

INDUSTRIAL MACHINE VISION LIGHTS



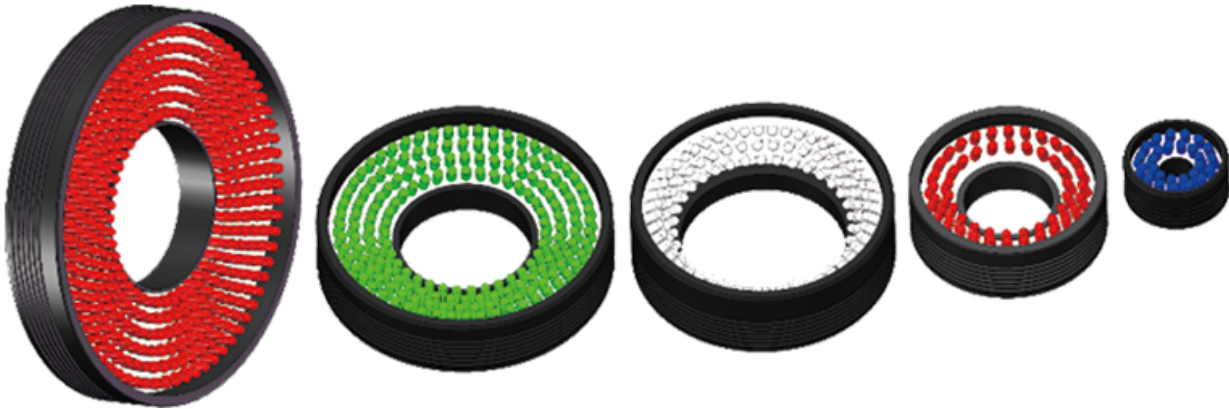
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RING LIGHT

PS-DR/DRG SERIES

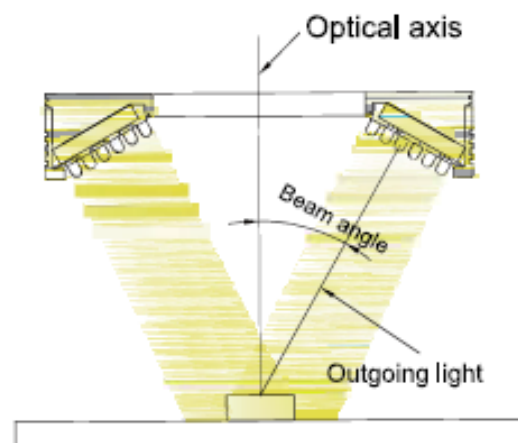
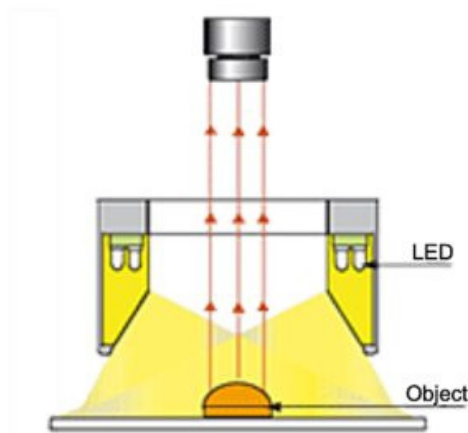


Ring lights offer a direct lighting method that can be used for either dark field or bright field illumination techniques depending on their angle of incidence with the object. Many Ring Lights can conveniently mount to the front of a camera lens thanks to their compact size and versatility.

These lights can be used for a wide range of working distances, as the unique design ensures little change in the uniform region as the distance from the workpiece increases or decreases. The full-color models feature independently controllable channels of red, green, and blue LEDs, while single-color red, blue, and white models are also available. High-intensity ring lights are ideal for a wide variety of detection applications, such as text recognition (OCR) and color examination.

Angle Diagram

Beam angle is the angle between the optical axis and the outgoing light:



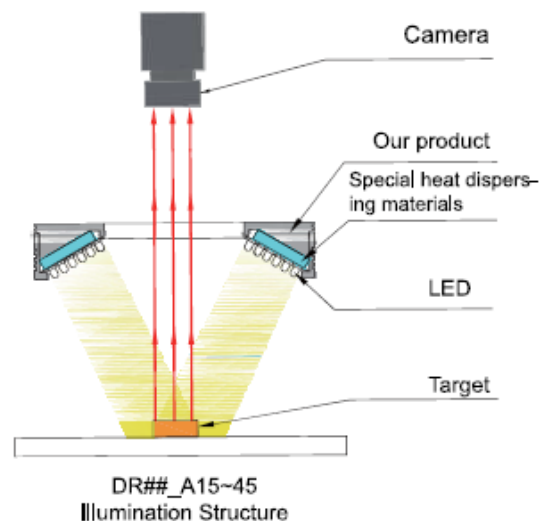
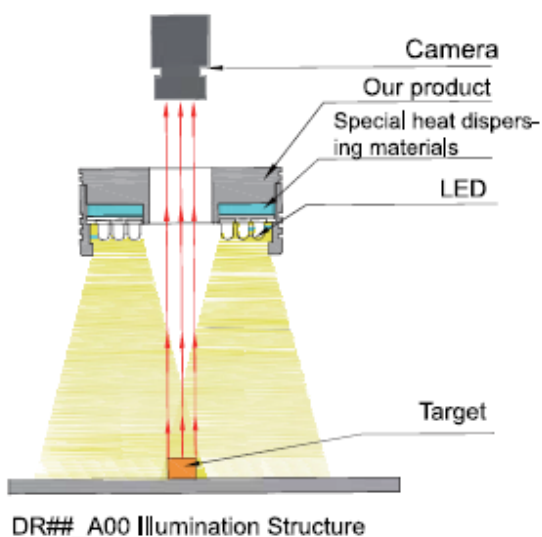
When and how to use Ring Light

The ring light is composed of evenly distributed LED particles passing through the light guide plate from the bottom to form a uniform diffuse light, effectively avoiding the reflection of the LED on the reflective surface. More powerful and further emitting distances are customisable.

Ring lights are suitable for many different image processing tasks. They are most commonly used as a bright field configuration in the inspection of matte, non-reflective materials.

They are suitable for more matte, non-reflective materials, perfect for character recognition, 2D code recognition, electronic components and PCBs.

Illumination Structure



RING LIGHTS

PS-DR Series

FEATURES

- High-density LED array, high brightness
- Various beam angles can be customized
- Diffuse board is optional, increases the uniformity of lights
- Uses wave-soldering technology, improves the quality of products, easy installation

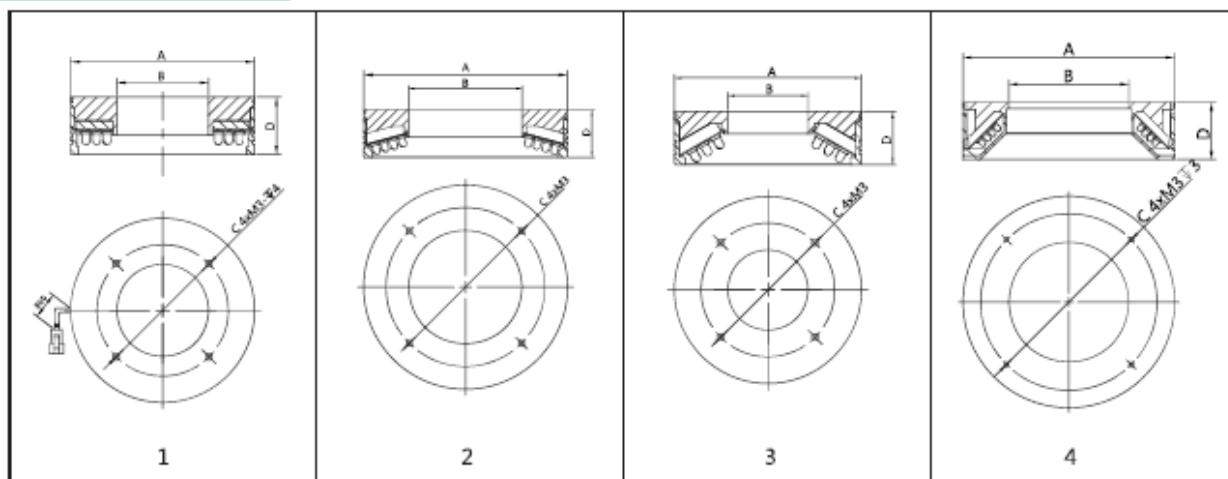
APPLICATION

- Inspection PCB (printed circuit board)
- Inspection of labels
- Inspection of package defects
- Inspection of general appearance
- Inspection of IC elements characters and appearance

RING LIGHTS

PS-DR SERIES

Installation diagram



TECHNICAL INDEX

Color (Wavelength)	Red: 620-630nm	Green: 525-530nm	Blue: 465-470nm
	White Color Temperature 6600-7000K	UV: 365-395nm	IR: 850/940nm
Operating environment	Temperature: 0 to 50 C, Humidity: 20% to 85% RH		
Lifetime	100,000 Hours theoretical service time (Depends on the operating environment, not a guarantee.		
Compatible Controller	Analog Controller, Digital Controller, Constant Current Controller		
Optional Accessory	Light sources and Lens Adapter.		
	Diffusion Plate, Polarizing Plate (Optical Transmittance: 60%, 70%, 80%, 90%)		
	Extension Cable: 1m/2m/5m/10m/15m (Two kinds of materials of the shell of wire; PVC of hardness; silicon of softness)		
Warranty	One year warranty, technical support (Buyers pay for the freight)		

RING LIGHTS

PS-DR SERIES

Light parameters (Voltage is 24V or 48 V)

Angle	Model	Color	Power(W)		Dimensions(mm)					Picture No.
			Output ●	Output ● ● ●	O.D. (mm) A	I.D. (mm) B	Mounting Hole C	Thickness D	Quantity of Row	
0°	PS-DR28-A00	● ● ● ●	0.2W	0.5W	28	10	20	22	1	1
	PS-DR35-A00	● ● ● ●	0.9W	1.35W	37	15	24	22	2	
	PS-DR50-A00	● ● ● ●	1.3W	2.3W	50	15	40	22	3	
	PS-DR70-A00	● ● ● ●	1.8W	2.7W	90	44	25	83	3	
	PS-DR90-A00	● ● ● ●	3.5W	6.1W	90	45	70	22	4	
	PS-DR100-A00	● ● ● ●	6.1W	7.3W	100	40	80	22	5	
	PS-DR110-A00	● ● ● ●	6.4W	7.9W	110	60	85	22	5	
	PS-DR120-A00	● ● ● ●	4.7W	7.3W	120	50	100	22	6	
	PS-DR140-A00	● ● ● ●	6.5W	10.5W	140	90	120	22	6	
	PS-DR150-A00	● ● ● ●	10.5W	15.8W	150	25/50	130	22	11/8	
	PS-DR200-A00	● ● ● ●	13.1W	18.9W	200	110	160	22	7	
	PS-DR260-A00	● ● ● ●	16.2W	23.3W	260	160	220	22	8	
15°	PS-DR34-A15-	● ● ● ●	0.9W	1.2W	34	10	24	21	2	2
	PS-DR40-A15-	● ● ● ●	0.9W	1.4W	42	15	30	21	2	
	PS-DR50-A15-	● ● ● ●	0.8W	1.6W	52	27	40	21	2	
	PS-DR60-A15-	● ● ● ●	0.93W	1.8W	62	37	50	21	2	
	PS-DR70-A15-	● ● ● ●	1.7W	2.9W	70	37	50	21	3	
	PS-DR90-A15-	● ● ● ●	3.1W	5.6W	90	50	70	21	4	
	PS-DR104-A15-	● ● ● ●	4.1W	6.5W	104	56	80	21	5	

Angle	Model	Color	Power(W)		Dimensions(mm)					Picture No.
			Output ●	Output ● ● ● ●	O.D. (mm) A	I.D. (mm) B	Mounting Hole C	Thickness D	Quantity of Row	
15°	PS-DR110-A15-	● ● ● ● ●	0.2W	0.5W	28	10	20	22	1	2
	PS-DR120-A15-	● ● ● ● ●	0.9W	1.35W	37	15	24	22	2	
	PS-DR145-A15-	● ● ● ● ●	1.3W	2.3W	50	15	40	22	3	
30°	PS-DR50-A30-	● ● ● ● ●	1.5W	2.3W	50	28	40	20	2	3
	PS-DR60-A30-	● ● ● ● ●	1.6W	2.5W	60	34	50	20	2	
	PS-DR70-A30-	● ● ● ● ●	2.1W	3.3W	70	30	50	20	3	
	PS-DR90-A30-	● ● ● ● ●	3.85W	6.3W	90	40	70	22	5	
	PS-DR100-A30-	● ● ● ● ●	4.25W	7.1W	100	50	70	22	4	
	PS-DR120-A30-	● ● ● ● ●	8.5W	13.6W	120	60	90	24	6	
	PS-DR150-A30-	● ● ● ● ●	8.8W	14.5W	150	90	130	24	6	
	PS-DR180-A30-	● ● ● ● ●	8.8W	15.9W	180	120	130	24	6	
	PS-DR200-A30-	● ● ● ● ●	9.5W	16.2W	200	140	140	24	6	
45°	PS-DR55-A45-	● ● ● ● ●	1.9W	2.2W	55	25	40	20	2	4
	PS-DR70-A45-	● ● ● ● ●	2.3W	3.7W	70	37	50	21	2	
	PS-DR90-A45-	● ● ● ● ●	3.6W	5.7W	90	50	70	22	3	
	PS-DR100-A45-	● ● ● ● ●	3.8W	6.1W	100	56	80	24	3	
	PS-DR120-A45-	● ● ● ● ●	8.8W	13.4W	120	78	130	33	3	
	PS-DR130-A45-	● ● ● ● ●	9.5W	15.3W	130	78	133	30	3	
	PS-DR150-A45-	● ● ● ● ●	10.2W	15.3W	150	103	130	30	4	
	PS-DR180-A45-	● ● ● ● ●	12.3W	18.4W	180	130	130	30	5	

Notes: Beam angle is the angle between the optical axis and the outgoing light. (All the lights adopt 24V output voltage, please inform us in advance to custom if you want 12V.)

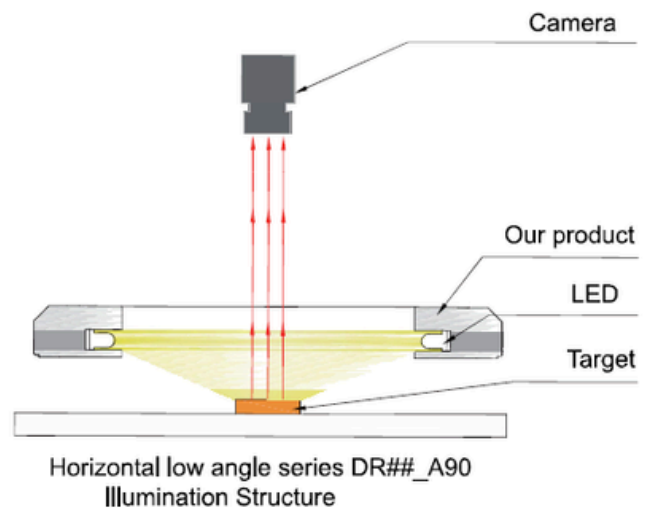
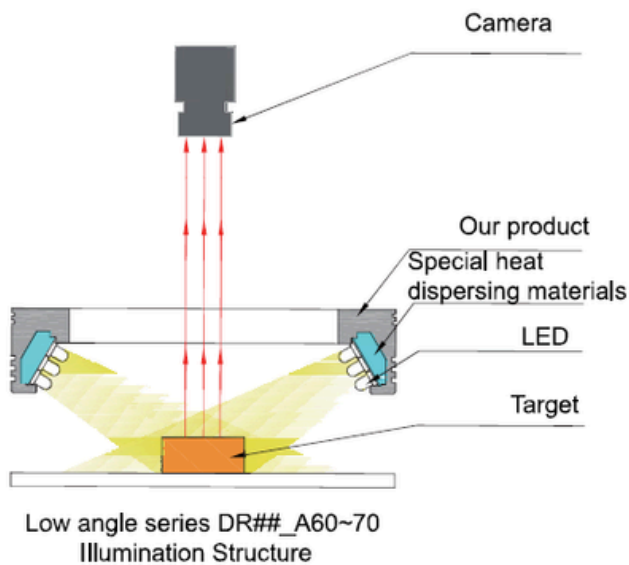
LOW POWER RING LIGHTS

PS-DR Series

When and how to use Low Power Ring Light

Low Power Ring Lights are suitable for applications where moderate illumination is needed to enhance visibility while minimizing power consumption and heat generation.

Illumination Structure



FEATURES

- High-density LED array, high brightness
- Various beam angles can be customized
- Diffuse board is optional, increases the uniformity of lights
- Uses wave-soldering technology, improves the quality of products, easy installation

APPLICATION

- Inspection PCB (printed circuit board)
- Inspection of labels
- Inspection of package defects
- Inspection of general appearance
- Inspection of IC elements characters and appearance
- Inspection of surface scratches, marks, breakage, margin, etc.

LOW POWER RING LIGHTS

PS-DR SERIES

TECHNICAL INDEX

Color (Wavelength)	Red: 620-630nm	Green: 525-530nm	Blue: 465-470nm
	White Color Temperature 6600-7000K	UV: 365-395nm	IR: 850/940nm
Operating environment	Temperature: 0 to 50 C, Humidity: 20% to 85% RH		
Lifetime	100,000 Hours theoretical service time (Depends on the operating environment, not a guarantee.		
Compatible Controller	Analog Controller, Digital Controller, Constant Current Controller		
Optional Accessory	Light sources and Lens Adapter.		
	Diffusion Plate, Polarizing Plate (Optical Transmittance: 60%, 70%, 80%, 90%)		
	Extension Cable: 1m/2m/5m/10m/15m (Two kinds of materials of the shell of wire; PVC of hardness; silicon of softness)		
Warranty	One year warranty, technical support (Buyers pay for the freight)		

APPLICATIONS

Inspect the Automobile Hub

- Model: PS-DRG320-W

Because the long working distance and large area require the light source should not be too heavy, the high-bright ring light with large LED particles can fulfill the requirement quite well.



LOW POWER RING LIGHTS

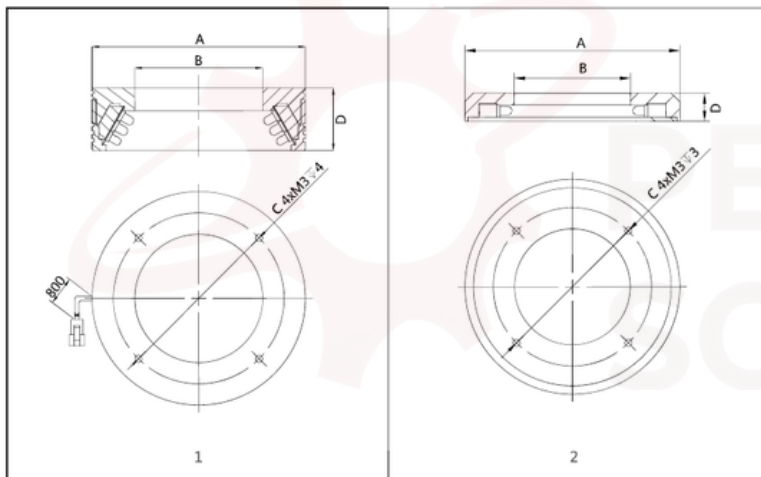
PS-DR SERIES

Light parameters (Voltage is 24V)

Angle	Model	Color (R/G/B/W)	Power(W)		Dimensions(mm)					Picture No.
			Output 	Output   	O.D. (mm) A	I.D. (mm) B	Mounting Hole C	Thickness D	Quantity of Row	
60-75°	PS-DR50-A60	   	1.1W	1.8W	50	20	40	23	2	1
	PS-DR60-A60	   	1.6W	2.5W	60	30	50	23	3	
	PS-DR75-A60	   	2.3W	3.6W	75	40	60	22	3	
	PS-DR90-A60	   	3.9W	5.9W	90	54	75	23	3	
	PS-DR100-A60	   	4.4W	6.4W	100	63	84	23	3	
	PS-DR120-A60	   	5.1W	10.1W	120	87	100	30	3	
	PS-DR160-A75	   	7W	12.3W	161	124	145	22	3	
	PS-DR150-A75	   	6.8W	11.1W	150	112	140	26	4	
	PS-DR180-A75	   	7.3W	12.8W	180	142	160	26	4	
	PS-DR200-A75	   	11.5W	18.6W	200	160	180	26	4	
	PS-DR240-A75	   	13.6W	21.4W	240	200	220	26	4	
	PS-DR320-A75	   	16.3W	26.3W	320	278	304	34	4	
Horizontal 90°	PS-DR40-A90-	   	0.45W	0.7W	40	12	25	10.5	1	2
	PS-DR75-A90-	   	0.6W	1.8W	76	41	56	10.5	1	
	PS-DR96-A90-	   	0.8W	2W	96	61	80	10.5	1	
	PS-DR126-A90-	   	1.6W	2.4W	126	91	110	10.5	1	
	PS-DR150-A90-	   	2.5W	2.9W	151	116	130	10.5	1	

Angle	Model	Color (R/G/B/W)	Power(W)		Dimensions(mm)					Picture No.
			Output ●	Output ● ● ●	O.D. (mm) A	I.D. (mm) B	Mounting Hole C	Thickness D	Quantity of Row	
Horizontal 90°	PS-DR170-A90-	● ● ● ●	2.6W	3.4W	172	130	164	10.5	1	2
	PS-DR208-A90-	● ● ● ●	2.7W	3.8W	208	173	190	10.5	1	
	PS-DR208-A90-LS5	● ● ● ●	3.0W	4.2W	208	165	190	11.5	1	

Installation Diagram



APPLICATIONS

Inspect the Defects on the Surface of Auto Parts

- Model: PS-DR150-A75
- Use low angle ring light to illuminate the surface of auto parts. The flat surface will appear quite bright; on the contrary, the scratches and defect areas will appear dark, so we can tell the flaws easily.

Inspect the Defects of Auto Parts

- Model: PS-DR206-A90-W
- Use horizontal low angle ring light to illuminate the surface of auto parts. This can make those six salient appear quite bright, but the background will appear dark, so we can tell the defects easily.

Inspect the Defects of Nuts

- Model: PS-DR75-A90-R
- Use horizontal low angle ring light to illuminate nuts. The edge will appear bright, but the defect area will appear dark since the reflected light cannot enter the lens. The background appears dark grey, so the defect area can be seen clearly.

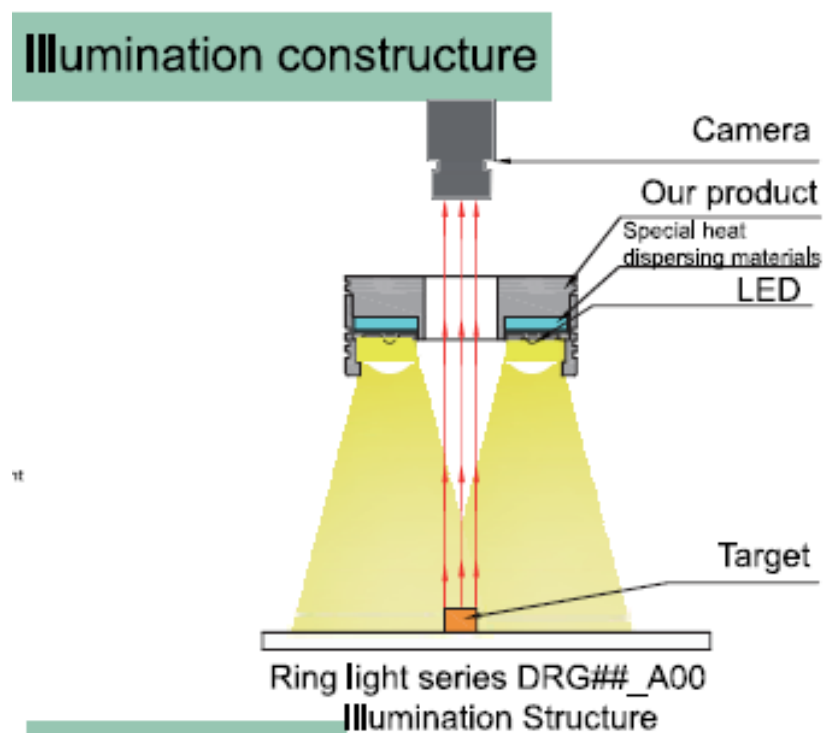


HIGH POWER RING LIGHTS

PS-DRG Series

When and how to use High Power Ring Light

High Power Ring Lights are ideal for applications where strong and uniform illumination is required to enhance image quality, reduce shadows, and improve contrast in machine vision and industrial inspection setups.



FEATURES

- High brightness large LED particles array
- Far illuminating distance and large illuminating area
- Various colors can be customized
- Diffuse board is optional, increases the uniformity of lights
- Uses wave-soldering technology, improved product quality, easy installation

APPLICATION

- Far illuminating distance
- Large illuminating area
- Inspect the general appearance
- High-speed assembly line illuminating

HIGH POWER RING LIGHTS

PS-DRG Series

TECHNICAL INDEX

Color (Wavelength)	Red: 620-630nm	Green: 525-530nm	Blue: 465-470nm
	White Color Temperature 6600-7000K	UV: 365-395nm	IR: 850/940nm
Operating environment	Temperature: 0 to 50 C, Humidity: 20% to 85% RH		
Lifetime	100,000 Hours theoretical service time (Depends on the operating environment, not a guarantee.		
Compatible Controller	Analog Controller, Digital Controller, Constant Current Controller		
Optional Accessory	Light sources and Lens Adapter.		
	Diffusion Plate, Polarizing Plate (Optical Transmittance: 60%, 70%, 80%, 90%)		
	Extension Cable: 1m/2m/5m/10m/15m (Two kinds of materials of the shell of wire; PVC of hardness; silicon of softness)		
Warranty	One year warranty, technical support (Buyers pay for the freight)		

APPLICATIONS

Inspect the Automobile Hub

- Model: PS-DRG320-W

Because the long working distance and large area require the light source should not be too heavy, the high-bright ring light with large LED particles can fulfill the requirement quite well.



HIGH POWER RING LIGHTS

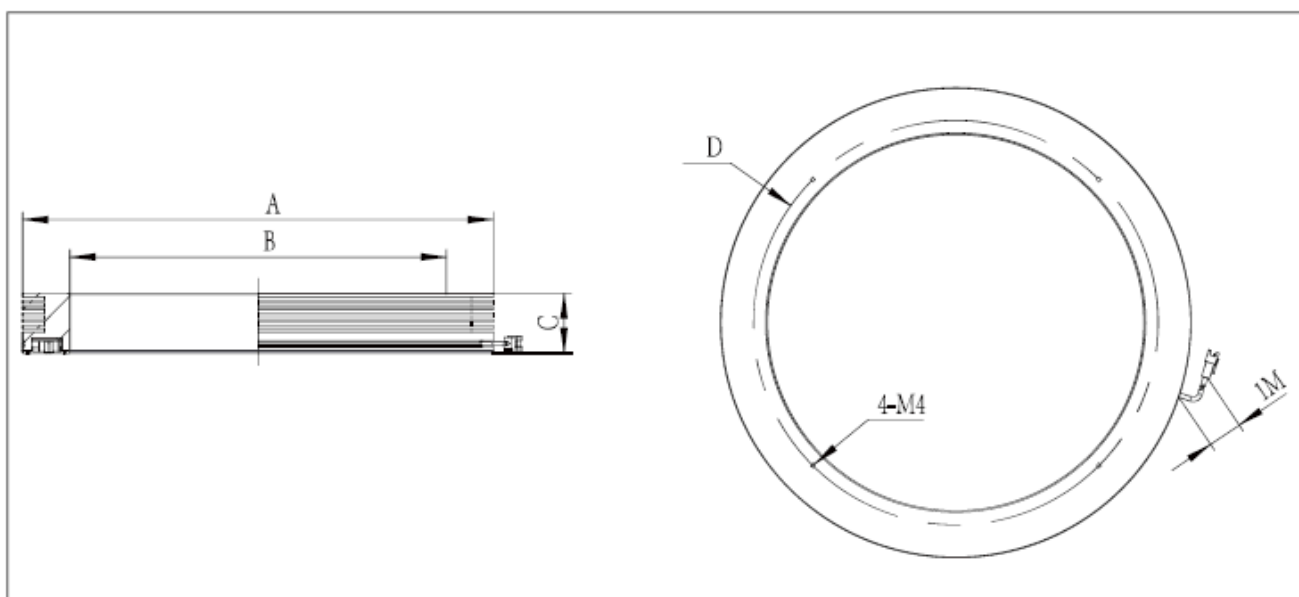
PS-DRG Series

Light parameters (Voltage is 24V)

Angle	Model	Color (R/G/B/ W/IR/UV)	Power(W)		Dimensions(mm)					Picture No.
			Output 	Output   	O.D. (mm) A	I.D. (mm) B	Mounti ng Hole C	Thickne ss D	Quantit y of Row	
0°	PS-DRG90-A00	   	5.3W	7.6W	90	34	43	60	1	1
	PS-DRG120-A00	   	9.9W	14.6W	120	60	43	80	1	
	PS-DRG180-A00	   	20.3W	29.3W	180	120	43	140	1	
	PS-DRG240-A00	   	28.5W	37.5W	240	180	43	210	1	
	PS-DRG320-A00	   	50.2W	66.2W	320	256	43	275	1	
	PS-DRG600-A00	   	70.3W	86.3W	600	540	43	570	1	

All the models can be made with R, G, B, W, IR, and UV light, but some special colors of LED particles should contact us first to custom.

Installation Diagram



CONTACT DETAILS

You can also contact us over email / phone, we will be happy to support you.

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