



# Ring Lights

## LDR2/SQR Series

### High-intensity light output, creating crisp vivid image

Direct light can be irradiated with focus on the center of the workpiece from any angle.



#### Flexible Circuit Boards

CCS has established a manufacturing method using flexible circuit boards. Using a flexible board makes it possible to improve product quality and increase manufacturing speed.

##### Flexible Board

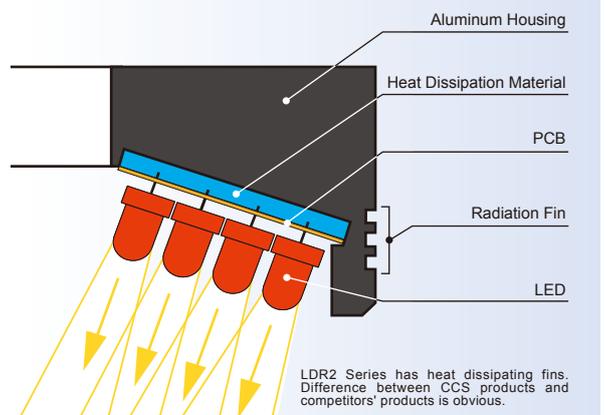


Using a flexible board makes it possible to adjust the outer diameter, inner diameter, illumination angle, and other characteristics to create an illumination system that is ideal for the object being illuminated.

#### Significantly Suppressing the Temperature Rise of LEDs

The LDR2 Series uses a special heat dissipating casing to prevent heat from building up in the LEDs and increase the life expectancy.

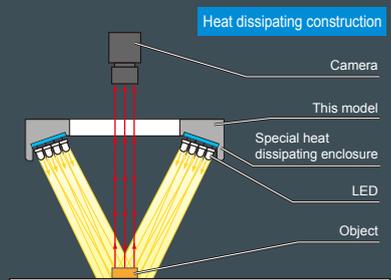
##### Structure of LDR2



With conventional construction, LED lights were not able to efficiently dissipate heat due to the gap between the PCB and aluminum housing. By employing a special heat dissipating material between the PCB and the housing in the new CCS construction, heat generated from the LEDs can be more effectively conducted into the housing. This new design suppresses the temperature rise of the LEDs, providing stable images for a long period of time. (Refer to page 95.)

#### Illumination Structure of LDR2-90

The flexible board is formed to the desired shape and a high-density LED array placed on the substrate. The light is concentrated at the center of the illumination system.

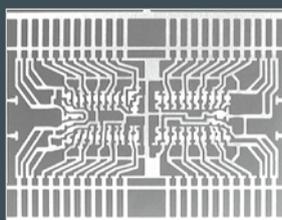


#### Examples of Ring Light Images

##### Lead Frame Inspection

The whole frame is illuminated from above using an LDR2 Series.

##### Standard Illumination



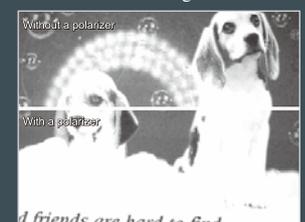
By decreasing the working distance of the illuminator, the silver plated sections of the lead frame become much more clear.

Light used: LDR2 Series



##### Image comparisons utilizing a polarizer

LED glare in the top half of the image distorts the image. Using a polarizing plate and filter can eliminate this glare, as shown in the bottom half of the image.



# Product Lineup Table

Direct Number : You can easily access the web page providing information on any desired product by simply entering the 7-digit direct number in the space provided. (Refer to the back cover of this brochure.)

Series	Direct Number	Model Name	Color	Power Consumption	Option	Dimension
LDR2	1001435	LDR2-32RD	●	12V / 1.5W	D·P·A	1
	1002719	LDR2-32SW2	○	24V / 1.9W		
	1001427	LDR2-32BL	●	24V / 2.0W		
	1001434	LDR2-32GR	●	12V / 2.1W	D·P·A	2
	1001443	LDR2-42RD	●			
	1002720	LDR2-42SW2	○			
	1001439	LDR2-42BL	●	24V / 2.9W	D·P·A	3
	1001440	LDR2-42GR	●			
	1001460	LDR2-50RD	●	12V / 3.0W		
	1001462	LDR2-50RD-WD	●	24V / 3.8W	D·P·A	4
	1002721	LDR2-50SW2	○			
	1001455	LDR2-50BL	●			
	1001457	LDR2-50GR	●	12V / 6.0W	D·P*	5
	1001479	LDR2-70RD	●			
	1001481	LDR2-70RD-WD	●			
	1002722	LDR2-70SW2	○	24V / 8.2W	D·P·A	6
	1001475	LDR2-70BL	●			
	1001476	LDR2-70GR	●	12V / 9.5W		
	1001516	LDR2-90RD	●	24V / 14W	D·P·A	7
	1001518	LDR2-90RD-WD	●			
	1002723	LDR2-90SW2	○			
	1001510	LDR2-90BL	●	12V / 14W	—	8
	1001514	LDR2-90GR	●			
	1001507	LDR2-90-30RD	●			
	1002755	LDR2-90-30SW2	○	12V / 24W	D·P·A	8
	1001505	LDR2-90-30BL	●			
	1001506	LDR2-90-30GR	●			
	1001388	LDR2-120RD-WD	●	24V / 28W	D·P·A	8
	1002756	LDR2-120SW2	○			
	1001384	LDR2-120BL	●			
1001385	LDR2-120GR	●				

Series	Direct Number	Model Name	Color	Power Consumption	Option	Dimension	
SQR	1002519	SQR-56	●	12V / 3.0W	D·P	9	
	1002524	SQR-56-N	●	24V / 4.1W	D·P	10	
	1002525	SQR-56-SW	○				
	1002520	SQR-56-BL	●				
	1002585	SQR-56-GR	●	12V / 0.5W	—	11	
1002531	SQR-TP-28-OR	●					
1002532	SQR-TP-34-OR	●	12V / 0.8W				12
1005258	SQR-TP-28RD	●	24V / 0.4W				13
1005259	SQR-TP-34RD	●	24V / 0.8W				14

\*-WD in the model name represents LED cone angle (±) 40 (refer to P.96).

\*-N in the model name represents LED cone angle (±) 20 (refer to P.96).

\*-OR in the model name represents orange color LED lighting with a peak wavelength of 612 nm.

\*The peak wavelength for SQR-TP-28RD/SQR-TP-34RD is 635 nm.

\*-Items marked with an asterisk under 'Options' are items with an adapter used for installation.

\*The following letters indicate options.

D: Diffusion Plate, P: Polarizing Plate, A: Fixing Adapter

\*For further details on these options, refer to page 91 to 93.

Existing Ring Light SQR-TP-28-OR/SQR-TP-34-OR will be discontinued at the end of December, 2011. SQR-TP-28RD/SQR-TP-34RD is recommended as replacement.

## Dimension Diagrams (Unit: mm)

