Modular Ring Light
White infrared light, 130 mm

OPT2427
Part Number

- **4 sectors selectable**
- **Bicolor**
- **Highly modular illumination platform**
- **No external control required**
- **Overdrive**
- **Quick and easy replacement of accessories**

The modular ring lights are suitable for many illuminating forms on a smaller visual field < Ø 130 mm. Based on the diffuse ring light, the way the light is scattered and directed at the target can be changed by adding a low angle attachment or a dome attachment. Each ring light has two bi-color light colors: Red/Cyan or White/IR. The lights can be operated in continuous mode or synchronized with the Machine Vision Camera in strobe mode or strobe mode with increased intensity (overdrive). Each ring light can be controlled via a lockable control panel and a standardized 5-pin M12 connector for power and strobe signals. The control panel can be disabled via the secondary connection, which can also be used to control individual sectors and to control the color remotely.

Technical Data

Optical Data	
Light Source	White-infrared light
Wavelength	860 nm
Risk Group (EN 62471)	1
Beam angle	± 65 °
Light output	≤ 19200 Lux
Electrical Data	
Supply Voltage	21,6...30 V DC
Power	13 W
Peak power	62 W
Current Consumption Continuous Mode (Ub = 24 V)	0,54 A
Current consumption strobe mode (Ub = 24 V)	2,58 A
Flash Duration	2 ms
Duty Cycle	< 0,1
Duty cycle	15 μs
Fall time	10 μs
Input signal	PNP/NPN
Temperature Range	-10...40 °C
Storage temperature	-20...60 °C
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Dimming	0....10 V ≙ 100...30%
Overdrive	yes
Mechanical Data	
Housing Material	Aluminum, PMMA, ABS
Degree of Protection	IP65
Optic Cover	PMMA
Connection	M12 × 1; 5-pin
Max. cable lenght	40 m
Camera aperture inner diameter	130 mm
Weight	< 600 g
Function	
Operating modes	Continuous, Strobe Overdrive

Connection Diagram No.	007
Control Panel No.	T18
Suitable Mounting Technology No.	927

Complementary Products

Dome accessory OPT2428/29
Low angle accessory OPT2430/31
Mounting bracket OPT2434

Ctrl. Panel

T18

68
9b
7b
8b
0c

All dimensions in mm (1 mm = 0.03937 Inch)
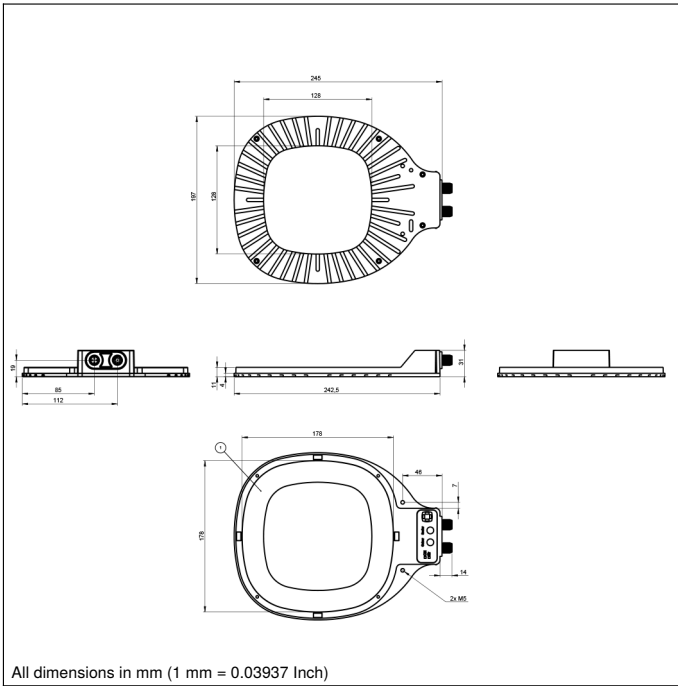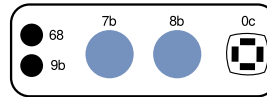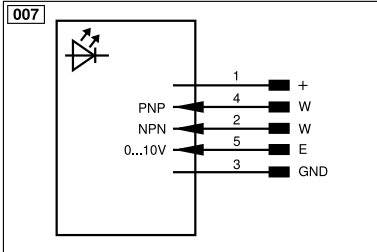
0c = sector selection indicator
68 = supply voltage indicator
7b = Color Selection Button
8b = Sector Selection Button
9b = Strobe Mode Indicator

007

1	+
4	W
PNP 2	W
NPN 5	E
0...10V 3	GND

Legend					
+	Supply Voltage +	nc	Not connected	EN$_{BRS422}$	Encoder B/B̄ (TTL)
–	Supply Voltage 0 V	U	Test Input	EN$_A$	Encoder A
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted	EN$_B$	Encoder B
A	Switching Output (NO)	W	Trigger Input	A$_{MIN}$	Digital output MIN
Ā	Switching Output (NC)	W–	Ground for the Trigger Input	A$_{MAX}$	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	A$_{OK}$	Digital output OK
V̄	Contamination/Error Output (NC)	O–	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	A$_{MV}$	Valve Output	O$_{LT}$	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY–	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⏚	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
⊘	IO-Link	Rx+/–	Ethernet Receive Path	GN	Green
PoE	ower over Ethernet	Tx+/–	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(–)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/–	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
EN$_{0\ RS422}$	Encoder 0-pulse 0/0̄ (TTL)	EDM	Contactor Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	EN$_{ARS422}$	Encoder A/Ā (TTL)		

UK CA   C E   RoHS   ⬦