

LED MODULES™

44" Linear LED Modules



Manufactured in the USA with domestic and foreign components



LED Light Engines

Electrical Specifications - 80 CRI

Driver type	Constant Current
Drive Current	900mA Nominal
Total Board Power	32.4W Nominal
Life	50,000 Hrs, @ Ta 25°C
Max Junction Temp:	125°C
Operating Temp:	-40°C to +85°C
Storage Temp:	-40°C to +125°C
Viewing Angle (FWHM):	120°
LED CRI:	80

44 Inch Linear - Forward Voltage: 36V

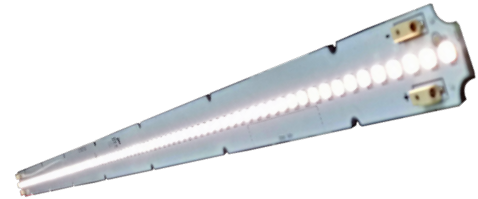
Model	Color Temp (K)	Total Current (mA)	Power (W)	Lumens	Efficacy (Lm/W)
LE48C/3080S/44	3000	900	32.4	4550	140.4
LE48C/3580S/44	3500	900	32.4	4619	142.6
LE48C/4080S/44	4000	900	32.4	4786	147.7
LE48C/5080S/44	5000	900	32.4	4855	149.8

Electrical Specifications - 90 CRI

Driver type	Constant Current
Drive Current	900mA Nominal
Total Board Power	32.4W Nominal
Life	50,000 Hrs, @ Ta 25°C
Max Junction Temp:	125°C
Operating Temp:	-40°C to +85°C
Storage Temp:	-40°C to +125°C
Viewing Angle (FWHM):	120°
LED CRI:	90

44 Inch Linear - Forward Voltage: 36V

Model	Color Temp (K)	Total Current (mA)	Power (W)	Lumens	Efficacy (Lm/W)
LE48C/3090S/44	3000	900	32.4	3815	117.7
LE48C/3590S/44	3500	900	32.4	3954	122.0
LE48C/4090S/44	4000	900	32.4	4092	126.3
LE48C/5090S/44	5000	900	32.4	4092	126.3



Overview

- Constant Current DC Array:
 - 44" Linear - 12 LED Series x4 Parallel Strings =48 Samsung LEDs
- Designed for easy use in standard luminaires
- Aluminum MCPCB provides exceptional thermal performance
- Color: 1/4 ANSI Binning, 3 Step MacAdam Ellipse
- Suggested Applications: Surface-mount, Recessed or Suspended lighting, Troffers, Troffer Retrofits, Linear Recessed and Flush-mount
- UL Recognized Components
- Engineered by: AC Electronics

Connectivity

For Poke-In Connectors use

#26-22 AWG stranded or solid wire

BJB Connector, Part # 46.131.1001.50

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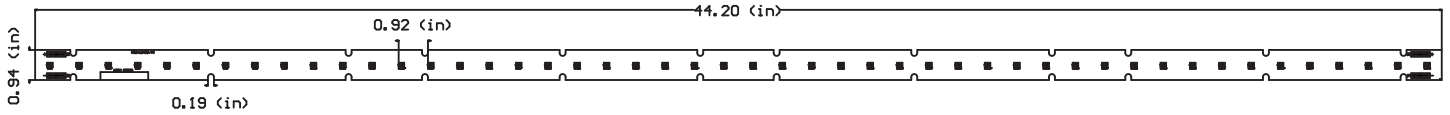
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Dimensions



CIE Chromaticity Coordinates:

3000K

3 Step Macadams Ellipse

X	Y
0.4325	0.4101
0.4452	0.4146
0.4244	0.3923
0.4362	0.3965

3500K

3 Step Macadams Ellipse

X	Y
0.4045	0.3975
0.4189	0.4044
0.3989	0.3819
0.412	0.3875

4000K

3 Step Macadams Ellipse

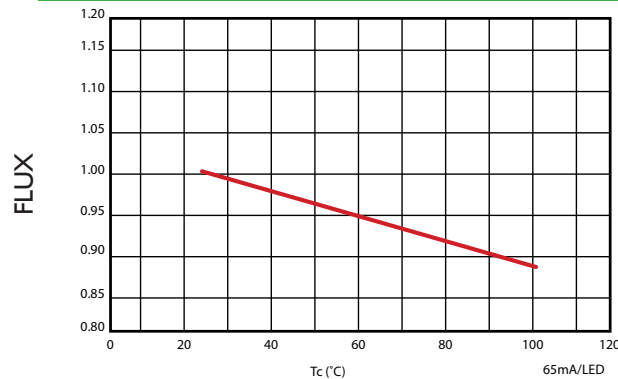
X	Y
0.3783	0.3836
0.3909	0.3906
0.3747	0.3687
0.3864	0.3757

5000K

3 Step Macadams Ellipse

X	Y
0.3408	0.3461
0.3485	0.3520
0.3416	0.3585
0.3499	0.3644

Relative Luminous Flux / Tc Temperature





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Maximum Run Lengths

The max number of boards wired in a chain (parallel or series) is limited by the max current rating of the first board wired to the driver. The sum of the board currents in the chain funnels through the first board, when wired from one end. Multiple chains can connect directly to the power supply in parallel.

Improved wiring design for each parallel ladder chain should specify the positive and negative power connections at opposite ends of the chain to equalize current through each LED. Series ladder chains are naturally wired this way. Wiring from one end of the chain will create an uneven voltage across each section. The longer the ladder chain, the more important this becomes. The number of sections or chains wired in parallel directly from the driver is only limited by the supply wire size or driver capacity.

Thermal Application Notes

These boards require additional heat sinking to run above 45°C ambient at nominal specifications. Heat sink also required when operated above specified drive currents.

Warranty

AC Electronics, (ACE), warrants to the purchaser that each LED module will be free from defects in material or workmanship for a period of 5 years from the date of manufacture when operated at a temperature of less than or equal to the specified "Operating Temperature" in the specification when properly installed with an appropriate heat sink and under normal conditions of use.

Mounting Notes

The LED assembly is supplied with mounting holes, per dimensional drawing. It is important to mount the board in such a way as to maintain the Tc point below the max. The steady state thermals in application will dictate if the board needs to be mounted directly to metallic housing and/or include a thermal pad. For example, fully enclosed recessed fixture will require better thermal mounting than an open air pendant.

Static Sensitive Device

Handle only at static-safe work stations.