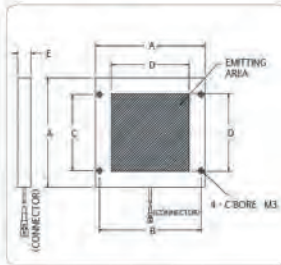
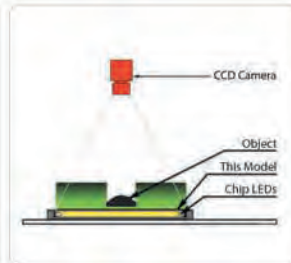
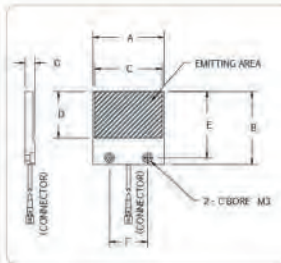


Backlight Illumination

BHDS & BHD SERIES – Side Backlight Illumination

BHDS & BHD series consist of a 4-sided lighting fit into a diffuser block where light shines from the flat surface of the block.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement



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 465nm
- Green Led is 540nm

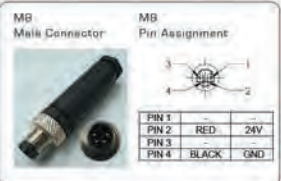
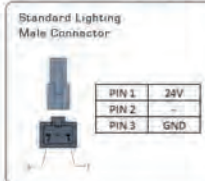
Model	Dimensions (MM)						
	A	B	C	D	E	F	G
BHDS-00-25X36-1-X	38.5	43.5	35.0	25	40.0	18.5	5.3
BHDS-00-31X58-1-X	60.2	43.5	56.3	31	40.0	40.0	5.4
BHDS-00-070-1-X	98.5	84.5	68.5	70.0	81.0	60.0	5.3
BHDS-00-30X150-1-X	154.2	49.3	150.2	30	45.8	40	8.0

Color	Voltage / Watt	Current	Weight (g)
● ● ● ●	24V / 0.38W	15mA	27
● ● ● ○	24V / 0.48W	20mA	
● ● ● ○	24V / 0.72W	30mA	38
● ● ● ○	24V / 0.72W	30mA	
● ● ● ○	24V / 2.16W	90mA	80
● ● ● ○	24V / 2.16W	90mA	
● ● ● ○	24V / 2.4W	100mA	105
● ● ● ○	24V / 2.4W	100mA	

Model	Dimensions (MM)				
	A	B	C	D	E
BHD-00-070-1-X	98.5	91.5	68.5	70	5.3
BHD-00-100-1-X	128.5	121.5	100.0	100.0	5.3
BHD-00-100X80-1-X	113	105	80	100	9

Color	Voltage / Watt	Current	Weight (g)
● ● ● ●	24V / 2.88W	120mA	95
● ● ● ○	24V / 2.88W	120mA	
● ● ● ○	24V / 4.32W	180mA	145
● ● ● ○	24V / 3.84W	160mA	
● ● ● ○	24V / 6.72W	280mA	215
● ● ● ○	24V / 6.72W	280mA	

Optional Connector



Product Part Numbering System :
BHDS-00-25X36-1-X-24V-M8

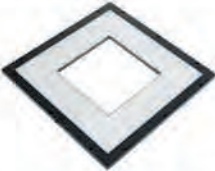
Product Part Numbering System :
BHDS-00-25X36-1-X-24V-M12

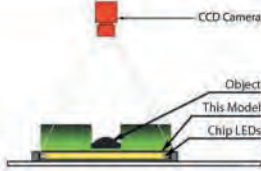
2019 BHDQ Series

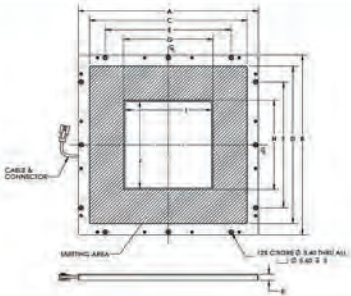
BHDQ SERIES – Side Backlight Illumination

BHDQ series is a four-sided backlight with a diffuser that produces highly uniform light distribution. It is used in applications where the side or the corner of an object is inspected.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement







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 460nm
- Green Led is 540nm

Model	Dimensions (MM)									Color	Voltage / Watt	Current	Weight [g]
	A	B	C	D	E	F	G	H	I				
BHDQ-00-200-1-X	228.5	228.5	200	200	160	160	113.6	110	110		24V / 14.4W 24V / 14.4W	800mA 800mA	40g


Optional Connector

Standard Lighting Male Connector:




PIN 1	24V
PIN 2	-
PIN 3	GND

M8 Male Connector:




M8 Pin Assignment:




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

Product Part Numbering System :
BHDQ-00-200-1-X-24V M8

M12 Male Connector:



M12 Pin Assignment:



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

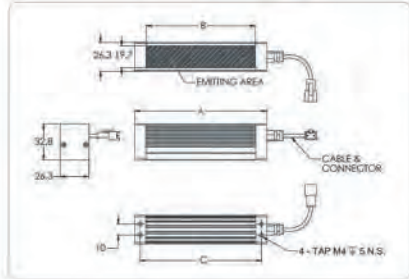
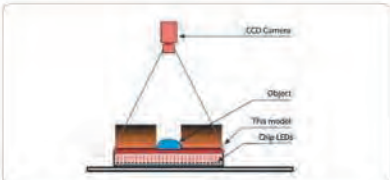
Product Part Numbering System :
BHDQ-00-200-1-X-24V M12

Backlight Illumination

LBL3 SERIES – Backlight Line Illumination

LBL3 series is a bar-shaped backlight which LEDs are arranged in a dense array and shine into a diffuser.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement



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				
LBL3-00-100-X-X	120.0	99.0	110.0	●●●○	24V / 2.16W	90mA	150
LBL3-00-200-X-X	220.0	200.0	210.0	●●●○	24V / 3.60W	150mA	150
LBL3-00-300-X-X	300.0	300.0	310.0	●●●○	24V / 4.32W	180mA	240
LBL3-00-300-X-X	300.0	300.0	310.0	●●●○	24V / 7.20W	300mA	240
LBL3-00-300-X-X	300.0	300.0	310.0	●●●○	24V / 6.48W	270mA	340
LBL3-00-400-X-X	420.0	400.0	410.0	●●●○	24V / 10.80W	450mA	340
LBL3-00-400-X-X	420.0	400.0	410.0	●●●○	24V / 8.64W	380mA	450
LBL3-00-500-X-X	520.0	499.0	510.0	●●●○	24V / 14.40W	600mA	450
LBL3-00-500-X-X	520.0	499.0	510.0	●●●○	24V / 10.80W	450mA	530
LBL3-00-600-X-X	620.0	599.0	610.0	●●●○	24V / 18.00W	750mA	530
LBL3-00-600-X-X	620.0	599.0	610.0	●●●○	24V / 12.96W	540mA	580
LBL3-00-700-X-X	720.0	699.0	710.0	●●●○	24V / 21.60W	900mA	580
LBL3-00-700-X-X	720.0	699.0	710.0	●●●○	24V / 15.12W	630mA	720
LBL3-00-800-X-X	820.0	799.0	810.0	●●●○	24V / 25.20W	1050mA	720
LBL3-00-800-X-X	820.0	799.0	810.0	●●●○	24V / 17.28W	720mA	780
LBL3-00-900-X-X	920.0	899.0	910.0	●●●○	24V / 25.80W	1200mA	780
LBL3-00-900-X-X	920.0	899.0	910.0	●●●○	24V / 19.44W	810mA	810
LBL3-00-1000-X-X	1020.0	999.0	1010.0	●●●○	24V / 32.40W	1350mA	810
LBL3-00-1000-X-X	1020.0	999.0	1010.0	●●●○	24V / 21.60W	900mA	930
LBL3-00-1000-X-X	1020.0	999.0	1010.0	●●●○	24V / 36.00W	1500mA	930

Optional Connector

Standard Lighting Male Connector

PIN 1	24V
PIN 2	-
PIN 3	GND

M8 Male Connector Pin Assignment

PIN 1	-	24V
PIN 2	RED	-
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 - LBL3-00-100-X-X-24V-M8

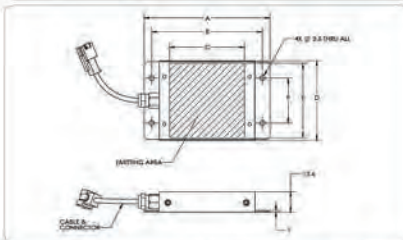
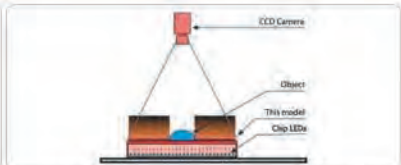
Product Part Numbering System - LBL3-00-100-X-X-24V-M12

2019 Backlight Illumination

BHS4 SERIES -Backlight Illumination

BHS4 series' LEDs are arranged in a dense array and shine into a diffuser. The uniform light emitted provides area illumination creating a silhouette that highlights a work piece's shape and outline. The PCBs are in modular form and can be increased in size according to the requirement.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement, edge detection



Technical Specification:

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

Customize Lighting:

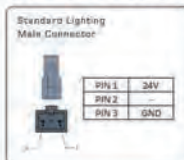
- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult: Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	A	B	C	D	E	F				
BHS4-00-025-X-X	59.0	49.0	25.0	28.0	25.0	17.0	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 1.44W 24V / 0.576W 24V / 0.432W 24V / 3.12W	60mA 24mA 18mA 130mA	30
BHS4-00-050-X-X	84.0	74.0	50.0	53.0	50.0	30.0	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 2.304W 24V / 1.728W 24V / 2.304W	96mA 72mA 96mA	80
BHS4-00-075-X-X	109.0	99.0	75.0	78.0	75.0	38.5	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 5.184W 24V / 3.888W 24V / 5.184W	216mA 162mA 216mA	100
BHS4-00-100-X-X	134.0	124.0	100.0	103.0	100.0	60.0	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 9.216W 24V / 6.912W 24V / 9.216W	384mA 288mA 384mA	220

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	A	B	C	D	E	F				
BHS4-00-030-X-X	64.0	54.0	30.0	33.0	30.0	22	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 1.44W 24V / 0.576W 24V / 0.432W 24V / 3.12W	60mA 24mA 18mA 130mA	50
BHS4-00-060-X-X	84.0	84.0	60.0	63.0	60.0	40	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 2.304W 24V / 1.728W 24V / 2.304W	96mA 72mA 96mA	115
BHS4-00-090-X-X	124.0	114.0	90.0	93.0	90.0	70	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 5.184W 24V / 3.888W 24V / 5.184W	216mA 162mA 216mA	200
BHS4-00-120-X-X	154.0	144	120.0	123.0	120.0	100	●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●● ●●●●	24V / 9.216W 24V / 6.912W 24V / 9.216W	384mA 288mA 384mA	325

Remark: BHS3 series are replaced by BHS4-25X25 series
BHL3 series are replaced by BHS4-30X30 series

Optional Connector



Product Part Numbering System
BHS4-00-025-X-X-24V-M8

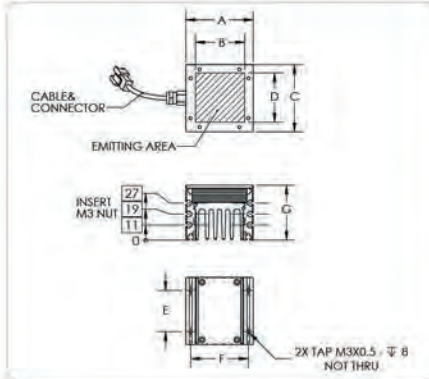
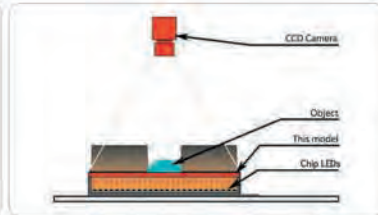
Product Part Numbering System
BHS4-00-025-X-X-24V-M12

Backlight Illumination

BHH SERIES – High Power Backlight Illumination

BHH series is a high power backlight which LEDs are arranged in a dense array and shine into a diffuser. This product is suitable to be used in high speed applications.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement, edge detection



Technical Specification:

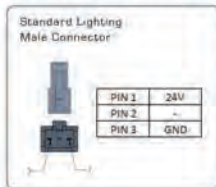
- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

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	G				
BHH-00-035-X-X	49.0	35.0	49.0	35.0	30.0	42.0	40	●●●	24V / 3.60W	150mA	135
BHH-00-070-X-X	84.0	70.0	84.0	70.0	65.0	77.0	40	●●●	24V / 14.40W	600mA	380

Optional Connector



Product Part Numbering System
BHH-00-035-X-X-24V-M8

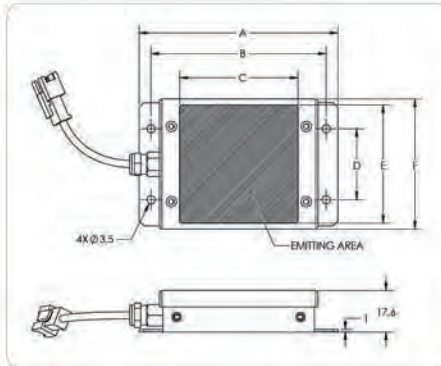
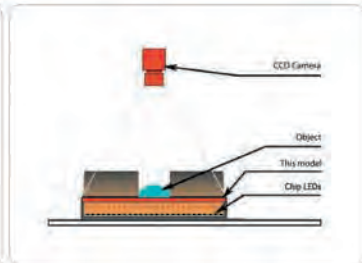
Product Part Numbering System
BHH-00-035-X-X-24V-M12

2019 Backlight Illumination

BHC2 SERIES – High Intensity Collimated Backlight Illumination

BHC2 is a high intensity, uniform and collimated backlight that create a silhouette that highlights a work piece's shape and outline distinctly compare to the standard backlight.

Applications: Lead Frame Inspection, Shape Recognition, Size Measurement



Technical Specification:

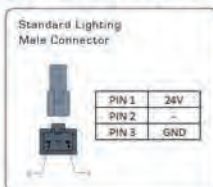
- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

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				
BHC2-00-025-X-X	59	49	25	17	25	30	● 24V / 1.44W ○ 24V / 0.576W	80mA 24mA	48	
BHC2-00-050-X-X	84	74	50	30	50	55	● 24V / 0.432W ○ 24V / 2.304W	18mA 96mA	93	
BHC2-00-075-X-X	109	99	75	38.5	75	80	● 24V / 1.728W ○ 24V / 5.184W	72mA 216mA	121	
BHC2-00-100-X-X	134	124	100	60	100	105	● 24V / 3.888W ○ 24V / 9.216W	162mA 384mA	264	

Optional Connector



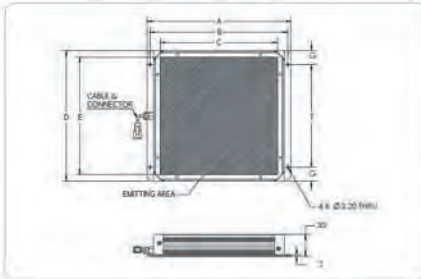
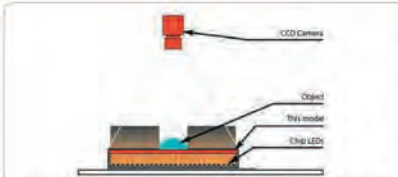
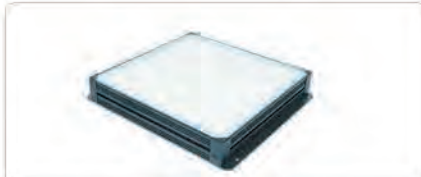
Product Part Numbering System -
BHC2-00-050-X-X-24V M8

Product Part Numbering System -
BHC2-00-050-X-X-24V M12

2019 Backlight Illumination

BHLX3 SERIES – Backlight Illumination

BHLX3 series is bigger and thicker size of backlight which provides diffused backlighting over a wide area. This product is a cascade able PCB (80mm x 80mm). Maximum quantity of this product that could be cascaded is 28 pieces.



Technical Specification:

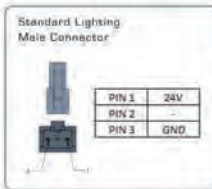
- Color Red, Green, Blue and White
- 24V DC Input Power
- Continuous and Strobe Applications
- Compact Size
- Lighting Cable 500mm

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	G				
BHLX3-00-160X160-X-X	196	188	160	178	160	140	19	● ● ● ● IR850	24V / 12.96W 24V / 12.48W	540mA 720mA	665
BHLX3-00-160X240-X-X	276	268	240	178	160	140	19	● ● ● ● IR850	24V / 19.44W 24V / 25.92W 24V / 18.72W	810mA 1080mA 780mA	860
BHLX3-00-160X320-X-X	356	348	320	178	160	140	19	● ● ● ● IR850	24V / 25.92W 24V / 34.56W 24V / 24.96W	1080mA 1440mA 1040mA	1060
BHLX3-00-160X400-X-X	436	428	400	178	160	140	19	● ● ● ● IR850	24V / 32.40W 24V / 43.20W 24V / 31.2W	1350mA 1800mA 1300mA	1265
BHLX3-00-240X240-X-X	276	268	240	258	240	140	59	● ● ● ● IR850	24V / 29.16W 24V / 36.88W 24V / 28.08W	1215mA 1620mA 1170mA	1170
BHLX3-00-240X320-X-X	356	348	320	258	240	140	59	● ● ● ● IR850	24V / 39.88W 24V / 51.84W 24V / 37.44W	1620mA 2160mA 1800mA	1410
BHLX3-00-240X400-X-X	436	428	400	258	240	140	59	● ● ● ● IR850	24V / 48.60W 24V / 64.80W 24V / 46.8W	2025mA 2700mA 2160mA	1665
BHLX3-00-320X320-X-X	356	348	320	338	320	300	19	● ● ● ● IR850	24V / 69.12W 24V / 49.92W 24V / 64.80W	2880mA 2080mA 2700mA	1900
BHLX3-00-320X400-X-X	436	428	400	338	320	300	19	● ● ● ● IR850	24V / 86.40W 24V / 62.4W 24V / 81.00W	3600mA 3375mA 4500mA	2120
BHLX3-00-400X400-X-X	436	428	400	418	400	360	29	● ● ● ● IR850	24V / 108.00W 24V / 78.0W	4500mA 3250mA	2800

Optional Connector



Product Part Numbering System
BHLX3-00-160X160-X-X-24V-MB

Product Part Numbering System
BHLX3-00-160X160-X-X-24V-M12

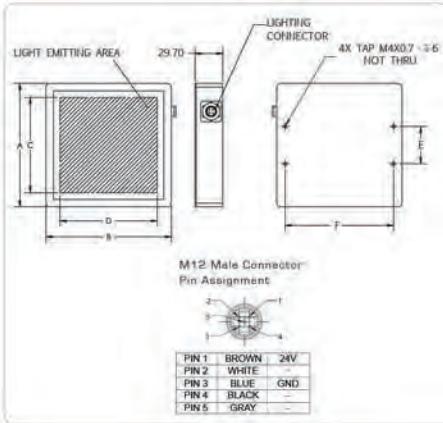
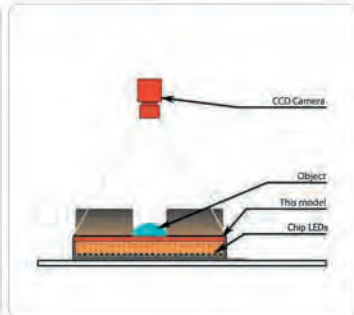
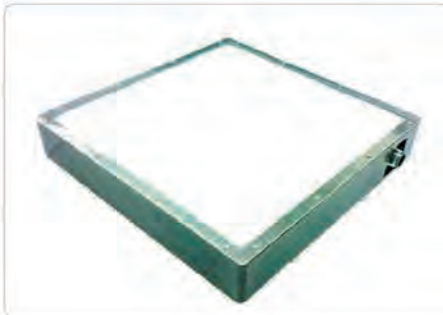
Ingress Protection Illumination (IP65)

BHP SERIES – Ingress Protection, High Intensity Backlight Illumination

BHP series is an ingress protected illuminator which LEDs are arranged in a dense array and shine into a diffuser. The uniform light emitted provides even area illumination.

This illumination is dust tight and protected from low pressure water jets from any direction.

Applications: Lead Frame Inspection, Shape Recognition, Dimensions Measurement



Technical Specification:

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

Customize Lighting:

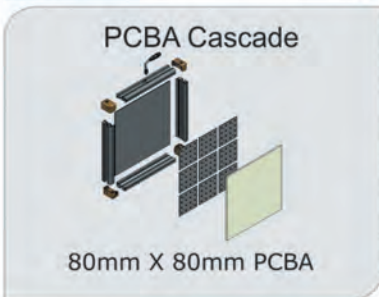
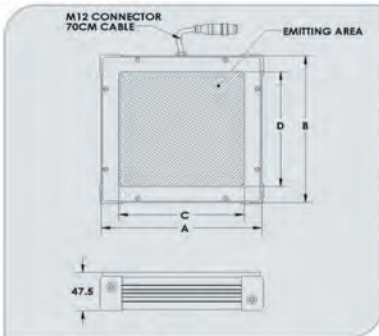
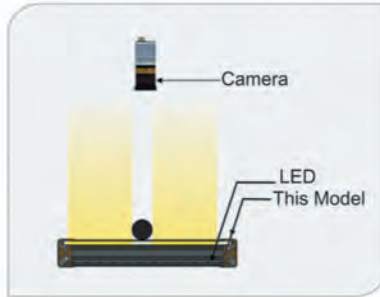
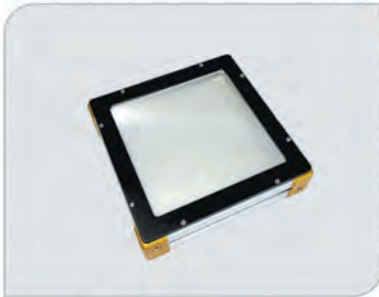
- Customize Sizes, Mounting Requirements
- Color and Voltage Available
- Consult Technical Sales for More Information

Model	Dimensions (MM)						Color	Voltage / Watt	Current	Weight (g)
	A	B	C	D	E	F				
BHP1010-X-X	132.0	134.0	102.0	104.0	40.0	116.0	●●●○	24V / 9.12W	380mA	650
BHP1515-X-X	180.0	180.0	150.0	150.0	75.0	183.0	●●●○	24V / 6.84W	285mA	1000
BHP1520-X-X	180.0	230.0	150.0	200.0	75.0	213.0	●●●○	24V / 18.48W	770mA	1000
							●●○	24V / 20.16W	840mA	1200
							●●○	24V / 23.04W	960mA	1200
							●●○	24V / 20.16W	840mA	1200

HBBC SERIES – High Intensity Collimated Backlight



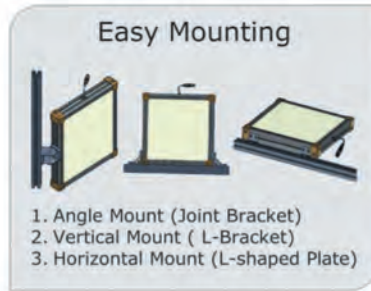
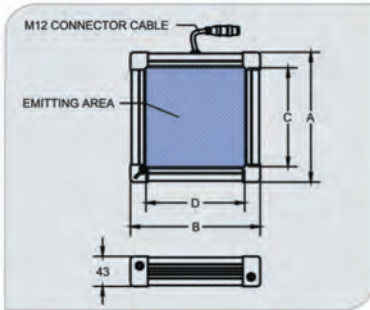
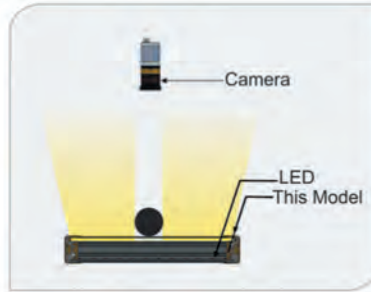
HBBC Series is a collimated backlight which LEDs are arranged in a dense array and shine into a diffuser, producing uniform area illumination which makes it suitable for measurement applications.



MODEL	DIMENSIONS (MM)				COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)
	A	B	C	D				
HBBC-00-160X160-X	183	183	143	143		24V / 11.52W 24V / 12.00W	480mA 500mA	1380

HBBX SERIES – High Intensity Backlight

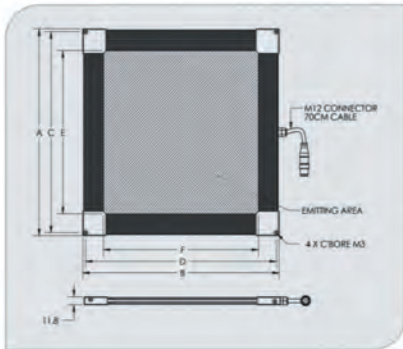
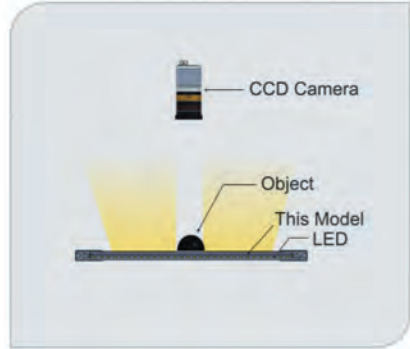
HBBX series provides diffused back lighting over a wide area. The LEDs are arranged in a dense array and shine into a diffuser. This product is able to be cascaded based on its PCB size (80mm x 80mm).



MODEL	DIMENSIONS (MM)				COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)
	A	B	C	D				
HBBX-00-160X160-X	186.2	186.2	147	147	•••○	24V / 11.52W 24V / 12.00W	480mA 500mA	1170
HBBX-00-160X240-X	186.2	266.2	147	227	•••○	24V / 17.28W 24V / 18.00W	720mA 750mA	1500
HBBX-00-160X320-X	186.2	346.2	147	307	•••○	24V / 23.04W 24V / 24.00W	960mA 1000mA	1870
HBBX-00-240X240-X	266.2	266.2	227	227	•••○	24V / 25.92W 24V / 27.00W	1080mA 1125mA	1900
HBBX-00-240X320-X	266.2	346.2	227	307	•••○	24V / 34.56W 24V / 36.00W	1440mA 1500mA	2280
HBBX-00-320X320-X	346.2	346.2	307	307	•••○	24V / 48.00W 24V / 46.08W	2000mA 1920mA	2880

BHD2 SERIES – Thin Backlight

BHD2 series consists of a four-sided illumination fit into a diffuser block in which light shines from the flat surface of the block.



M12 Male Connector

M12 Pin Assignment

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

MODEL	DIMENSIONS (MM)						COLOR	VOLTAGE / WATT	CURRENT	WEIGHT (g)
	A	B	C	D	E	F				
BHD2-00-235X235-1	297.8	297.8	289.60	289.40	235	235		24V / 14.40W 24V / 14.40W	600mA 600mA	1620
BHD2-00-545X545-1	607.4	607.4	599	599	545	545		24V / 34.56W 24V / 34.56W	1440mA 1440mA	4800