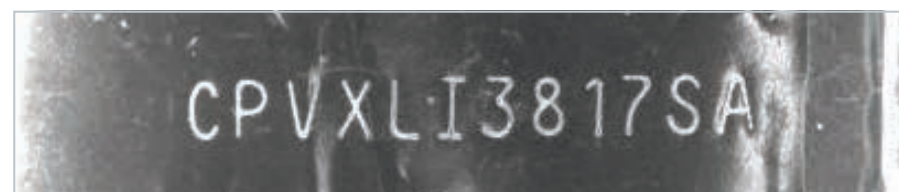
BOTTLE CAP



SCREW CODE

LOW ANGLE works by reflecting the light at a **45 degree** angle. Perfect for creating a blade of light close to the field of view.

■ EXAMPLE: MARKING ON METAL PART



COMBOS FOR **EASY TESTING** AVAILABLE

EVALUATION PROCESS SIMPLIFIED



**INCLUDING
THE NEW DARK FIELD**

2 SIZES AVAILABLE:
80mm & 130mm

- **Make life easy:** no need to order the products separately
- **Perfect feasibility tool**
- **Rapid delivery**



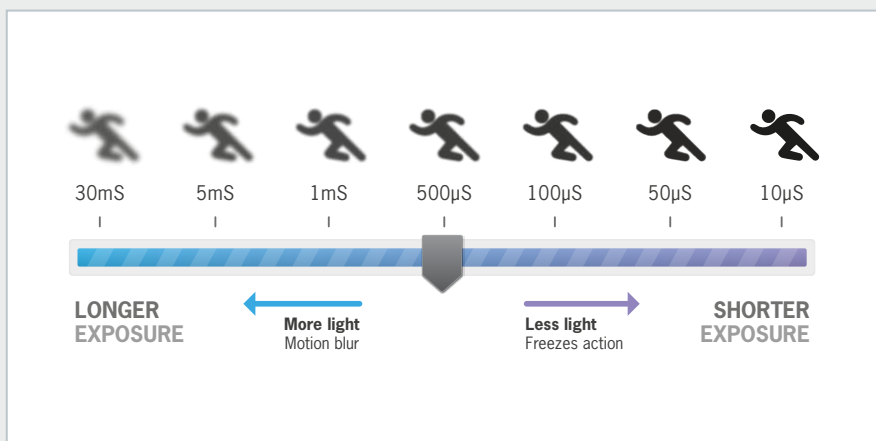
EASY TO USE!

COMBOS available for easy ordering	COMBO References
COMBO 80 Red-Cyan with briefcase	MR-80-RC-CO-B
COMBO 80 White-Infrared with briefcase	MR-80-WIR-CO-B
COMBO 80 Red-Cyan White-Infrared with briefcase	MR-80-RC-WIR-CO-B
COMBO 130 Red-Cyan with briefcase	MR-130-RC-CO-B
COMBO 130 White-Infrared with briefcase	MR-130-WIR-CO-B
COMBO 130 Red-Cyan White-Infrared with briefcase	MR-130-RC-WIR-CO-B

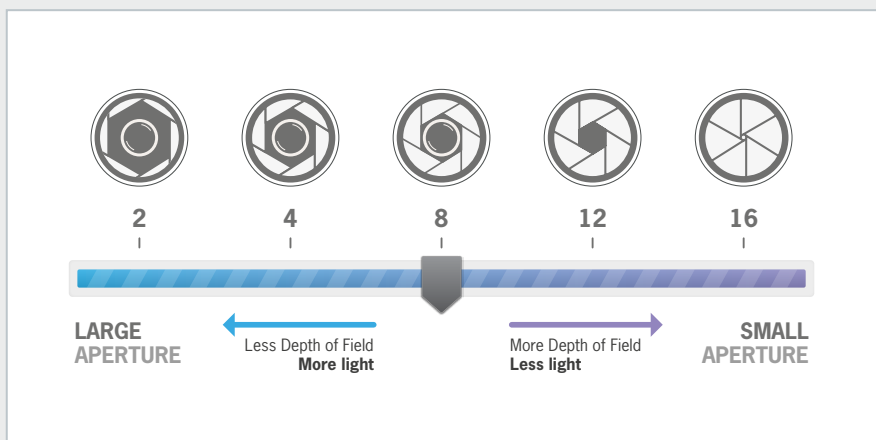
OVERDRIVE FUNCTIONALITY ENABLED

IN ALL CONFIGURATIONS OF THE MODULAR RINGLIGHT

■ EXPOSURE TIME (ET)



■ LENS APERTURE (A)



■ NO OVERDRIVE



■ WITH OVERDRIVE



(images shown with Dome MR-130-WIR-D in OverDrive mode)

MODULAR RINGLIGHT 80: LIGHTING DATA

All data (except Lux column) is given in W/m².

STANDARD	RED 80mm				CYAN 80mm				WHI 80mm					IR 80mm			
Working Distance	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD	RING (lux)	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD
10 mm	41.3	30.4	18.2	31.2	24.2	17.8	10.7	18.2	28280,8	102	75	45	77	19.1	19.7	11.8	20.3
25 mm	29.2	21.5	14.6	28.4	17.1	12.6	8.5	16.6	19962,9	72	53	36	70	18.9	13.9	9.5	18.4
50 mm	26.7	10.9	7.7	20.3	15.6	6.4	4.5	11.8	18299,4	66	27	19	50	17.4	7.1	5	13.2
100 mm	15.8	4.5	3.2	9.3	9.2	2.6	1.9	5.4	10813,3	39	11	8	23	10.3	2.9	2.1	6.1
200 mm	6.1	1.6	0.8	2.8	3.6	0.9	0.5	1.7	4158,9	15	4	2	7	3.9	1.1	0.5	1.8
300 mm	3.2	1.2	0.8	1.2	1.9	0.7	0.5	0.7	2218,1	8	3	2	3	2.1	0.8	0.5	0.8
500 mm	1.6	0.8	0.4	0.4	0.9	0.5	0.2	0.2	1109,1	4	2	1	1	1.1	0.5	0.3	0.3

OVERDRIVE	RED 80mm				CYAN 80mm				WHI 80mm					IR 80mm			
Working Distance	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD	RING (lux)	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD
10 mm	165.3	121.6	72.9	124.8	96.6	71.1	42.6	72.9	113123	408	300	180	308	76.5	78.9	47.4	81.1
25 mm	116.7	85.9	58.4	113.5	68.2	50.2	34.1	66.3	79851,8	288	212	144	280	75.8	55.8	37.9	73.7
50 mm	107	43.8	30.8	81.1	62.5	25.6	18	47.4	73197,5	264	108	76	200	69.5	28.4	20	52.6
100 mm	63.2	17.8	13	37.3	36.9	10.4	7.6	21.8	43253,1	156	44	32	92	41.1	11.6	8.4	24.2
200 mm	24.3	6.5	3.2	11.3	14.2	3.8	1.9	6.6	16635,8	60	16	8	28	15.8	4.2	2.1	7.4
300 mm	13	4.9	3.2	4.9	7.6	2.8	1.9	2.8	8872,4	32	12	8	12	8.4	3.2	2.1	3.2
500 mm	6.5	3.2	1.6	1.6	3.8	1.9	0.9	0.9	4436,2	16	8	4	4	4.2	2.1	1.1	1.1

MODULAR RINGLIGHT 130: LIGHTING DATA

All data (except Lux column) is given in W/m².

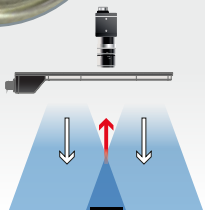
STANDARD	RED 130mm				CYAN 130mm				WHI 130mm					IR 130mm			
Working Distance	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD	RING (lux)	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD
10 mm	72.6	51.2	33.6	54.8	45.5	32.1	21.1	34.3	26338,7	95	67	44	71.7	25.4	21.1	18.4	30
25 mm	45.9	45.9	27.5	44.6	28.7	28.7	17.2	27.9	16635	60	60	36	58.3	25.1	18.9	15.1	24.4
50 mm	39.8	35.2	23.7	30.1	24.9	22	14.8	18.9	14417	52	46	31	39.4	21.8	14.5	13	16.5
100 mm	29.1	16.1	10.7	17.1	18.2	10.1	6.7	10.7	10535,5	38	21	14	22.4	15.9	6.6	5.9	9.4
200 mm	14.5	5.4	3.1	6.8	9.1	3.4	1.9	4.2	5267,7	19	7	4	8.9	8	2.2	1.7	3.7
300 mm	8.4	3.1	1.5	3.2	5.3	1.9	1	2	3049,7	11	4	2	4.1	4.6	1.3	0.8	1.7
500 mm	3.8	1.5	0.8	1	2.4	1	0.5	0.6	1386,2	5	2	1	1.3	2.1	0.6	0.4	0.5

OVERDRIVE	RED 130mm				CYAN 130mm				WHI 130mm					IR 130mm			
Working Distance	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD	RING (lux)	RING	DOME	LOW ANGLE	DARK FIELD	RING	DOME	LOW ANGLE	DARK FIELD
10 mm	276	194.7	127.8	208.4	172.8	121.9	80	130.4	100087	361	254.6	167.2	272.5	96.5	80	70	114.1
25 mm	174.3	174.3	104.6	169.5	109.1	109.1	65.5	106.1	63213	228	228	136.8	221.7	95.5	71.7	57.3	92.8
50 mm	151.1	133.6	90.1	114.4	94.6	83.7	56.4	71.7	54784,6	197.6	174.8	117.8	149.7	82.8	54.9	49.3	62.7
100 mm	110.4	61	40.7	65.1	69.1	38.2	25.5	40.8	40034,9	144.4	79.8	53.2	85.2	60.5	25.1	22.3	35.7
200 mm	55.2	20.3	11.6	25.8	34.6	12.7	7.3	16.1	20017,4	72.2	26.6	15.2	33.7	30.2	8.4	6.4	14.1
300 mm	32	11.6	5.8	12	20	7.3	3.6	7.5	11589,1	41.8	15.2	7.6	15.7	17.5	4.8	3.2	6.6
500 mm	14.5	5.8	2.9	3.6	9.1	3.6	1.8	2.3	5267,7	19	7.6	3.8	4.8	8	2.4	1.6	2

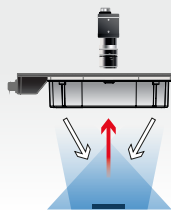


EFFECTS WITH DIFFERENT ACCESSORIES

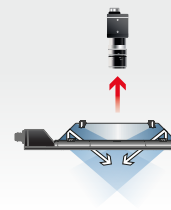
EXAMPLE: TIN CAN



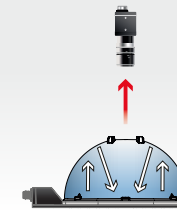
RING



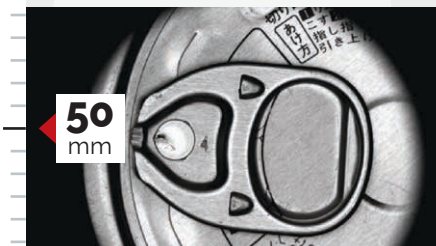
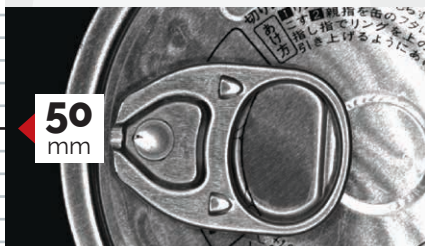
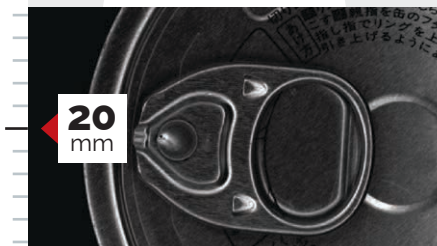
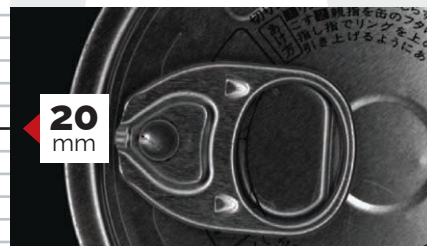
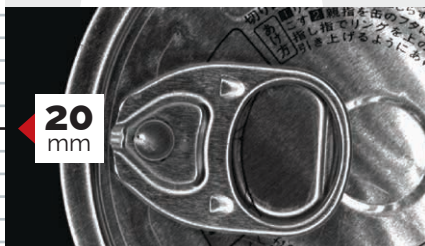
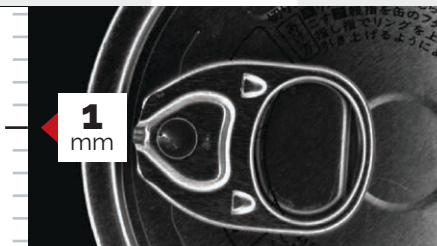
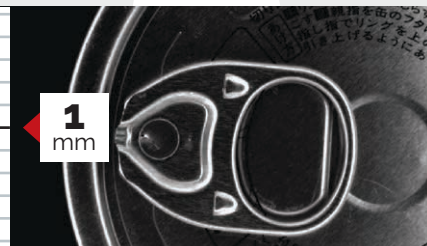
DARK FIELD



LOW ANGLE



DOME



WORKING DISTANCE

WORKING DISTANCE

WORKING DISTANCE

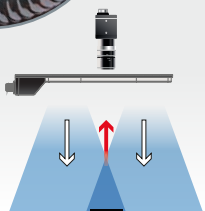
WORKING DISTANCE

No exposure time or aperture adjustments shown as you go down each column.

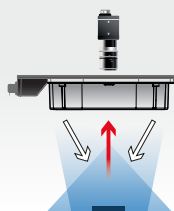


EFFECTS WITH DIFFERENT ACCESSORIES

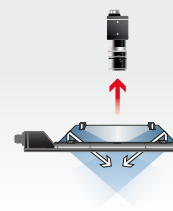
EXAMPLE: EMBOSSING ON GLASS



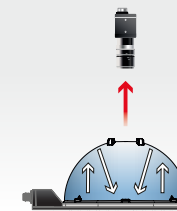
RING



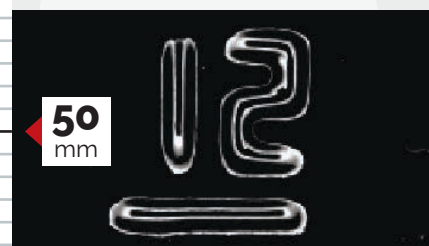
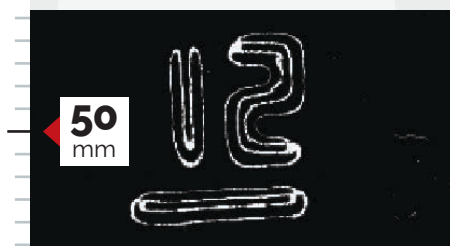
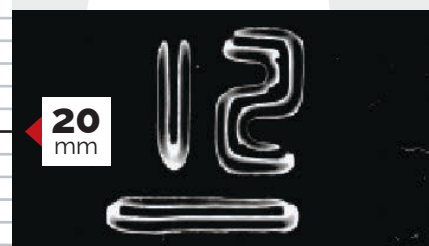
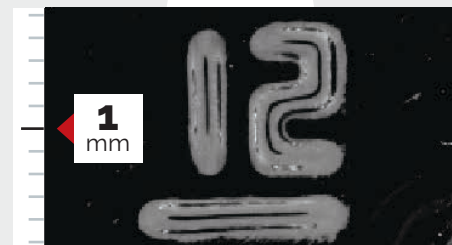
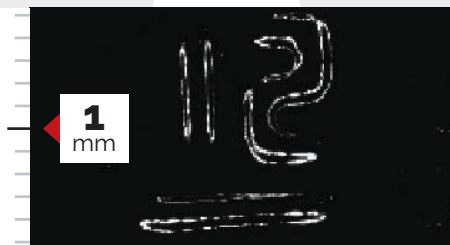
DARK FIELD



LOW ANGLE



DOME



WORKING DISTANCE

WORKING DISTANCE

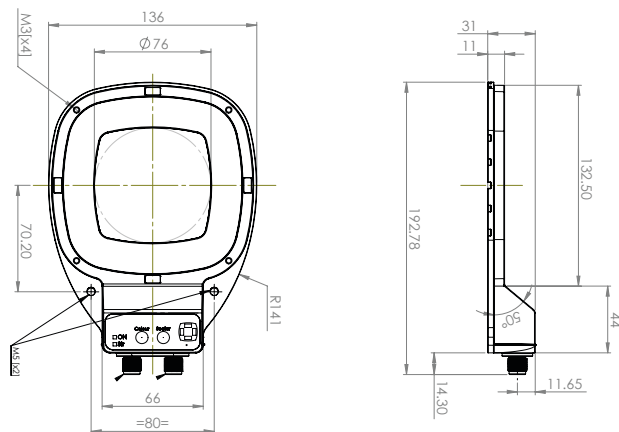
WORKING DISTANCE

WORKING DISTANCE

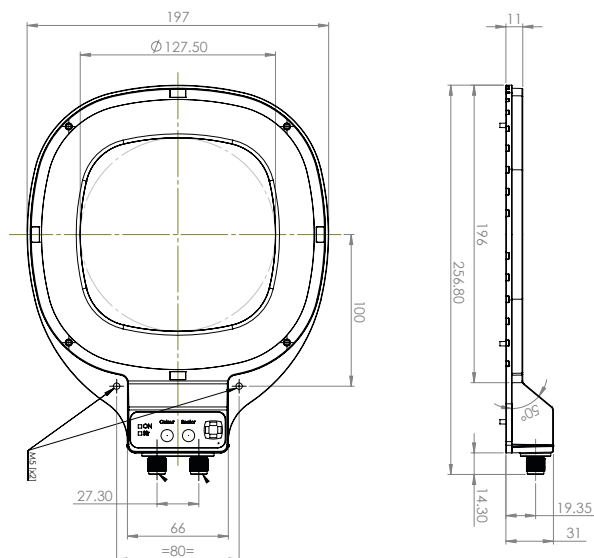
No exposure time or aperture adjustments shown as you go down each column.

MODULAR RINGLIGHT: AN INDUSTRIAL PLATFORM

Modular Ringlight 80



Modular Ringlight 130



REMOTE SETTINGS

THROUGH CAMERA / PLC

M12 male 8 pins *

- ☒ Activate OverDrive
- ☒ Change colour
- ☒ Program sectors
- ☒ Disable keypad

* For pin out information, refer to Technical User Guide

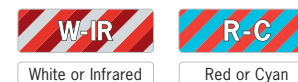
MANUAL SETTINGS

FOR FEASIBILITY TESTING

☒ Select sector pairs:



☒ Select Colour:







Features	80 mm	130 mm
Functioning Modes	Continuous, Strobe, OverDrive, Dimming, Manual Control	
Rise/ Fall Time	10µs / 10µs	
Minimum On-Time @ min frequency	50µs @ 30 Hz	
Maximum consumption Red-Cyan	9W average / 51W peak*	11W average / 82W peak*
Maximum consumption WHI-IR	10W average / 42W peak*	13W average / 62W peak*
Dimensions (external)	136 x 193 mm	197 x 257 mm
Dimensions (internal)	Ø76 mm	Ø127.5 mm
Height with no accessories	11 mm at light, 31 mm at connectors	
Height with Dome	75 mm	106.75 mm
Height with Low Angle	34.75 mm	45.25 mm
IP Protection	IP 65	
Labels	RoHS / CE / UKCA / WEEE	
Country of Origin	Made in France	
Tariff Number	94054990	


* Peak only reached when OverDrive is activated (see user manual).

THE PERFECT **PARTNER** PLATFORM!

■ SELECT FROM:

4x RINGS	
RING 80mm White-IR	MR-80-WIR-R 
RING 80mm Red-Cyan	MR-80-RC-R 
RING 130mm White-IR	MR-130-WIR-R 
RING 130mm Red-Cyan	MR-130-RC-R 

6x LIGHTING ACCESSORIES	
LOW ANGLE – 80mm	LA-MR-80 
DOME – 80mm	D-MR-80 
DARK FIELD – 80mm	DKF-MR-80 
LOW ANGLE – 130mm	LA-MR-130 
DOME – 130mm	D-MR-130 
DARK FIELD – 130mm	DKF-MR-130 

MOUNTING ACCESSORY	
MOUNTING BRACKET	TPL-MOUNT-MR 

■ SUPPLY UP TO 16 CONFIGURATIONS:

Products		80 mm	130 mm
	RING White-IR	MR-80-WIR-R	MR-130-WIR-R
	RING Red-Cyan	MR-80-RC-R	MR-130-RC-R
	LOW ANGLE White-IR	MR-80-WIR-LA	MR-130-WIR-LA
	LOW ANGLE Red-Cyan	MR-80-RC-LA	MR-130-RC-LA
	DOME White-IR	MR-80-WIR-D	MR-130-WIR-D
	DOME Red-Cyan	MR-80-RC-D	MR-130-RC-D
	DARK FIELD White-IR	MR-80-WIR-DKF	MR-130-WIR-DKF
	DARK FIELD Red-Cyan	MR-80-RC-DKF	MR-130-RC-DKF
COMBOS available for easy ordering ▶ (See page 7 for all Combo options)		COMBO 80 Red-Cyan White-Infrared with briefcase	MR-80-RC-WIR-CO-B
		COMBO 130 Red-Cyan White-Infrared with briefcase	MR-130-RC-WIR-CO-B