A Solid-State Lighting Premium Expert

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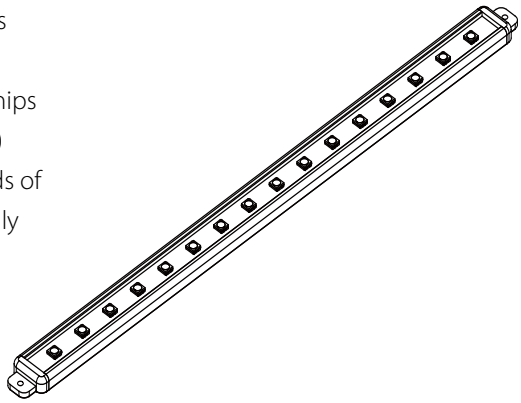
Solid-State Lighting Series

PLCC Lightbar with Heatsink Series Datasheet

With the newly introduced PLCC Lightbar from Edison Opto, users can now fashion their own choices of lighting without the excess limitation of a lighting fixture. The PLCC Lightbar features multi-chips packaged 5050 PLCC SMDs on an extruded heat-sink 20mm (0.8") wide and length up to 120cm (47.2"). The plastic caps at both ends of the heat-sink combine with the slim linear are designed specifically to allow easy screw-tight installation at compact spaces where traditional light source cannot fit in.



Features :

- High Brightness SMD LED
- Low Power Requirement & Energy Efficient
- Easily customized for length with several options

Typical Applications :

- Tube Light Source
- Auditorium Walkway Lighting
- Stairway Accent Lighting
- Cabinet Lighting

Specifications :

- CRI≥80
- Color :

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• Package Dimensions

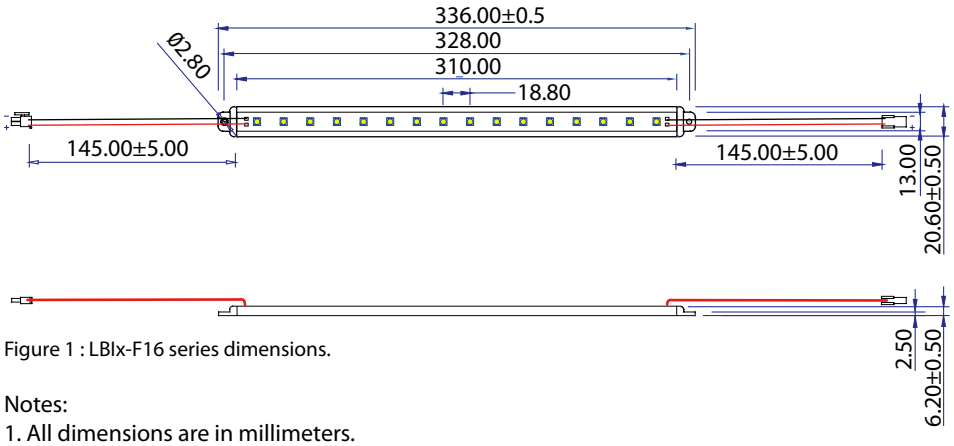

Figure 1 : LBIx-F16 series dimensions.

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.20 mm.

• Circuit Diagram

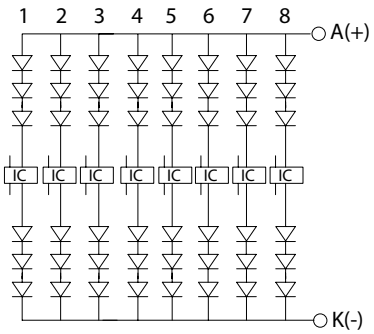

Figure 2 : LBIx-F16 series circuit diagram.

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LBIx-F24/x0220 Package Dimensions and Circuit Diagram

• Package Dimensions

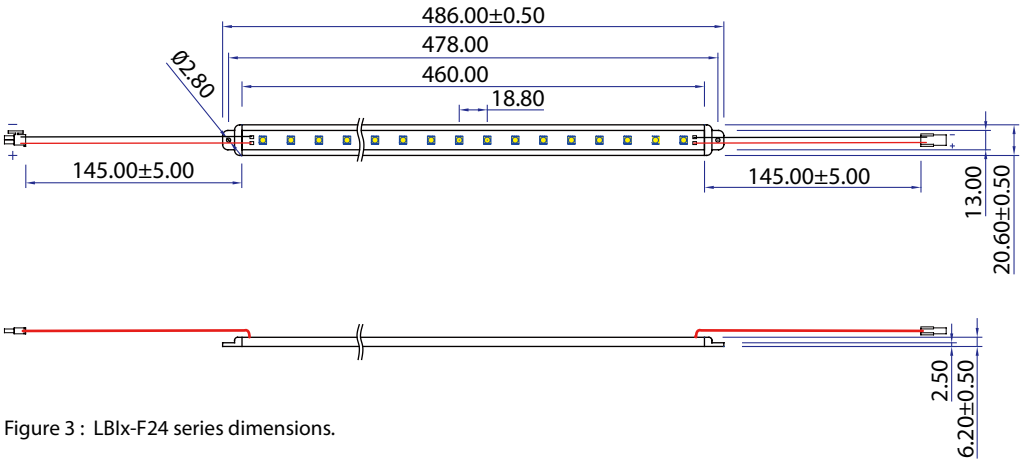

Figure 3 : LBIx-F24 series dimensions.

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.20 mm.

• Circuit Diagram

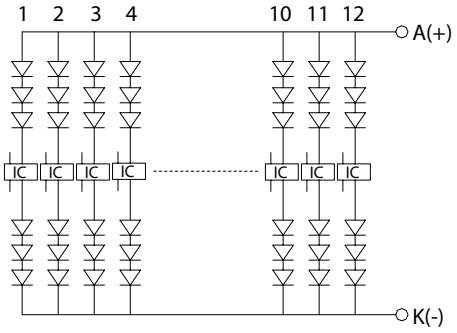

Figure 4 : LBIx-F24 series circuit diagram.

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LBIx-F32/x0228 Package Dimensions and Circuit Diagram

• Package Dimensions

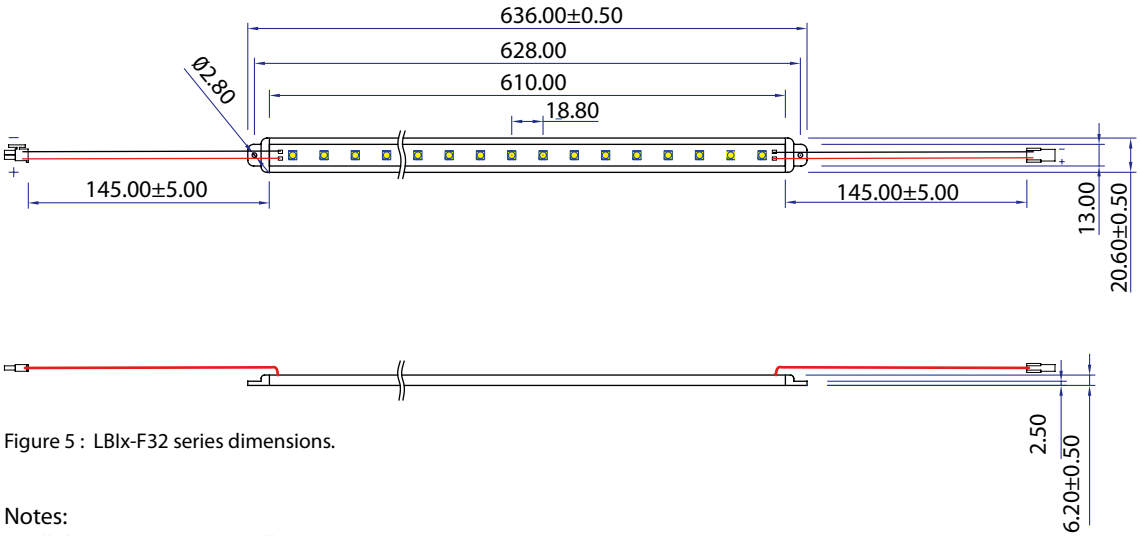

Figure 5 : LBIx-F32 series dimensions.

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.20 mm.

• Circuit Diagram

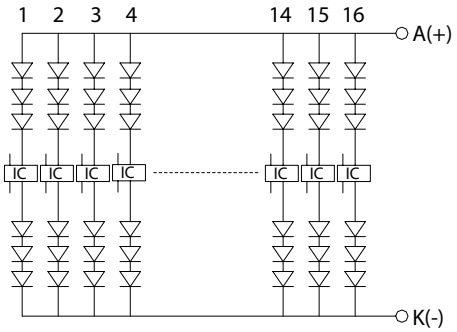

Figure 6 : LBIx-F32 series circuit diagram.

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LBIx-F48/x0229 Package Dimensions and Circuit Diagram

• Package Dimensions

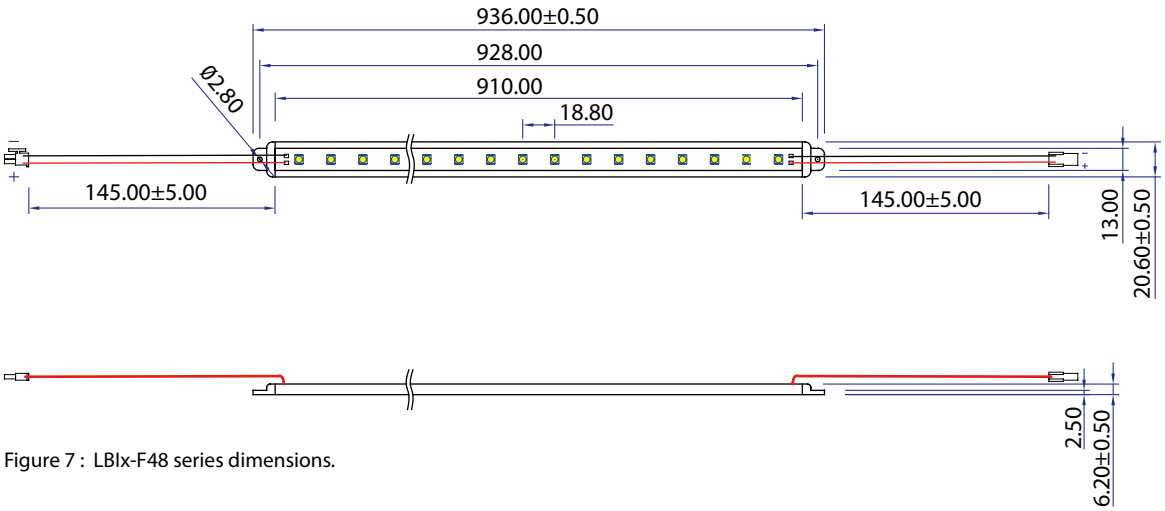

Figure 7 : LBIx-F48 series dimensions.

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.20 mm.

• Circuit Diagram

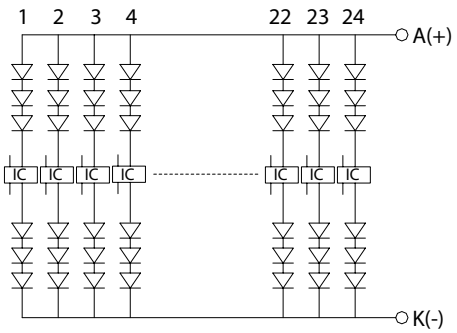

Figure 8 : LBIx-F48 series circuit diagram.

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LBIx-F64/x0230 Package Dimensions and Circuit Diagram

• Package Dimensions

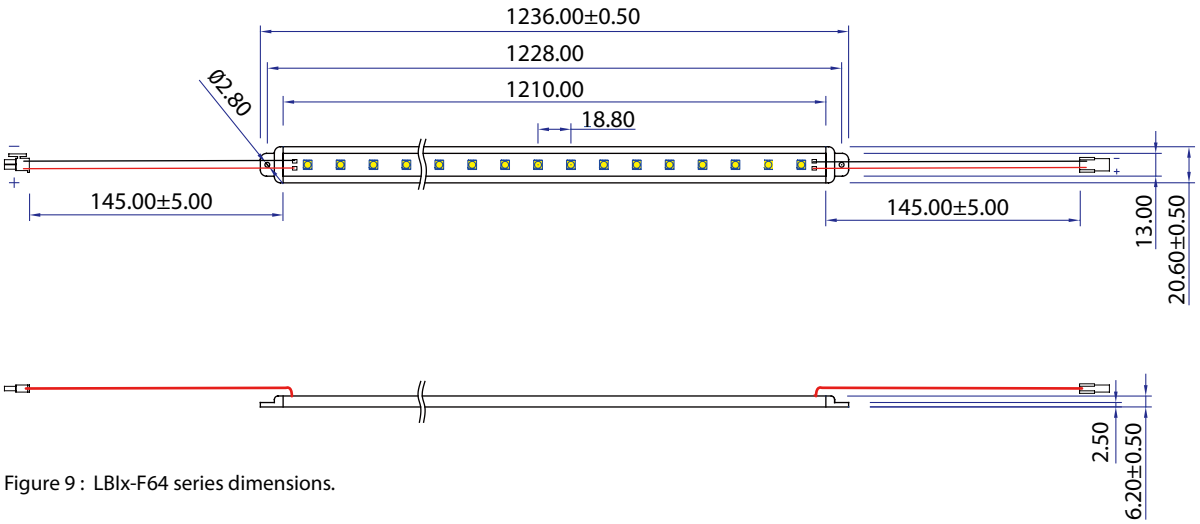

Figure 9 : LBIx-F64 series dimensions.

Notes:
1. All dimensions are in millimeters.
2. Tolerance is ±0.20 mm.

• Circuit Diagram

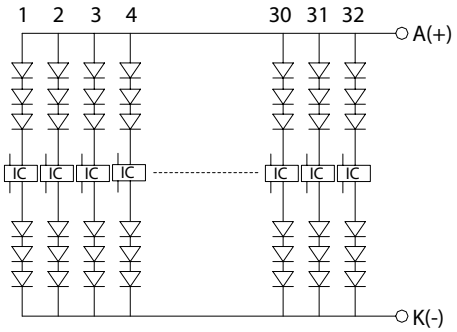

Figure 10 : LBIx-F64 series circuit diagram.

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Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
LED Junction Temperature	T_J	125	°C
Operating Temperature	T_{opr}	-30 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	°C

Table 1 : Absolute maximum ratings for PLCC lightbar with heatsink series.

Notes:
1. Proper current derating must be observed to maintain junction temperature below the maximum at all time.
2. LEDs are not designed to be driven in reverse bias.

Electro-Optical Characteristics (T_a=25°C)

• LBIx-F16/x0205 Series

Part No.	Color	Number of LEDs	Input Voltage (V DC)	Power (W)	Current (mA)	Radiance Angle	λd(nm)/ CCT(K)	Lumen Flux(lm)
LBIR-F16/N0205	Red	16	15	2.40	160	120°	625nm	58
LBIY-F16/N0205	Yellow	16	15	2.40	160	120°	590nm	62
LBIA-F16/N0205	Amber	16	15	2.40	160	120°	615nm	58
LBIG-F16/N0205	True Green	16	15	3.84	160	120°	525nm	133
LBIB-F16/N0205	Blue	16	15	3.84	160	120°	470nm	37
LBIW-F16/D0205	Cool White	16	15	3.84	160	120°	6000K	192
LBIH-F16/D0205	Neutral White	16	15	3.84	160	120°	4100K	163
LBIX-F16/D0205	Warm White	16	15	3.84	160	120°	3050K	163

Table 2 : LBIx-F16 series electrico-optical characteristics.

Note :
Flux is measured with an accuracy of ± 10%.

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• LBIx-F24/x0220 Series

Part No.	Color	Number of LEDs	Input Voltage (V DC)	Power (W)	Current (mA)	Radiance Angle	λd(nm)/ CCT(K)	Lumen Flux(lm)
LBIR-F24/N0220	Red	24	15	3.60	240	120°	625nm	87
LBIY-F24/N0220	Yellow	24	15	3.60	240	120°	590nm	94
LBIA-F24/N0220	Amber	24	15	3.60	240	120°	615nm	87
LBIG-F24/N0220	True Green	24	24	5.76	240	120°	525nm	200
LBIB-F24/N0220	Blue	24	24	5.76	240	120°	470nm	56
LBIW-F24/D0220	Cool White	24	24	5.76	240	120°	6000K	288
LBIH-F24/D0220	Neutral White	24	24	5.76	240	120°	4100K	245
LBIX-F24/D0220	Warm White	24	24	5.76	240	120°	3050K	245

Table 3 : LBIx-F24 series electrico-optical characteristics.

Note :
Flux is measured with an accuracy of ± 10%.

• LBIx-F32/x0228 Series

Part No.	Color	Number of LEDs	Input Voltage (V DC)	Power (W)	Current (mA)	Radiance Angle	λd(nm)/ CCT(K)	Lumen Flux(lm)
LBIR-F32/N0228	Red	32	15	4.80	320	120°	625nm	116
LBIY-F32/N0228	Yellow	32	15	4.80	320	120°	590nm	125
LBIA-F32/N0228	Amber	32	15	4.80	320	120°	615nm	116
LBIG-F32/N0228	True Green	32	24	7.68	320	120°	525nm	266
LBIB-F32/N0228	Blue	32	24	7.68	320	120°	470nm	75
LBIW-F32/D0228	Cool White	32	24	7.68	320	120°	6000K	384
LBIH-F32/D0228	Neutral White	32	24	7.68	320	120°	4100K	326
LBIX-F32/D0228	Warm White	32	24	7.68	320	120°	3050K	326

Table 4 : LBIx-F32 series electrico-optical characteristics.

Note :
Flux is measured with an accuracy of ± 10%.

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• LBIx-F48/x0229 Series

Part No.	Color	Number of LEDs	Input Voltage (V DC)	Power (W)	Current (mA)	Radiance Angle	λd(nm)/ CCT(K)	Lumen Flux(lm)
LBIR-F48/N0229	Red	48	15	7.20	480	120°	625nm	175
LBIY-F48/N0229	Yellow	48	15	7.20	480	120°	590nm	187
LBIA-F48/N0229	Amber	48	15	7.20	480	120°	615nm	175
LBIG-F48/N0229	True Green	48	24	11.52	480	120°	525nm	399
LBIB-F48/N0229	Blue	48	24	11.52	480	120°	470nm	112
LBIW-F48/D0229	Cool White	48	24	11.52	480	120°	6000K	576
LBIH-F48/D0229	Neutral White	48	24	11.52	480	120°	4100K	490
LBIX-F48/D0229	Warm White	48	24	11.52	480	120°	3050K	490

Table 5 : LBIx-F48 series electrico-optical characteristics.

Note :
Flux is measured with an accuracy of ± 10%.

• LBIx-F64/x0230 Series

Part No.	Color	Number of LEDs	Input Voltage (V DC)	Power (W)	Current (mA)	Radiance Angle	λd(nm)/ CCT(K)	Lumen Flux(lm)
LBIR-F64/N0230	Red	64	15	9.60	640	120°	625nm	233
LBIY-F64/N0230	Yellow	64	15	9.60	640	120°	590nm	250
LBIA-F64/N0230	Amber	64	15	9.60	640	120°	615nm	233
LBIG-F64/N0230	True Green	64	24	15.36	640	120°	525nm	532
LBIB-F64/N0230	Blue	64	24	15.36	640	120°	470nm	150
LBIW-F64/D0230	Cool White	64	24	15.36	640	120°	6000K	768
LBIH-F64/D0230	Neutral White	64	24	15.36	640	120°	4100K	630
LBIX-F64/D0230	Warm White	64	24	15.36	640	120°	3050K	630

Table 6 : LBIx-F64 series electrico-optical characteristics.

Note :
Flux is measured with an accuracy of ± 10%.

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Environmental Compliance

PLCC lightbar with heatsink series are compliant to the Restriction of Hazardous Substances Directive or RoHS. The restricted materials including lead, mercury cadmium hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ether (PBDE) are not used in PLCC lightbar with heatsink series to provide an environmentally friendly product to the customers.

Application Notes

PLCC Lightbar series are available in red, yellow, green, blue, white, neutral white and warm white for application such as under-cabinet lighting, cove lighting and wall washing. Moreover, additional fine-tuned high color rendering index (CRI) version of white, neutral white and warm white all make PLCC Lightbar the ideal lighting choice for vividly displaying fruit and vegetables and/or refrigeration products, presenting the true color of the products and reflecting the freshness of goods.

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