

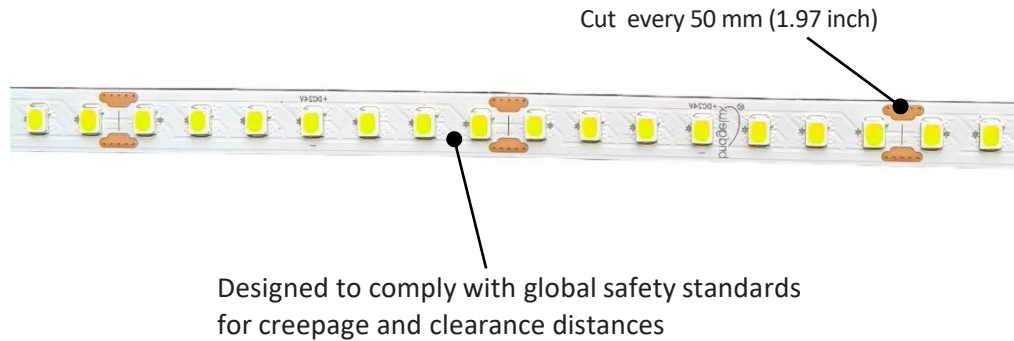
Bridgelux® F90™ CRD Flexible Strip Series

Product Data Sheet DS601



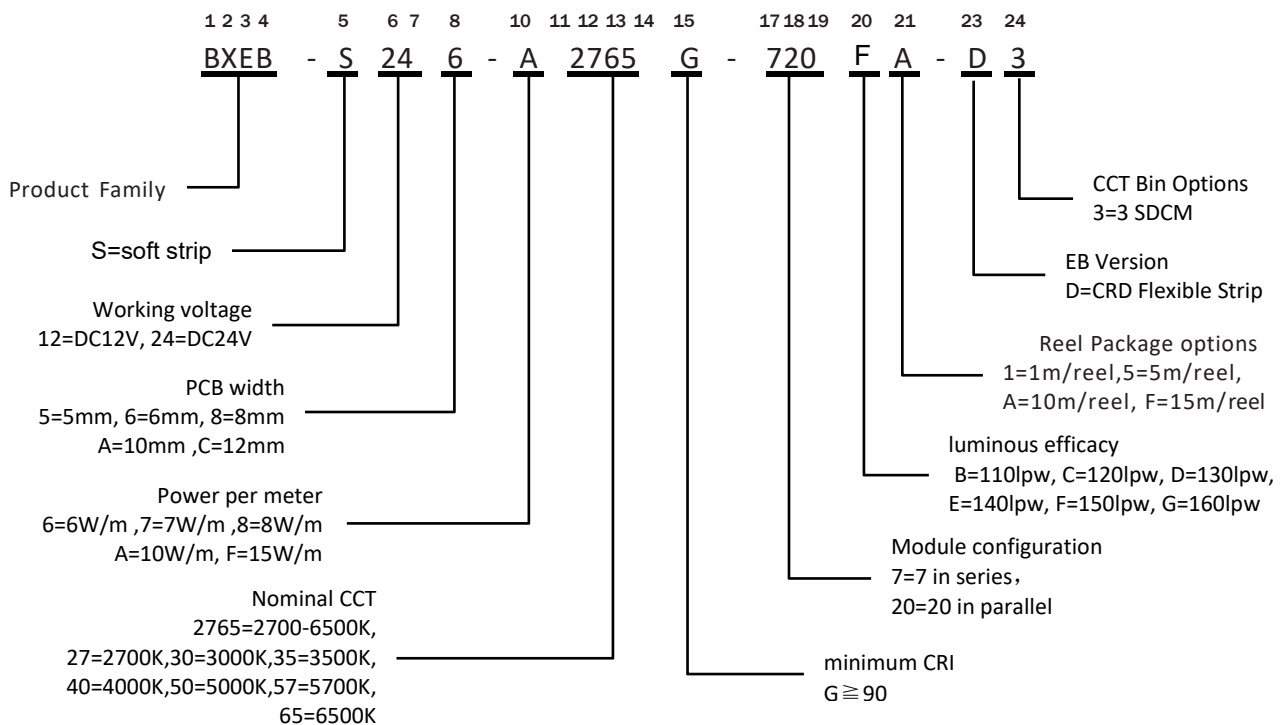
Product Feature Map

Bridgelux F90™ CRD (constant current diode) Flexible Strip Series are fully engineered devices that provide consistent thermal and optical performance on an engineered mechanical platform. The Strip products incorporate several features to simplify design integration and assembly. Please contact agents for more information on the F90 Series family of products.



Product Nomenclature

The part number designation for Bridgelux F90™ CRD Flexible is explained as follows:



Product Selection Guide

The following product configurations are available:

Table 1: Selection Guide, F90™ CRD Flexible Strip Measurement Data at 1 meter (3.28ft) length ($T_j=T_c=25^{\circ}\text{C}$)

Part Number	Nominal CCT ¹ (K)	CRI ²	Forward Voltage ³ (DCV)	Typical Power (W)	Typical Flux ^{3,4} (lm)	Typical Efficacy (lm/W)	Width plate (mm)	LED Quantity (EA/m)	Cut Length (mm)
BXEB-S246-A27G-720F1-D3	2700	90	24	10	1510	151	6	140	50.0
BXEB-S246-A30G-720F1-D3	3000	90	24	10	1520	152	6	140	50.0
BXEB-S246-A35G-720F1-D3	3500	90	24	10	1510	151	6	140	50.0
BXEB-S246-A40G-720F1-D3	4000	90	24	10	1500	150	6	140	50.0
BXEB-S246-A50G-720F1-D3	5000	90	24	10	1500	149	6	140	50.0
BXEB-S246-A65G-720F1-D3	6500	90	24	10	1570	148	6	140	50.0
BXEB-S246-72765G-728C1-D3	2700-6500	90	24	7	840	120	6	196	71.4
BXEB-S248-A27G-720F1-D3	2700	90	24	10	1510	151	8	140	50.0
BXEB-S248-A30G-720F1-D3	3000	90	24	10	1520	152	8	140	50.0
BXEB-S248-A35G-720F1-D3	3500	90	24	10	1510	151	8	140	50.0
BXEB-S248-A40G-720F1-D3	4000	90	24	10	1500	150	8	140	50.0
BXEB-S248-A50G-720F1-D3	5000	90	24	10	1490	149	8	140	50.0
BXEB-S248-A65G-720F1-D3	6500	90	24	10	1480	148	8	140	50.0
BXEB-S248-72765G-728C1-D3	2700-6500	90	24	7	840	120	8	196	71.4

Notes for Table 1:

1. Nominal CCT as defined by ANSI C78.377-2011.
2. Listed CRIs are minimum values and include test tolerance.
3. Products tested under pulsed condition (10ms pulse width) at nominal drive current where T_j (junction temperature) = T_c (case temperature) = 25°C .
4. Typical performance values are provided as a reference only and are not a guarantee of performance.
5. Bridgelux maintains a $\pm 7.5\%$ tolerance on flux measurements

Absolute Maximum Ratings

Table 2: Maximum Ratings at 1 meter (3.28ft) length

Parameter	Maximum Rating
Storage Temperature	-40°C to +65°C
Operating Case Temperature (T_c)	65°C
Soldering Temperature	350°C or lower for a maximum of 5 seconds
	BXEB- S24x- AxxG-720F1-D3 BXEB- S24x- AxxxxG-728C1-D3
Maximum driving voltage (DCV)	32

Notes for Table 2:

1. For IEC 62717 requirement, please consult your Bridgelux sales representative.
2. Lumen maintenance (L70) and lifetime predictions are valid for drive current and case temperature conditions used for LM-80 testing as included in the applicable LM-80 test report for the SMDs used in the modules. Contact your Bridgelux sales representatives for LM-80 report.

Performance Curves

Figure 1: Relative Forward Current vs. Forward Voltage for All Lengths, $T_c=25^\circ\text{C}$

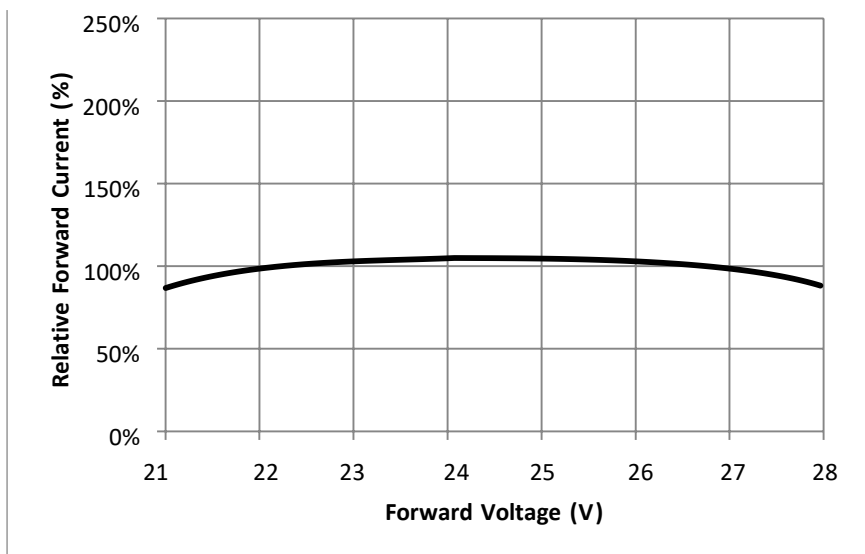
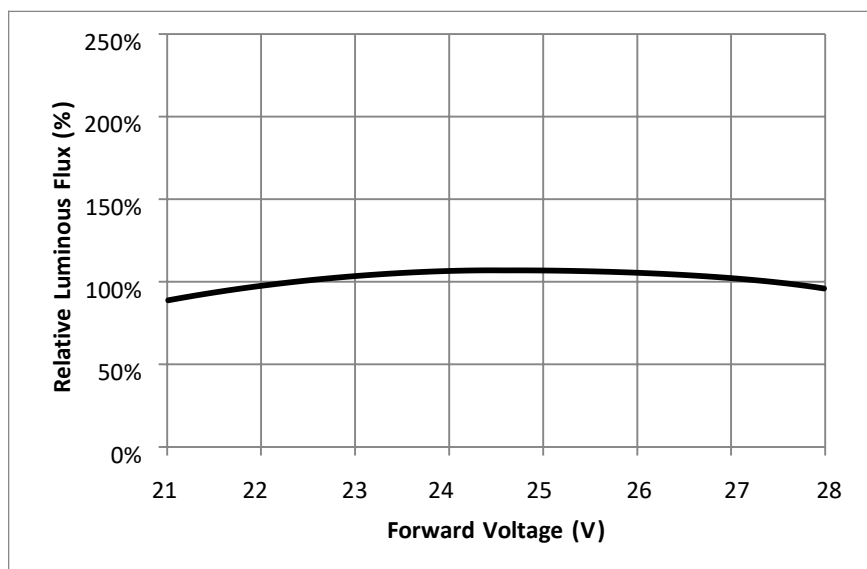


Figure 2: Relative Luminous Flux vs. Forward Voltage for All Lengths, $T_c=25^\circ\text{C}$



Performance Curves

Figure 3: Relative Current vs. Case Temperature for All Lengths, $T_c=25^\circ\text{C}$

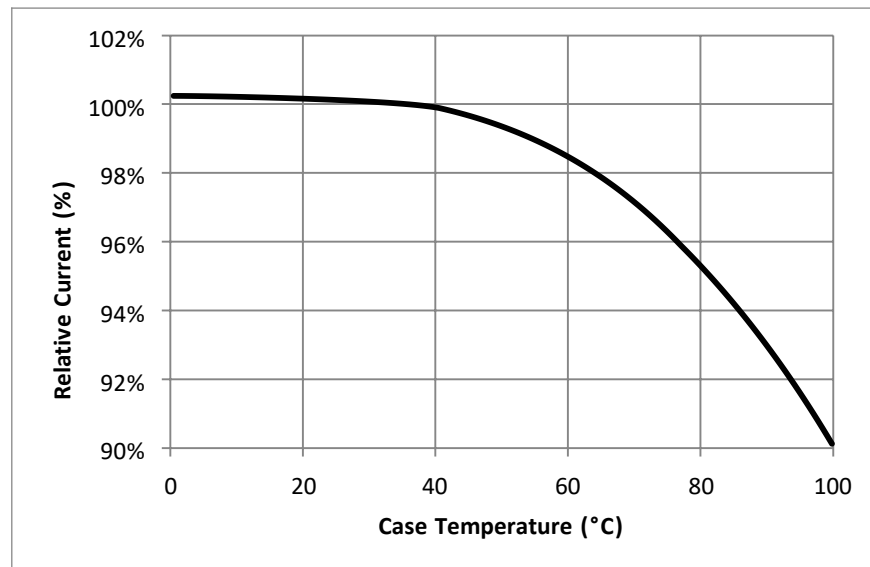
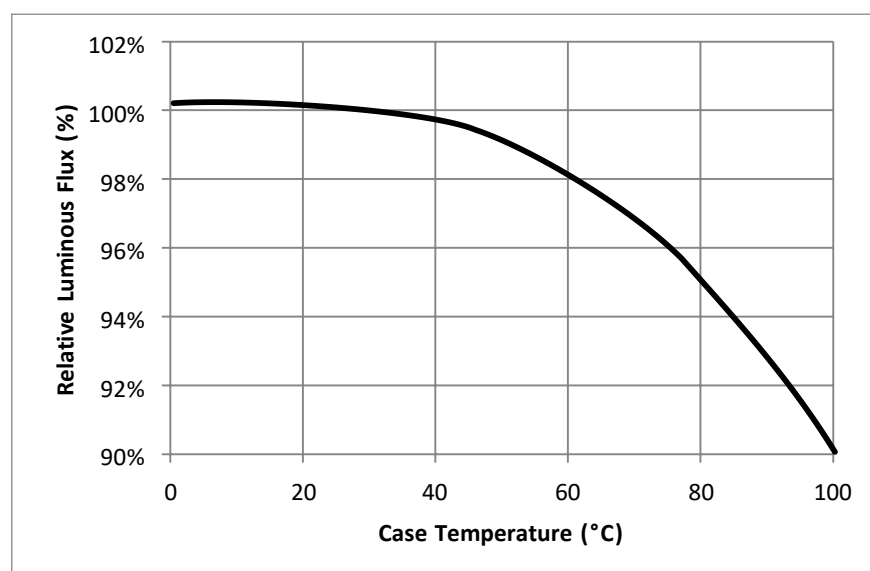
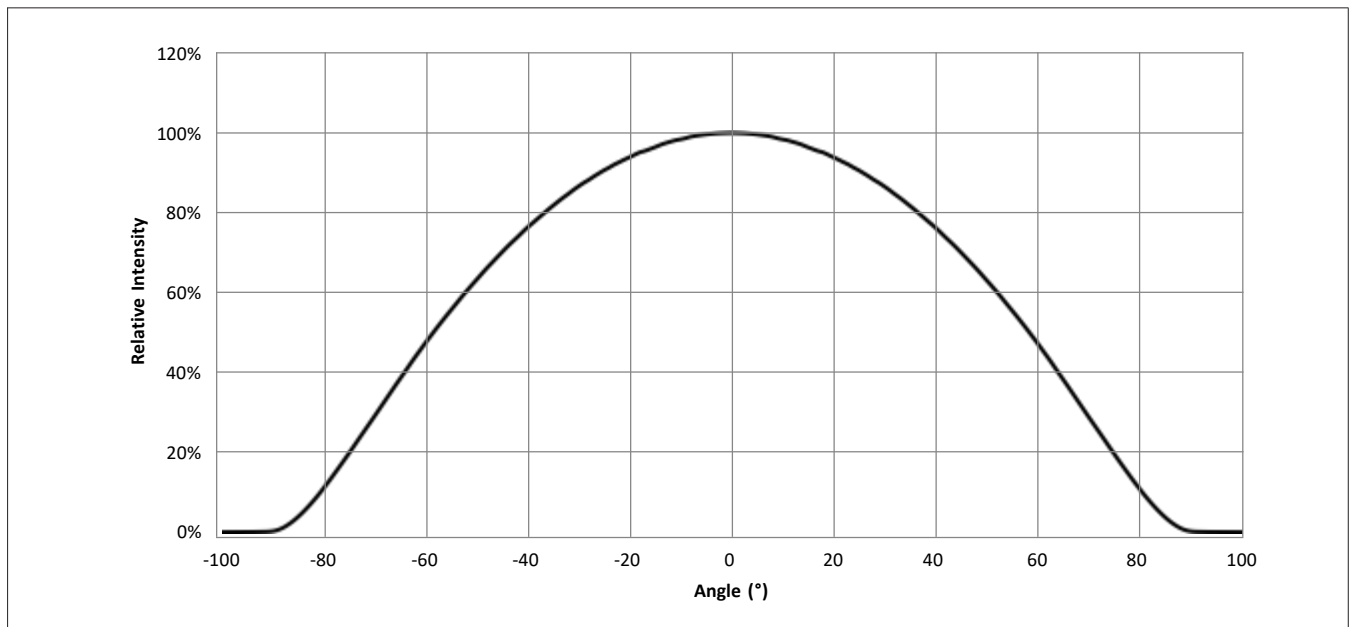


Figure 4: Relative Luminous Flux vs. Case Temperature for All Lengths, $T_c=25^\circ\text{C}$



Typical Radiation Pattern

Figure 5: Typical Spatial Radiation Pattern

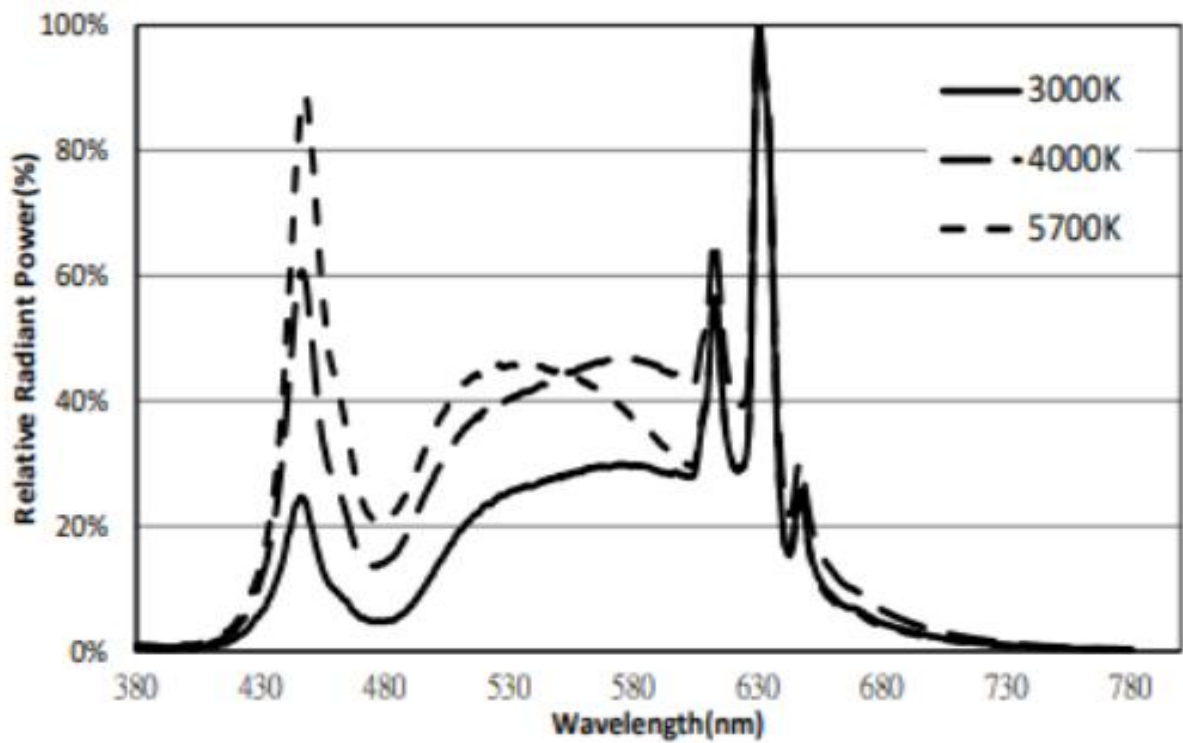


Notes for Figure 5:

1. Typical viewing angle is 120° .
2. The viewing angle is defined as the off axis angle from the centerline where I_v is $\frac{1}{2}$ of the peak value.

Typical Color Spectrum

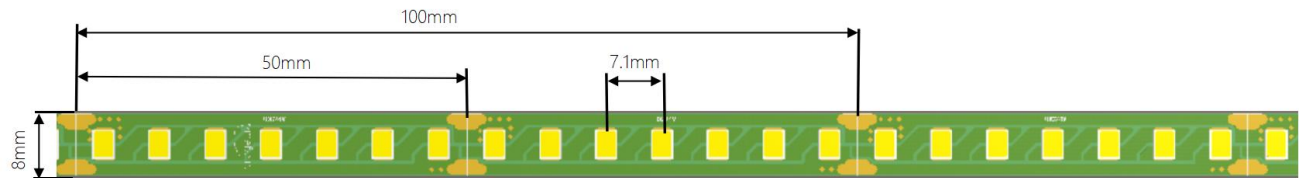
Figure 6: Typical Color Spectra, 90 CRI



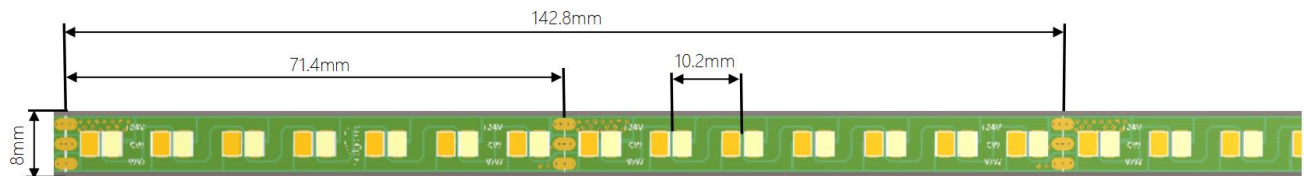
Mechanical Dimensions

Figure 7: Drawing Overview for F90™ CRD Flexible Strip

Single CCT Flexible strip



Dual CCT Flexible strip



Note for Figure 7:

1. Solder pads are labeled "+" to denote positive polarity, and "-" to denote negative polarity.
2. Drawing dimensions are in millimeters.

Table 3: Strip Module Dimensions

Parameter	BXEB-S24x-xxxxG-xxxx5-D3	BXEB-S24x-xxxxG-xxxxA-D3
Linear length per reel	5,000mm options	10,000mm options
Linear width	6/8mm	
Overall thickness	1.0mm	
PCB thickness	0.15 mm	

Table 4: Reel Package Option

Part Number	Strip Light Length Per Reel Package
BXEB-S24x-xxxG-xxxx1-D3	1 meter
BXEB-S24x-xxxxG-xxxx1-D3	1 meter
BXEB-S24x-xxxG-xxxx5-D3	5 meters
BXEB-S24x-xxxxG-xxxx5-D3	5 meters
BXEB-S24x-xxxG-xxxxA-D3	10 meters
BXEB-S24x-xxxxG-xxxxA-D3	10 meters

Packaging and Labeling

Figure 8: F90™ CRD Flexible Strip Series Packaging and Labeling

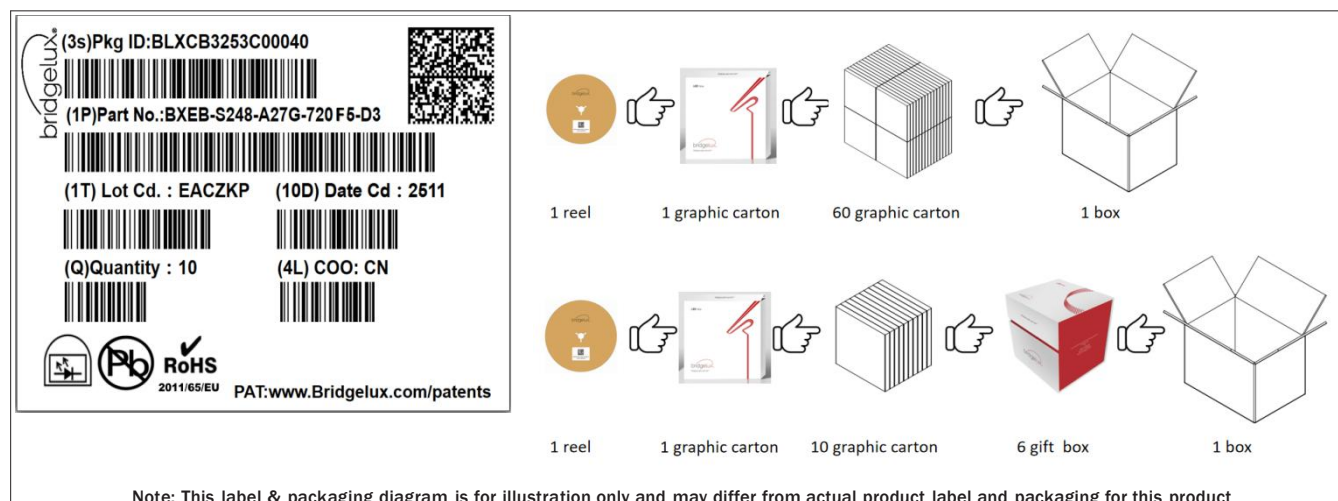


Table 5: Packaging Structure

Box Parameter	BXEB-S24x-AxxG-720Fx-D3	BXEB-S24x-7xxxxG-728Cx-D3	BXEB-S24x-AxxG-720Fx-D3	BXEB-S24x-7xxxxG-728Cx-D3
Quantity	60 reels			
Dimension	35cm x 24 cm x 35 cm (L*W*H)			
Gift Box Parameter	BXEB-S24x-AxxG-720Fx-D3	BXEB-S24x-7xxxxG-728Cx-D3	BXEB-S24x-AxxG-720Fx-D3	BXEB-S24x-7xxxxG-728Cx-D3
Quantity	6 Gift Box (60 reels)			
Dimension	38cm x 35 cm x 37 cm (L*W*H)			

Figure 9: Product Labeling

Bridgelux F90™ CRD Flexible Strip Series modules contain a label on the front to help with product identification. In addition to the product identification markings, Bridgelux F90™ CRD Flexible Strip Series modules also contain markings for internal, Bridgelux manufacturing use only. The image below shows which markings are for customer use and which ones are for Bridgelux internal use only. The Bridgelux internal manufacturing markings are subject to change without notice, however these will not impact the form, fit or performance of the module.



Scannable barcode provides product part number and other Bridgelux internal production information.

Design Resources

Application Notes

Bridgelux has developed a comprehensive set of application notes and design resources to assist customers in successfully designing with the EB Series product family. For a list of resources under development, visit www.bridgelux.com.

Optical Source Model

Optical source models and ray set files are available for all Bridgelux products. For a list of available formats, visit www.bridgelux.com.

3D CAD Models

Three-dimensional CAD models depicting the product outline of all Bridgelux EB Series F90™ CRD Flexible Strip are available in both IGS and STEP formats. Please contact your Bridgelux sales representative for assistance.

LM80

Please contact your Bridgelux sales representative for more information.

Precautions

CAUTION: CHEMICAL EXPOSURE HAZARD

Exposure to some chemicals commonly used in luminaire manufacturing and assembly can cause damage to the F90™ CRD Flexible Strip. Please consult Bridgelux Application Note for additional information.

CAUTION: EYE SAFETY

The Bridgelux F90™ CRD Flexible Strip emits visible light, that, under certain circumstances, could be harmful to the eye. Proper safeguards must be used.

CAUTION: RISK OF BURN

Do not touch the F90™ CRD Flexible Strip during operation. Allow the F90™ CRD Flexible Strip to cool for a sufficient period of time before handling. The F90™ Soft Strip may reach elevated temperatures such that could burn skin when touched.

STANDARD TEST CONDITIONS

Unless otherwise stated, F90™ CRD Flexible Strip testing is performed at the nominal drive voltage.

CAUTION

CONTACT WITH LIGHT EMITTING SURFACE (LES)

Avoid any contact with the LES. Do not touch the LES of the F90™ CRD Flexible Strip or apply stress to the LES (yellow phosphor resin area). Contact may cause damage to the F90™ CRD Flexible Strip.

Optics and reflectors must not be mounted in contact with the LES (yellow phosphor resin area). Optical devices may be mounted on the top surface of the F90™ CRD Flexible Strip.

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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WeChat ID: BridgeluxInChina



46410 Fremont Blvd Fremont, CA 94538 USA

Tel (925) 583-8400

Fax (925) 583-8401

www.bridgelux.com

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