


2019 Direct Illumination

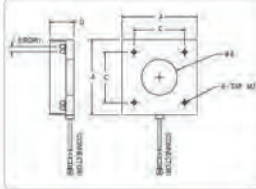
LSQ SERIES - 00°, 45° – High Intensity, Concentrated Ring Illumination

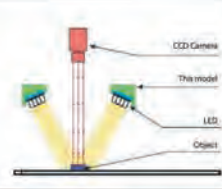
LSQ Series is with 00°, 45° square casing with LED arrays are arranged densely in ring shape for light arrays to be concentrated to a spot for extreme bright light. By using a flexible PCB board, the product quality and efficiency could be improved as flexible boards are able to achieve optimized angle with variations of outer and inner diameter to target a work piece.


Applications: Substrate Inspection, Label Inspection, Flat Surface, Fiducial Recognition



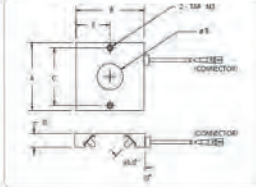
LSQ-00







LSQ-45



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)					Color	Voltage / Watt	Current	Weight [g]
	A	B	C	D	E (ROW)				
LSQ-00-050-2-X	58.5	27.0	38.0	18.0	2.0	●●○ ●●○	24V / 2.52W 24V / 2.88W	105mA 120mA	80
LSQ-00-060-3-X	64.0	27.0	33.0	19.0	3.0	●●○ ●●○	24V / 3.60W 24V / 4.32W	150mA 180mA	110

Model	Dimensions (MM)					Color	Voltage / Watt	Current	Weight [g]
	A	ØB	C	D	E				
LSQ-45-030-1-X	39.0	15.0	33.0	8.0	19.5	●●○ ●●○	24V / 0.72W 24V / 0.72W	30mA 30mA	40
LSQ-45-040-1-X	46.0	22.0	39.0	8.0	23.0	●●○ ●●○	24V / 0.72W 24V / 1.08W	30mA 45mA	40
LSQ-45-050-1-X	52.5	28.0	48.0	8.0	26.3	●●○ ●●○	24V / 1.08W 24V / 1.44W	45mA 60mA	60

Remark: 2 types of white are available- W: Cool White WW: Yellowish White

Optional Connector

Standard Lighting Male Connector



PIN 1	24V
PIN 2	-
PIN 3	GND

M8 Male Connector



PIN 1	-
PIN 2	RED 24V
PIN 3	-
PIN 4	BLACK GND

M12 Male Connector



PIN 1	BROWN	24V
PIN 2	WHITE	-
PIN 3	BLUE	GND
PIN 4	BLACK	-
PIN 5	GRAY	-

Product Part Numbering System
LSQ-00-050-2-X-24V-M8

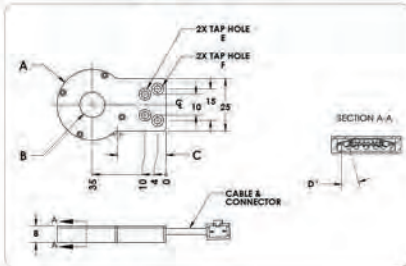
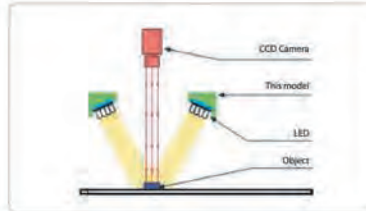
Product Part Numbering System
LSQ-00-050-2-X-24V-M12

Direct Illumination

LSQ STACKABLE SERIES – 00°, 15°, 30°, 45°

LSQ stackable series provides 4 different angles of lighting for multiple observations during inspection. Illumination from different angles provide slightly different results.

Applications: Substrate Inspection, Label Inspection, Flat Surface, Fiducial Recognition



Technical Specification:

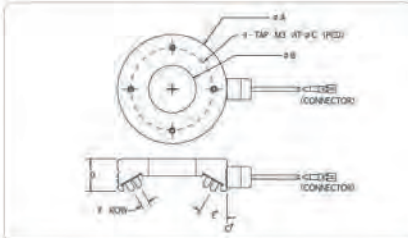
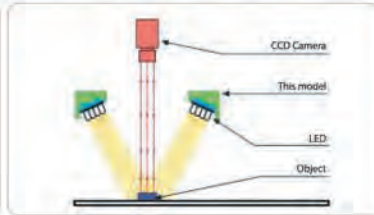
- Colour Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	A	B	C	D	TAP HOLE E	TAP HOLE F				
LSQ-00-033-1-X-24V	34	12	23	0	M4	Ø3.2	●●●○ ●●●○	24V / 0.36W 24V / 0.72W	15mA 30mA	29
LSQ-00-045-1-X-24V	48	24	15	0	M3	Ø3.2	●●●○ ●●●○	24V / 0.72W 24V / 1.44W	30mA 60mA	32
LSQ-00-051-1-X-24V	52	33.5	11	0	Ø3.2	M3	●●●○ ●●●○	24V / 0.72W 24V / 1.44W	30mA 60mA	33
LSQ-15-033-1-X-24V	34	12	23	15	M4	Ø3.2	●●●○ ●●●○	24V / 0.36W 24V / 0.72W	15mA 30mA	29
LSQ-15-045-1-X-24V	46	24	15	15	M3	Ø3.2	●●●○ ●●●○	24V / 0.72W 24V / 1.08W	30mA 45mA	30
LSQ-15-051-1-X-24V	52	33.5	11	15	Ø3.2	M3	●●●○ ●●●○	24V / 0.72W 24V / 1.44W	30mA 60mA	31
LSQ-30-033-1-X-24V	34	12	23	30	M4	Ø3.2	●●●○ ●●●○	24V / 0.36W 24V / 0.72W	15mA 30mA	29
LSQ-30-045-1-X-24V	46	24	15	30	M3	Ø3.2	●●●○ ●●●○	24V / 0.72W 24V / 1.44W	30mA 60mA	31
LSQ-30-051-1-X-24V	52	33.5	11	30	Ø3.2	M3	●●●○ ●●●○	24V / 0.72W 24V / 1.44W	30mA 60mA	31
LSQ-45-033-1-X-24V	34	12	23	45	M4	Ø3.2	●●●○ ●●●○	24V / 0.36W 24V / 0.72W	15mA 30mA	29
LSQ-45-045-1-X-24V	46	24	15	45	M3	Ø3.2	●●●○ ●●●○	24V / 0.72W 24V / 1.08W	30mA 45mA	30
LSQ-45-051-1-X-24V	52	33.5	11	45	Ø3.2	M3	●●●○ ●●●○	24V / 1.08W 24V / 1.44W	45mA 60mA	31

LSW SERIES– High Intensity, Concentrated Ring Illumination

LED arrays are arranged densely for the light arrays to be concentrated to a spot for extreme bright light. By using a flexible PCB board, the product quality and efficiency could be improve as flexible boards are able to achieve optimized angle with variations of outer and inner diameter to target a work piece.

Applications: Substrate Inspection, Label Inspection, Flat Surface, Fiducial Recognition



Technical Specification:

- Color: Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult: Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	A	B	C	D	E	F (row)				
LSW-00-040-2-X	43.0	15.0	28.0	20.0	0	2.0	● 24V / 1.44W ● 24V / 1.80W	60mA 75mA	40	
LSW-00-050-2-X	54.0	23.5	41.0	20.0	0	2.0	● 24V / 2.16W ● 24V / 2.88W	90mA 120mA	60	
LSW-00-070-3-X	70.0	26.0	56.0	20.0	0	3.0	● 24V / 4.32W ● 24V / 5.40W	180mA 225mA	120	
LSW-00-090-4-X	92.0	40.0	70.0	20.0	0	4.0	● 24V / 6.48W ● 24V / 8.28W	270mA 345mA	200	
LSW-15-050-2-X	50.0	28.0	40.0	18.0	15	2.0	● 24V / 2.16W ● 24V / 2.52W	90mA 105mA	40	
LSW-15-070-3-X	70.0	32.0	56.0	20.5	15	3.0	● 24V / 4.32W ● 24V / 5.76W	180mA 240mA	100	
LSW-15-070-2-X							● 24V / 2.88W ● 24V / 2.88W	120mA 120mA		
LSW-15-090-4-X	92.0	47.0	70.0	20.5	15	4.0	● 24V / 7.92W ● 24V / 10.08W	330mA 420mA	180	
LSW-15-100-5-X	103.0	48.0	80.0	22.0	15	5.0	● 24V / 10.80W ● 24V / 13.68W	450mA 570mA	200	
LSW-30-040-2-X	46.0	20.0	35.0	16.5	30	2.0	● 24V / 1.80W ● 24V / 2.52W	75mA 105mA	40	
LSW-30-050-2-X	54.0	23.5	41.0	18.0	30	2.0	● 24V / 2.16W ● 24V / 2.88W	90mA 120mA	60	
LSW-30-070-3-X	70.0	32.0	56.0	20.0	30	3.0	● 24V / 4.32W ● 24V / 5.40W	180mA 225mA	120	
LSW-30-090-4-X	92.0	48.0	70.0	22.0	30	4.0	● 24V / 8.28W ● 24V / 10.44W	345mA 435mA	200	
LSW-45-050-2-X	54.0	25.0	44.0	20.0	45	2.0	● 24V / 2.16W ● 24V / 2.88W	90mA 120mA	70	
LSW-45-070-3-X	70.0	35.0	60.0	21.0	45	3.0	● 24V / 4.68W ● 24V / 5.76W	195mA 240mA	120	
LSW-45-090-4-X	92.0	52.0	70.0	24.0	45	4.0	● 24V / 8.28W ● 24V / 10.44W	345mA 435mA	200	
LSW-45-100-5-X	100.0	48.0	80.0	30.0	45	5.0	● 24V / 11.16W ● 24V / 14.40W	465mA 600mA	250	

Remark: 2 types of white are available- W: Cool White WW: Yellowish White

LSW SERIES – Available Accessories

Optional Diffuser

Diffusers can be added to LSW series for uniform light distribution. Adding a diffuser helps to reduce glare from glossy applications and produce lighting that is softer, more beautiful and more shadow-free. The thickness of a diffuser is 2mm.

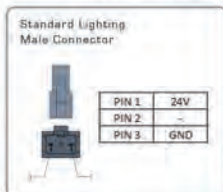


Optional Polarizer

Polarizers can be added to LSW series in the case in which polarised light is required to acquire ideal results. Adding a polarizer ensures the maximum elimination of unwanted glare and helps to absorb harsh reflection to provide better performance. The thickness of a polarizer is 0.8mm.



Optional Connector



Product Part Numbering System :
LSW-00-040-2-X-24V-MB

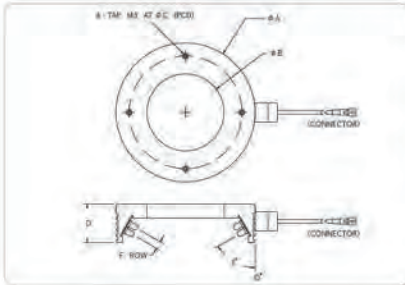
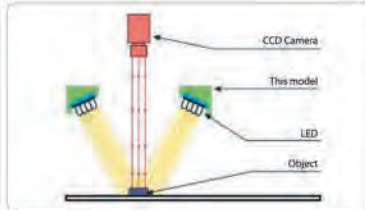
Product Part Numbering System :
LSW-00-040-2-X-24V-M12

Direct Illumination

LLA SERIES 60°, 75° - Direct, Low Angle, Ring Illumination

LED arrays are arranged in 60° & 75° provides side and low angle of illumination.
 LLA 60° & 75° series are available in 1 row to suit different brightness requirements.

Applications: Edge Detection, Scratch on Metal or Glossy Surface



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	ØA	ØB	ØC	D	E	F (ROW)				
LLA-60-070-2-X	74.0	41.0	60.0	20.5	60.0	2.0	● ● ●	24V / 3.60W	150mA	90
							● ● ○	24V / 4.88W	195mA	
LLA-60-090-2-X	90.0	57.0	75.0	20.5	60.0	2.0	● ● ●	24V / 4.32W	180mA	114
							● ● ○	24V / 5.76W	240mA	
							IR940	24V / 2.88W	120mA	
							IR940	24V / 2.88W	120mA	
LLA-60-150-3-X	151.0	114.0	136.0	23.5	60.0	3.0	● ● ●	24V / 11.88W	495mA	300
							● ● ○	24V / 15.12W	630mA	
LLA-60-200-2-X	202.0	167.0	186.0	20.5	60.0	2.0	● ● ●	24V / 10.80W	450mA	350
							● ● ○	24V / 14.04W	565mA	
LLA-75-130-3-X	131.0	94.0	116.0	24.5	75.0	3.0	● ● ●	24V / 10.08W	420mA	260
							● ● ○	24V / 12.96W	540mA	
LLA-75-170-3-X	175.0	136.0	159.0	24.5	75.0	3.0	● ● ●	24V / 13.68W	570mA	410
							● ● ○	24V / 17.64W	735mA	

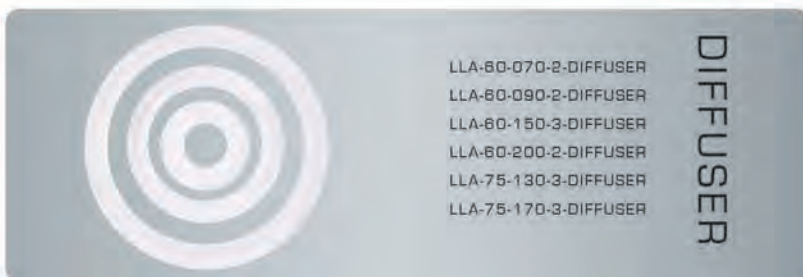
Remark: 2 types of white are available- W: Cool White WW: Yellowish White

2019 Direct Illumination

LLA SERIES 60°, 75° – Available Accessories

Optional Diffuser


Diffusers can be added to LLA series for uniform light distribution. Adding a diffuser helps to reduce glare from glossy applications and produce lighting that is softer, more beautiful and more shadow-free. The thickness of a diffuser is 2mm.



LLA-60-070-2-DIFFUSER	DIFFUSER
LLA-60-090-2-DIFFUSER	
LLA-60-150-3-DIFFUSER	
LLA-60-200-2-DIFFUSER	
LLA-75-130-3-DIFFUSER	
LLA-75-170-3-DIFFUSER	

Optional Polarizer


Polarizers can be added to LLA Series in instances in which polarised light is required to acquire ideal results. Adding a polarizer ensures the maximum elimination of unwanted glare and helps to absorb harsh reflection to provide better performance. The thickness of a polarizer is 0.8mm.



LLA-60-070-2-POLARIZER	POLARIZER
LLA-60-090-2-POLARIZER	
LLA-60-150-3-POLARIZER	
LLA-60-200-2-POLARIZER	
LLA-75-130-3-POLARIZER	
LLA-75-170-3-POLARIZER	

Optional Connector

Standard Lighting
Male Connector



PIN 1	24V
PIN 2	-
PIN 3	GND

M8
Male Connector

M8
Pin Assignment



PIN 1	-	24V
PIN 2	RED	24V
PIN 3	-	-
PIN 4	BLACK	GND

M12
Male Connector

M12
Pin Assignment



PIN 1	BROWN	24V
PIN 2	WHITE	-
PIN 3	BLUE	GND
PIN 4	BLACK	-
PIN 5	GRAY	-

Product Part Numbering System
LLA-60-070-2-X-24V-M8

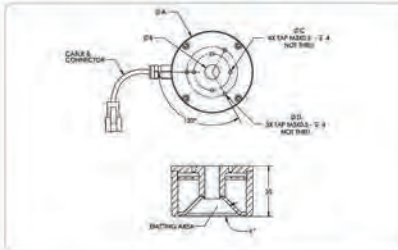
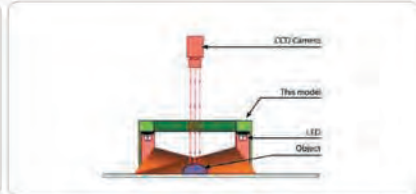
Product Part Numbering System
LLA-60-070-2-X-24V-M12

2019 Diffused Illumination

DLR3 SERIES – Diffused, Angular Ring Illumination

DLR3 series provides diffused uniform illumination covering a wide surface, which reduces glare for reflective surface inspections.

Applications: Character Recognition on Shining Surface, Lead Inspection



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

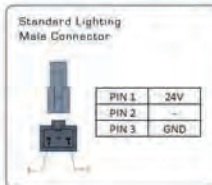
LED Wavelength (OSRAM LED Light Technology)

- Red Led is 620nm
- Blue Led is 450nm
- Green Led is 540nm

Model	Dimensions (MM)					Color	Voltage / Watt	Current	Weight (g)
	ØA	ØB	ØC	ØD	ØE				
DLR3-45-050-1-X	56.4	10	25	35	45	● ● ● ● ●	24V / 2.90W	120 mA	110
DLR3-45-080-1-X	81	30.5	54	56	45	● ● ● ● ●	24V / 4.30W	180 mA	145
DLR3-45-100-1-X	105.2	45.6	80	95	45	● ● ● ● ●	24V / 6.50W	270 mA	225
DLR3-45-130-1-X	131.5	74	95	106	45	● ● ● ● ●	24V / 8.60W	360 mA	260
DLR3-60-050-1-X	56.4	10	25	35	60	● ● ● ● ●	24V / 2.90W	120 mA	100
DLR3-60-080-1-X	81	36.2	54	56	60	● ● ● ● ●	24V / 4.30W	180 mA	145
DLR3-60-100-1-X	105.2	57	80	95	60	● ● ● ● ●	24V / 6.50W	270 mA	205
DLR3-60-130-1-X	131.5	84	95	106	60	● ● ● ● ●	24V / 8.60W	360 mA	265

Remarks: DLR2 part numbers are changed to DLR3

Optional Connector



Product Part Numbering System 1
DLR3-45-050-1-X-24V-M8

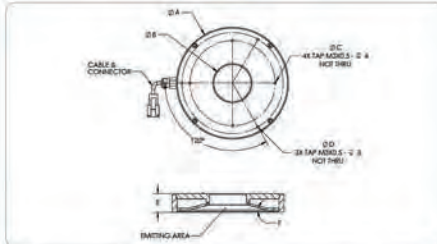
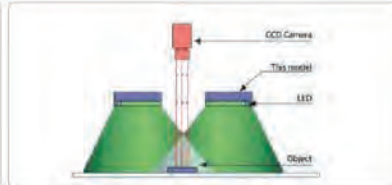
Product Part Numbering System 1
DLR3-45-050-1-X-24V-M12

Diffused Illumination

DFR4 SERIES – Diffused, Angular Ring Illumination

DFR4 series provides diffused uniform illumination over a conical surface, which makes it possible to illuminate a work piece from almost any angle.

Applications: Printed Character on IC Chips, PCB Components Inspection, Printing on Caps and Wafer OCR Inspection



Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

LED Wavelength (OSRAM LED Light Technology)

- Red Led is 620nm
- Blue Led is 450nm
- Green Led is 540nm

Model	Dimensions (MM)						Color	Voltage / Watt	Current:	Weight (g)
	ØA	ØB	Ø	D	E	F				
DFR4-00-050-1-X	56	8	25	35	18	0	• 24V / 2.6W • 24V / 2.6W	108 mA	108 mA	60
DFR4-00-080-1-X	81	21	54	56	18	0	• 24V / 4.70W • 24V / 4.70W	196 mA	196 mA	110
DFR4-00-100-1-X	105.2	30	80	95	18	0	• 24V / 5.40W • 24V / 5.40W	225 mA	225 mA	160
DFR4-00-130-1-X	131.5	45	95	106	18	0	• 24V / 7.20W • 24V / 7.20W	300 mA	300 mA	230
DFR4-15-080-1-X	81	19	54	56	17.5	15	• 24V / 4.70W • 24V / 4.70W	196 mA	196 mA	115
DFR4-15-100-1-X	105.2	35	80	95	17.5	15	• 24V / 5.40W • 24V / 5.40W	225 mA	225 mA	170
DFR4-15-130-1-X	131.5	45.6	95	106	17.5	15	• 24V / 7.20W • 24V / 7.20W	300 mA	300 mA	210
DFR4-30-050-1-X	56	12	25	35	17.5	30	• 24V / 2.6W • 24V / 2.6W	108 mA	108 mA	80
DFR4-30-080-1-X	81	25	54	56	17.5	30	• 24V / 4.70W • 24V / 4.70W	196 mA	196 mA	145
DFR4-30-100-1-X	105.2	44	80	95	17.5	30	• 24V / 5.40W • 24V / 5.40W	225 mA	225 mA	230
DFR4-30-130-1-X	131.5	68	95	106	17.5	30	• 24V / 7.18W • 24V / 7.18W	299 mA	299 mA	355

Optional Connector

Remarks: DFR3 part numbers are changed to DFR4

Standard Lighting Male Connector

PIN 1	24V
PIN 2	-
PIN 3	GND

M8 Male Connector

PIN 1	-	-
PIN 2	RED	24V
PIN 3	-	-
PIN 4	BLACK	GND

M12 Male Connector

PIN 1	BROWN	24V
PIN 2	WHITE	-
PIN 3	BLUE	GND
PIN 4	BLACK	-
PIN 5	GRAY	-


Product Part Numbering System
DFR4-00-050-1-X-24V-M8

Product Part Numbering System
DFR4-00-050-1-X-24V-M12

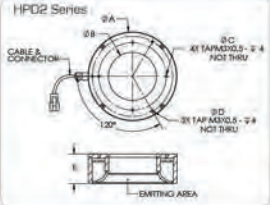
HPD & HPD2 SERIES – Diffused Ring Illumination

Mid-power LEDs are arranged uniformly in a ring structure with a moulded diffuser to achieve uniform area illumination with higher flexibility.

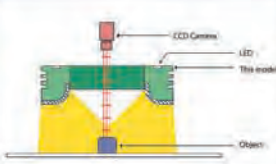
Applications: Shining Surface and Food Packaging Inspection




HPD2 Series



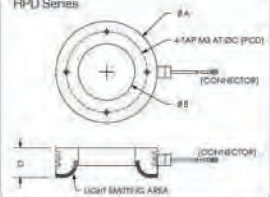
HPD2 Series



LED Chips
LED
This model
Object



HPD Series



HPD Series

Technical Specification:

- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

LED Wavelength [OSRAM LED Light Technology]

- Red Led is 620nm
- Blue Led is 450nm
- Green Led is 540nm

Model	ØA	ØB	ØC	Ø	E	Color	Voltage / Watt	Current	Weight (g)
HPD2-00-050-1-X	56	15.5	25	35	35	●●●	24V / 2.88W	120 mA	100
HPD2-00-080-1-X	81	34.2	54	56	35	●●●	24V / 2.88W	120 mA	100
HPD2-00-080-1-X	81	34.2	54	56	35	●●●	24V / 4.32W	180 mA	155
HPD2-00-100-1-X	105.2	57	80	95	35	●●●	24V / 4.32W	180 mA	155
HPD2-00-100-1-X	105.2	57	80	95	35	●●●	24V / 6.48W	270 mA	210
HPD2-00-100-1-X	105.2	57	80	95	35	●●●	24V / 6.48W	270 mA	210
HPD2-00-130-1-X	131.5	84	106	95	35	●●●	24V / 6.48W	270 mA	210
HPD2-00-130-1-X	131.5	84	106	95	35	●●●	24V / 8.64W	360 mA	275
HPD2-00-130-1-X	131.5	84	106	95	35	●●●	24V / 8.64W	360 mA	275


Model	ØA	ØB	ØC	Ø	Color	Voltage / Watt	Current	Weight (g)
HPD-00-170-1-X	176.6	111.0	150	29.6	●●●	24V / 18.00W	750mA	535
HPD-00-170-1-X	176.6	111.0	150	29.6	●●●	24V / 18.00W	750mA	535
HPD-00-240-1-X	245.0	158.5	200	38.0	●●●	24V / 25.20W	1050mA	1180
HPD-00-240-1-X	245.0	158.5	200	38.0	●●●	24V / 26.88W	1120mA	1180

Model	ØA	ØB	ØC	Ø	Color	Voltage / Watt	Current	Weight (g)
HPD-00-240-3-RGB	245.0	158.5	200	38.0	●●●	24V / 21.84W	910mA	1180
HPD-00-240-3-RGB	245.0	158.5	200	38.0	●●●	24V / 15.12W	630mA	1180
HPD-00-240-3-RGB	245.0	158.5	200	38.0	●●●	24V / 16.80W	700mA	1180



Optional Connector

Standard Lighting Male Connector



PIN 1	24V
PIN 2	-
PIN 3	GND

M8 Male Connector Pin Assignment



PIN 1	-	-
PIN 2	RED	24V
PIN 3	-	-
PIN 4	BLACK	GND

M12 Male Connector Pin Assignment



PIN 1	BROWN	24V
PIN 2	WHITE	-
PIN 3	BLUE	GND
PIN 4	BLACK	-
PIN 5	GRAY	-

Product Part Numbering System : HPD-00-070-1-X-24V-M8

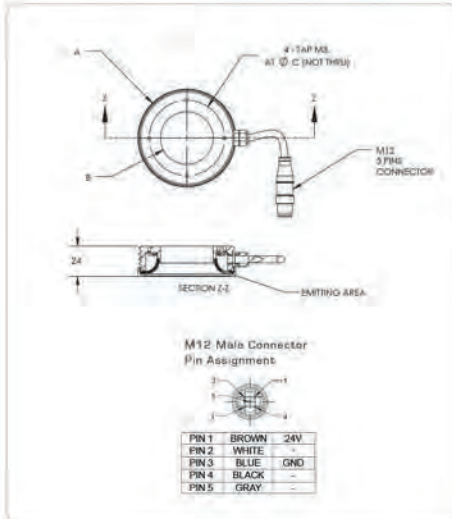
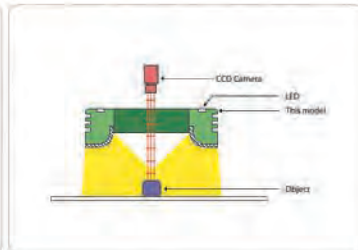
Product Part Numbering System : HPD-00-070-1-X-24V-M12

Ingress Protection Illumination (IP65)

HPDP SERIES – Large Uniform Ring Illumination

HPDP series consists of mid-power LEDs arranged in a circular structure with molded diffuser on the surface, which allows the emission of uniform, direct, diffused illumination with high flexibility and stability. This illumination is dust tight and protected from low pressure water jets from any direction.

Applications: Shining Surface & Food Packaging Inspection



Technical Specification:

- Color Red, Green, Blue and White
- 24V DG Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

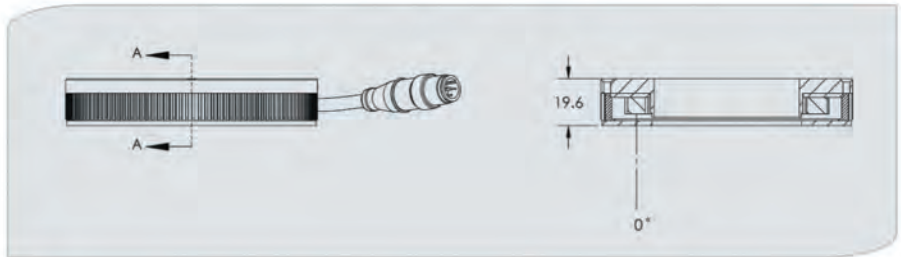
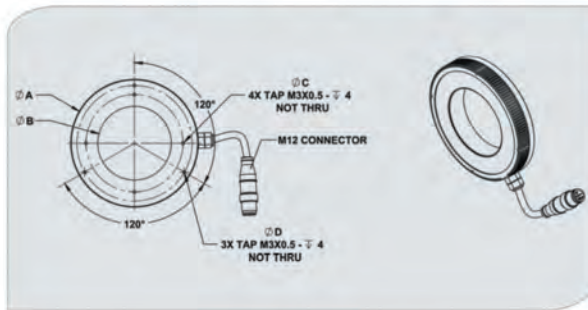
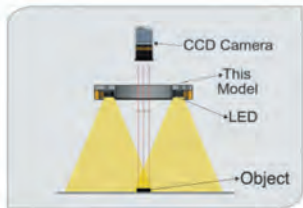
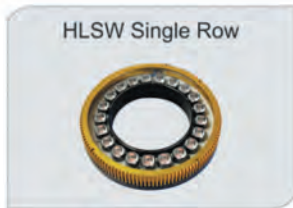
Customize Lighting:

- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)			Color	Voltage / Watt	Current	Weight (g)
	A	B	C				
HPDP-00-070-1-X	78.0	42	60.0	●●○	24V / 1.80W	75mA	130
HPDP-00-110-2-X	118.4	68	90.0	●●○	24V / 2.16W	90mA	200
				●●○	24V / 3.96W	165mA	
				●●○	24V / 4.37W	182mA	

HLSW SERIES – High Intensity Ring Light

HLSW series is a ring shaped illuminator that produces light with high intensity, which makes it suitable for a wide range of applications.

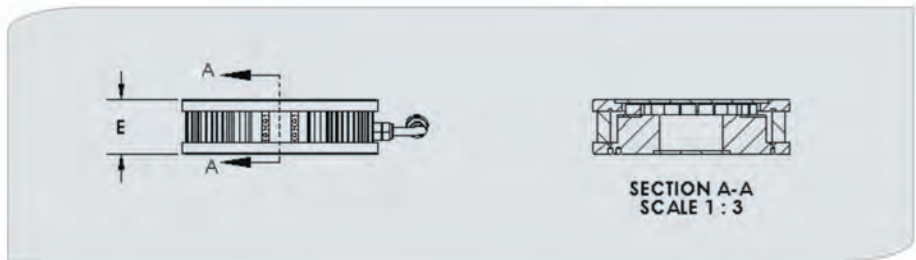
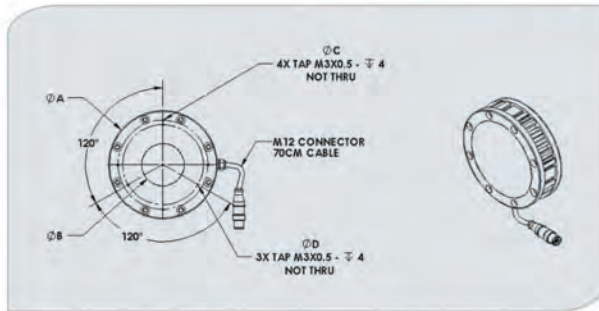
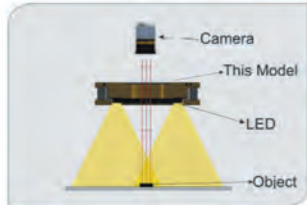


MODEL	DIMENSIONS (MM)				COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)
	A	B	C	D				
HLSW-00-050-1-X	56	24	31	35	●●○	24V / 3.24W	135mA	110
						24V / 3.24W	135mA	
HLSW-00-080-1-X	81	36.4	54	56	●●○	24V / 5.40W	225mA	165
						24V / 5.40W	225mA	
HLSW-00-100-1-X	105.2	60.7	80	95	●●○	24V / 7.56W	315mA	220
						24V / 7.56W	315mA	
HLSW-00-130-1-X	131.6	87	95	106	●●○	24V / 10.80W	450mA	240
						24V / 10.80W	450mA	
HLSW-00-100-2-X	105.2	40.7	80	95	●●○	24V / 11.52W	480mA	260
						24V / 11.52W	480mA	
HLSW-00-130-2-X	131.6	67	95	106	●●○	24V / 14.88W	620mA	295
						24V / 14.88W	620mA	

HLSWP SERIES (IP65) – High Intensity Ring Light



HLSWP series is a ring shaped illuminator with IP65 rating that produces light with high intensity, which makes it suitable for a wide range of applications.



MODEL	DIMENSIONS (MM)					COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)
	A	B	C	D	E				
HLSWP-00-100-1-X	128	50	106	95	36	●●○	24V / 7.56W	315mA	875
HLSWP-00-100-2-X	128	50	106	95	36	●●○	24V / 11.52W	480mA	886

MLSW SERIES – Direct Ring Light

LED arrays are arranged such that the light arrays are concentrated to a spot for extreme bright light. Using a flexible PCB board, the product quality and efficiency could be improved as flexible boards are able to achieve optimized angle with variations of outer and inner diameter to target a work piece



Applications: Substrate Inspection, Label Inspection, Flat Surface Inspection, Fiducial Recognition



MODEL	DIMENSIONS (MM)						COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)	
	A	B	C	D	E	F					
MLS-00-050-2-X	56	16	25	35	19.5	0	R	•	24V / 0.84W	35mA	17
							W	○	24V / 1.01W	42mA	
MLS-00-080-3-X	81	25.7	54	56	19.5	0	R	•	24V / 2.35W	98mA	178
							W	○	24V / 1.99W	83mA	
MLS-00-100-3-X	105.2	50	80	95	19.5	0	R	•	24V / 4.68W	195mA	242
							G	•	24V / 4.49W	187mA	
							W	○	24V / 3.67W	153mA	
MLS-00-130-5-X	131.8	56	95	106	19.5	0	R	•	24V / 8.40W	350mA	341
							W	○	24V / 6.96W	290mA	
MLS-15-050-2-X	56.3	12.3	25	35	18.5	15	R	•	24V / 1.01W	42mA	10
							W	○	24V / 0.84W	35mA	
MLS-15-080-3-X	81.3	27	54	56	18.5	15	R	•	24V / 3.02W	126mA	160
							W	○	24V / 2.54W	106mA	
MLS-15-100-3-X	105.2	45.6	80	95	18.5	15	R	•	24V / 5.04W	210mA	205
							G	•	24V / 4.82W	201mA	
							W	○	24V / 3.96W	165mA	
MLS-15-130-5-X	131.8	54.3	95	106	18.5	15	R	•	24V / 7.39W	308mA	274
							W	○	24V / 6.24W	260mA	
MLS-30-050-2-X	56.3	15	25	35	19.5	30	R	•	24V / 1.34W	56mA	113
							W	○	24V / 1.13W	47mA	
MLS-30-080-3-X	81.3	22.8	54	56	19.5	30	R	•	24V / 3.02W	126mA	169
							W	○	24V / 2.54W	106mA	
MLS-30-100-3-X	105.2	49	80	95	19.5	30	R	•	24V / 4.37W	182mA	219
							W	○	24V / 3.67W	153mA	
MLS-30-130-5-X	131.8	59.5	95	106	24	30	R	•	24V / 9.07W	378mA	332
							W	○	24V / 7.68W	320mA	
MLS-45-050-2-X	56.3	19	25	35	19.5	45	R	•	24V / 1.34W	56mA	110
							W	○	24V / 1.13W	47mA	
MLS-45-080-3-X	81.3	29.5	54	56	24	45	R	•	24V / 2.69W	112mA	178
							W	○	24V / 2.26W	94mA	
MLS-45-100-3-X	105.2	50	80	95	26	45	R	•	24V / 5.04W	210mA	245
							G	•	24V / 4.82W	201mA	
							W	○	24V / 3.96W	165mA	
MLS-45-130-5-X	131.8	67.8	95	106	31	45	R	•	24V / 9.36W	390mA	358
							W	○	24V / 7.92W	330mA	