



# Bridgelux White IB Series™ Module

Product Data Sheet DS341

Lengths: 305mm, 554mm, 1092mm

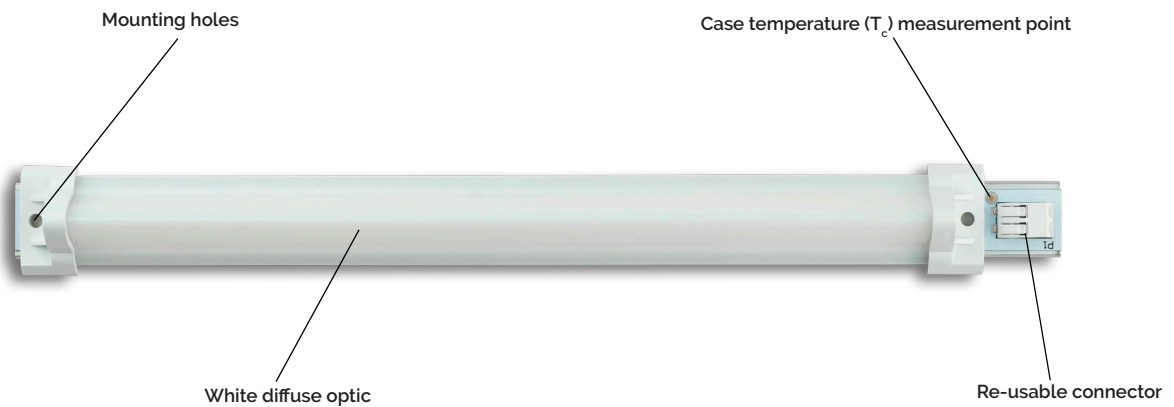
CRIs: 80 & 90

CCTs: 2700K, 3000K, 3500K, 4000K, 5000K, 5700K, 6500K



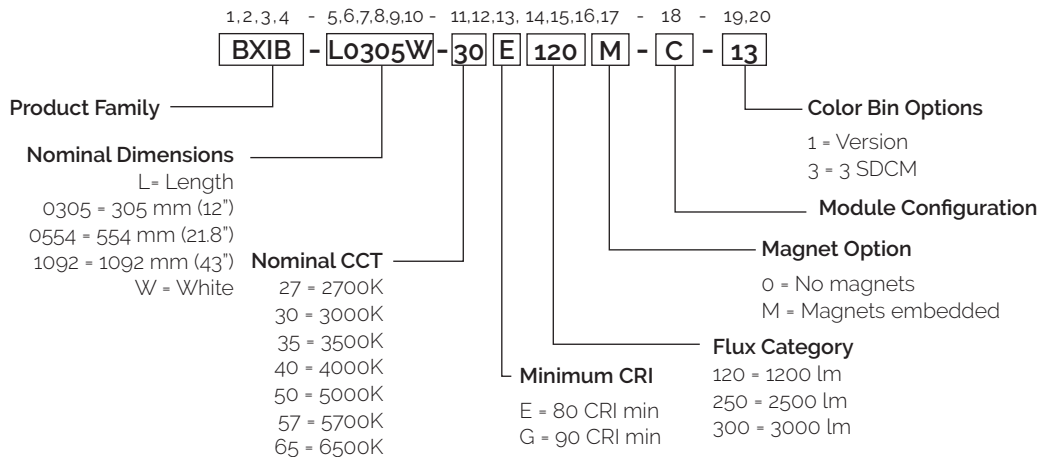
# Product Feature Map

Bridgelux White IB Series are fully engineered devices that provide consistent thermal and optical performance on an engineered mechanical platform. The linear products incorporate several features to simplify design integration and assembly. Please visit [www.bridgelux.com](http://www.bridgelux.com) for more information on the White IB Series family of products.



## Product Nomenclature

The part number designation for White IB Series is explained as follows:



# Product Characteristics

The following product configurations are available:

**Table 1: Product Performance ( $T_c = 40^\circ\text{C}$ )**

Part Number	Nominal CCT <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current (mA)	Typical Flux <sup>3,4</sup> (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXIB-L0305W-27E1200-C-13	2700	80	350	1135	22.6	7.9	144
BXIB-L0305W-27G1200-C-13		90		968			122
BXIB-L0305W-30E1200-C-13	3000	80		1185			150
BXIB-L0305W-30G1200-C-13		90		1018			129
BXIB-L0305W-35E1200-C-13	3500	80		1202			152
BXIB-L0305W-35G1200-C-13		90		1035			131
BXIB-L0305W-40E1200-C-13	4000	80		1285			163
BXIB-L0305W-40G1200-C-13		90		1085			137
BXIB-L0305W-50E1200-C-13	5000	80		1285			163
BXIB-L0305W-50G1200-C-13		90		1085			137
BXIB-L0305W-57E1200-C-13	5700	80		1285			163
BXIB-L0305W-57G1200-C-13		90		1085			137
BXIB-L0305W-65E1200-C-13	6500	80		1268			160
BXIB-L0305W-65G1200-C-13		90		1085			137
BXIB-L0554W-27E2500-C-13	2700	80	500	2248	31.1	15.5	145
BXIB-L0554W-27G2500-C-13		90		1917			123
BXIB-L0554W-30E2500-C-13	3000	80		2347			151
BXIB-L0554W-30G2500-C-13		90		2016			130
BXIB-L0554W-35E2500-C-13	3500	80		2380			153
BXIB-L0554W-35G2500-C-13		90		2049			132
BXIB-L0554W-40E2500-C-13	4000	80		2545			164
BXIB-L0554W-40G2500-C-13		90		2148			138
BXIB-L0554W-50E2500-C-13	5000	80		2545			164
BXIB-L0554W-50G2500-C-13		90		2148			138
BXIB-L0554W-57E2500-C-13	5700	80		2545			164
BXIB-L0554W-57G2500-C-13		90		2148			138
BXIB-L0554W-65E2500-C-13	6500	80		2512			162
BXIB-L0554W-65G2500-C-13		90		2148			138

Notes for Table 1:

- Nominal CCT as defined by ANSI C78.377-2011.
- CRI Values are minimums.
- All values are measured at  $T_c = 40^\circ\text{C}$ .
- Bridgelux maintains a  $\pm 7\%$  tolerance on flux data.
- The data in this table pertains to modules with and without the magnet option.

# Product Characteristics

The following product configurations are available:

**Table 2: Product Performance ( $T_c = 40^\circ\text{C}$ )**

Part Number	Nominal CCT <sup>1</sup> (K)	CRI <sup>2</sup>	Nominal Drive Current (mA)	Typical Flux <sup>3,4</sup> (lm)	Typical $V_f$ (V)	Typical Power (W)	Typical Efficacy (lm/W)
BXIB-L1092W-27E3000-C-13	2700	80	500	3091	42.3	21.2	146
BXIB-L1092W-27G3000-C-13		90		2636			125
BXIB-L1092W-30E3000-C-13	3000	80		3227			153
BXIB-L1092W-30G3000-C-13		90		2773			131
BXIB-L1092W-35E3000-C-13	3500	80		3273			155
BXIB-L1092W-35G3000-C-13		90		2818			133
BXIB-L1092W-40E3000-C-13	4000	80		3500			165
BXIB-L1092W-40G3000-C-13		90		2955			140
BXIB-L1092W-50E3000-C-13	5000	80		3500			165
BXIB-L1092W-50G3000-C-13		90		2955			140
BXIB-L1092W-57E3000-C-13	5700	80		3500			165
BXIB-L1092W-57G3000-C-13		90		2955			140
BXIB-L1092W-65E3000-C-13	6500	80		3455			163
BXIB-L1092W-65G3000-C-13		90		2955			140

Notes for Table 2:

1. Nominal CCT as defined by ANSI C78.377-2011.
2. CRI Values are minimums.
3. All values are measured at  $T_c = 40^\circ\text{C}$ .
4. Bridgelux maintains a  $\pm 7\%$  tolerance on flux data.
5. The data in this table pertains to modules with and without the magnet option.

**Product Certifications:**



# Product Characteristics

**Table 3: Nominal Electrical Characteristics**

Part Number	Nominal Drive Current (mA)	Forward Voltage (V) @ Tc = 40°C		
		Minimum	Typical	Maximum
BXIB-L0305W-xy120z-C-13	350	21.0	22.6	24.2
BXIB-L0554W-xy250z-C-13	500	28.9	31.1	33.3
BXIB-L1092W-xy300z-C-13	500	39.3	42.3	45.3

**Table 4: Maximum Electrical Characteristics**

Part Number	Maximum Drive Current (mA)	Forward Voltage (V) @ Tc = 40°C		
		Minimum	Typical	Maximum
BXIB-L0305W-xy120z-C-13	1050	22.9	24.6	26.3
BXIB-L0554W-xy250z-C-13	1500	31.5	33.9	36.3
BXIB-L1092W-xy300z-C-13	1500	42.9	46.1	49.3

Notes for Table 3 and Table 4:

1. The designations of xx, y, and z in the part number correspond to CCT, CRI, and Magnet product options.
2. All values included in the tables above are hot stabilized performance with a case temperature (Tc) of 40°C after 60 minutes of operation.
3. Bridgelux maintains a tolerance of ± 0.1 V on forward voltage measurements.

**Table 5: Temperature Limits**

Parameter	Maximum Rating
Operating Case Temperature (Tc)	-20°C to + 65°C
Storage Case Temperature (Tc)	-20°C to + 80°C

# Product Characteristics

**Table 6: Mechanical Dimensions**

Part Number	Module Length	Module Width	Module Height
BXIB-L0305W-xy120z-C-13	304.8 mm	25 mm	19 mm
BXIB-L0554W-xy250z-C-13	554.0 mm		
BXIB-L1092W-xy300z-C-13	1092.2 mm		

Notes for Table 6:

1. The designations of xx, y, and z in the part number correspond to CCT, CRI, and Magnet product options.
2. For full dimensioning, tolerancing, and other critical assembly details, refer to drawings according to Table 7

**Table 7: Drawing Numbers**

Part Number	Product Length	Includes Magnets	Drawing Number
BXIB-L0305W-xy120M-C-13	305 mm	Yes	15-000774
BXIB-L0305W-xy1200-C-13		No	15-000776
BXIB-L0554W-xy250M-C-13	554 mm	Yes	15-000732
BXIB-L0554W-xy2500-C-13		No	15-000766
BXIB-L1092W-xy300M-C-13	1092 mm	Yes	15-000733
BXIB-L1092W-xy3000-C-13		No	15-000767

Notes for Table 7:

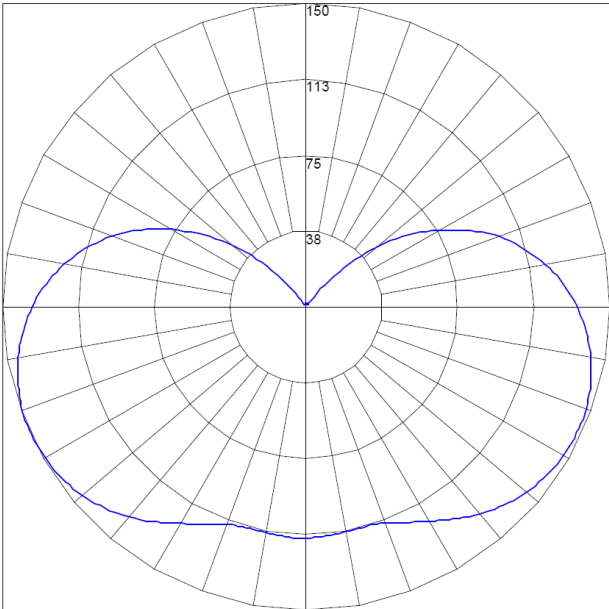
1. Refer to the drawings for complete mechanical configuration details
2. The designations of xx and y in the part number correspond to CCT, CRI color point options.

**Table 8: Connector and wiring**

Parameter	Specification
Input wire cross-section	18-24 AWG solid or fine stranded 0.2 - 0.75 mm <sup>2</sup>
Wire strip length	7-9 mm

# Product Characteristics

**Figure 1: Intensity Distribution**



Note for Figure 1:

- 1. The typical cross sectional FWHM beam angle is 240° (i.e. viewed from either end of the module).

**Table 9: Bin Coordinates and Associated Typical CCT**

3 SDCM Bin	2700K	3000K	3500K	4000K	5000K	5700K	6500K
CCT Range	2651K - 2794K	2968K - 3136K	3369K - 3586K	3851K - 4130K	4835K - 5215K	5490K - 5820K	6250K - 6745K
Center Point (x,y)	(0.458, 0.410)	(0.434, 0.403)	(0.407, 0.392)	(0.382, 0.380)	(0.3445, 0.355)	(0.329, 0.342)	(0.312, 0.328)

Notes for Table 9:

- 1. 80 CRI modules are color binned at solder point temperature Tsp of SMDs of 25°C.
- 2. 90 CRI modules are color binned at solder point temperature Tsp of SMDs of 85°C.
- 3. Bridgelux maintains a tolerance of ± 0.007 on x and y color coordinates in the CIE 1931 color space.

# Typical Color Spectrum

Figure 2: Typical Color Spectra, 80 CRI

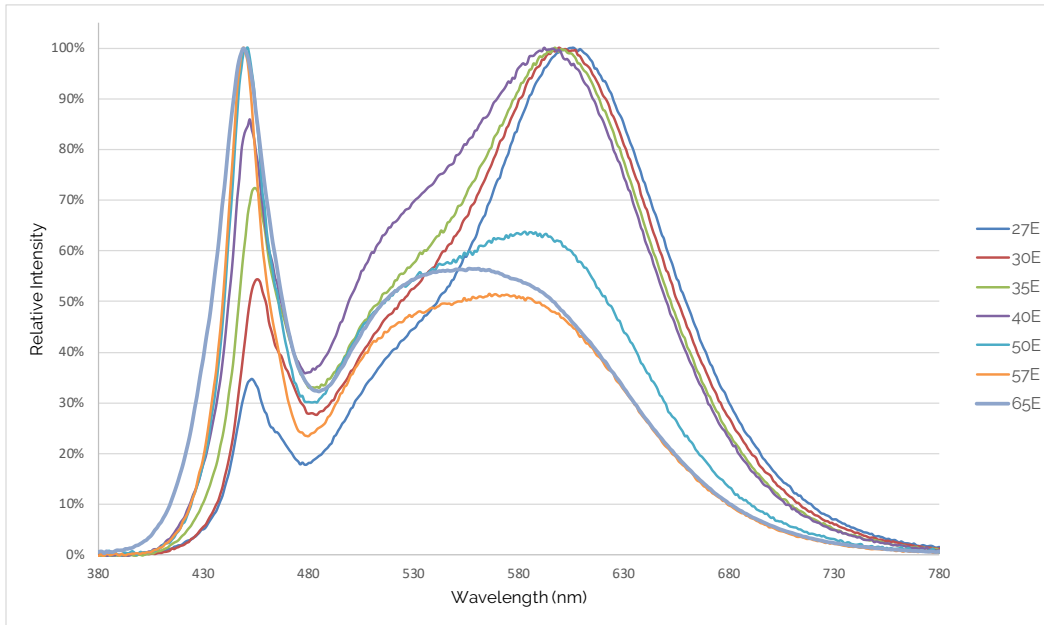
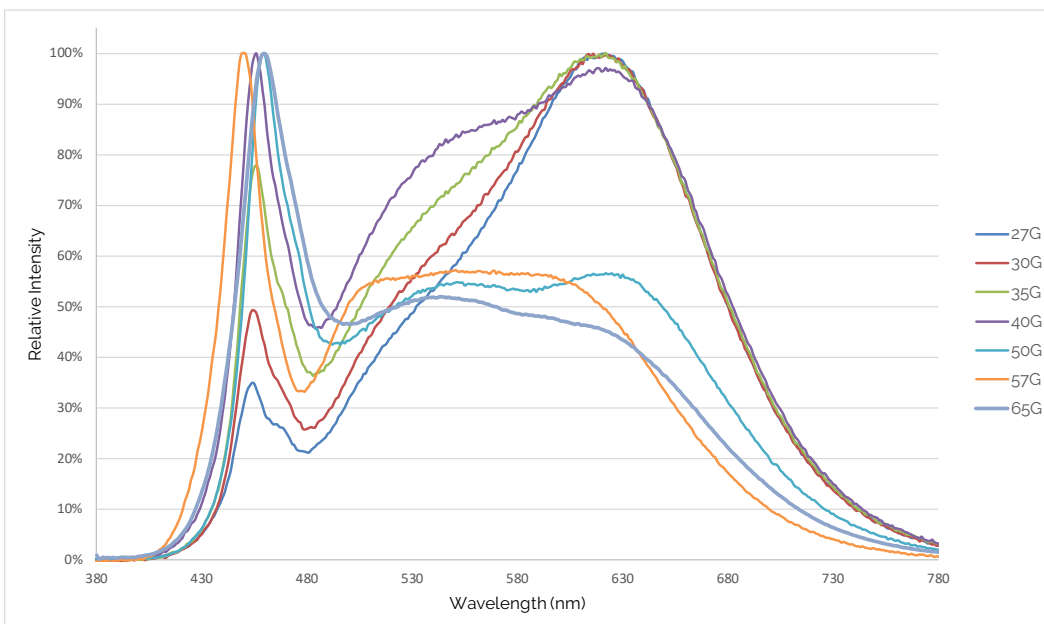


Figure 3: Typical Color Spectra, 90 CRI



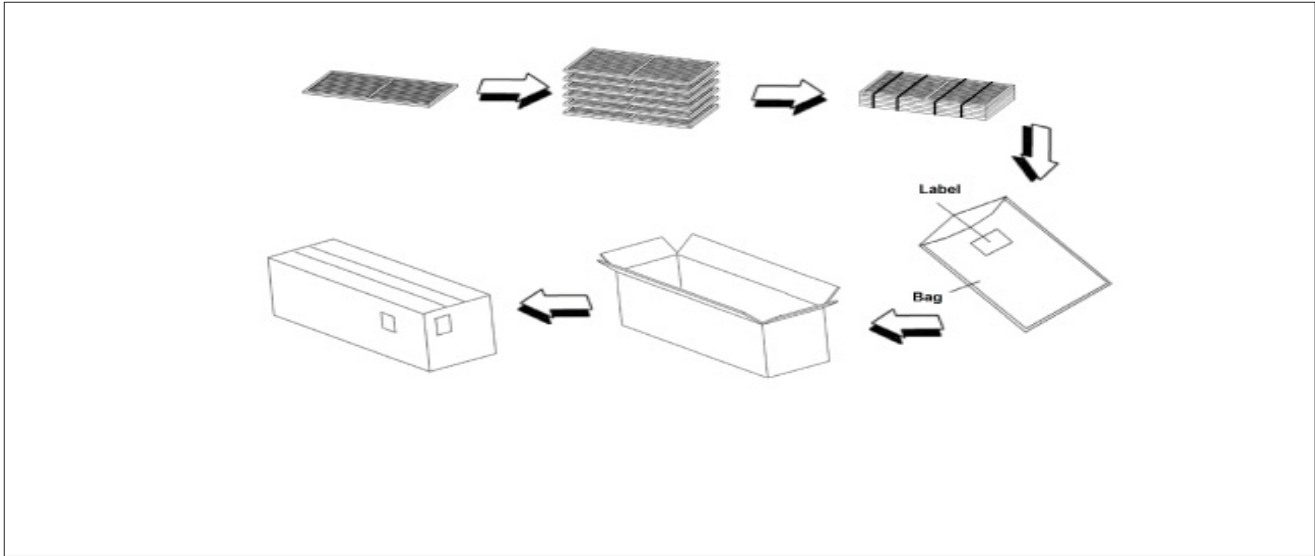
Note for Figures 2 & 3:

1. Color spectra measured at nominal current for LED  $T_C = 40^\circ\text{C}$



# Packaging and Labeling

**Figure 4: IB Series Packaging and Labeling**



Note for Figure 4:

1. IB Series modules are packed in trays. Trays are sealed in a bag which is then placed in a box. The box is then labeled with corresponding part number. Only one product (part number) is contained per box.

**Table 10: Packaging Structure**

Product	Value	Tray	Box
305 mm Module	Quantity	10	100
	Dimension	40 cm x 36 cm x 2.5 cm	42 cm x 38 cm x 27 cm
554 mm Module	Quantity	10	100
	Dimension	45 cm x 62 cm x 2.5 cm	47 cm x 64 cm x 27 cm
1092 mm Module	Quantity	10	50
	Dimension	40 cm x 115 cm x 2.5 cm	42 cm x 117 cm x 15 cm

# Design Resources

## Application Notes

Bridgelux has developed a comprehensive set of application notes and design resources to assist customers in successfully designing with the IB Series product family. For a list of resources under development, visit [www.bridgelux.com](http://www.bridgelux.com).

## Photometric Files

Photometric files are available for all Bridgelux products. For a list of available formats, visit [www.bridgelux.com](http://www.bridgelux.com).

## 3D CAD Models

Three dimensional CAD models depicting the product outline of all Bridgelux IB Series modules are available in both IGES and STEP formats. Please contact your Bridgelux sales representative for assistance.

# Precautions

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## CAUTION: CHEMICAL EXPOSURE HAZARD

Exposure to some chemicals commonly used in luminaire manufacturing and assembly can cause damage to the LED linear. Please consult Bridgelux Application Note for additional information.

## CAUTION: EYE SAFETY

Please use appropriate precautions. It is important that employees working with LEDs are trained to use them safely.

## CAUTION: RISK OF BURN

Do not touch the IB Series modules during operation. Allow the linear to cool for a sufficient period of time before handling. The IB Series modules may reach elevated temperatures such that could burn skin when touched.

# Disclaimers

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## STANDARD TEST CONDITIONS

Unless otherwise stated, linear testing is performed at the nominal drive current.

## MINOR PRODUCT CHANGE POLICY

The rigorous qualification testing on products offered by Bridgelux provides performance assurance. Slight cosmetic changes that do not affect form, fit, or function may occur as Bridgelux continues product optimization.

# About Bridgelux: Bridging Light and Life™

At Bridgelux, we help companies, industries and people experience the power and possibility of light. Since 2002, we've designed LED solutions that are high performing, energy efficient, cost effective and easy to integrate. Our focus is on light's impact on human behavior, delivering products that create better environments, experiences and returns—both experiential and financial. And our patented technology drives new platforms for commercial and industrial luminaires.

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