CREE⇆ LEDs | MacAdam 3-Step | CSA C US | RoHS COMPLIANT

2ft High Lumen Density

Product Brief

made assembles high quality RoHS compliant LED modules to customer specifications. Any LED may be specified. Class 2 modules are CSA recognized for dry and damp locations. Conformal coating and end of line assembly verification. LUX, CCT, CRI, Voltage, Current, Chromiticity (X,Y) & (u,v) are available options.

Key Applications

LFT
LED Panel
Troffer Retrofit
High Bay

Industrial
Commercial Indoor
Channel

Features & Benefits

High Efficacy, Long Life
Industry Standard Mechanical Attributes
Optimized for Industry Standard Power Supplies
3 SDCM
RoHs Compliant

Environmental

Min. Ambient Operating Temp: -22°F , -30°C
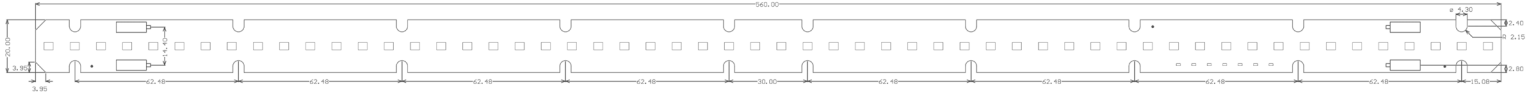Max Board Temp: 185°F , 90°C

Table 1: 80CRI

CCT	Min. CRI	Dimension (mm)	Typ. FLUX (lm) IF=780mA, Tj=25C	LPW	Vf (V) Typ.	IF (mA) Typ.	IF (mA) Max.	Ordering Code
2700K			6002	185				S5620D90C1440F8N27CRM282D8A
3000K			6236	192				S5620D90C1440F8N30CRM282D8A
3500K	80	560x20x6.35	6444	199	41.7	780	1440	S5620D90C1440F8N35CRM282D8A
4000K			6624	204				S5620D90C1440F8N40CRM282D8A
5000K			6624	204				S5620D90C1440F8N50CRM282D8A

Table 2 : 90CRI

CCT	Min. CRI	Dimension (mm)	Typ. FLUX (lm) IF=780mA, Tj=25C	LPW	Vf (V) Typ.	IF (mA) Typ.	IF (mA) Max.	Ordering Code
2700K			5102	157				S5620D90C1440F9N27CRM282D8A
3000K			5328	164				S5620D90C1440F9N30CRM282D8A
3500K	90	560x20x6.35	5508	170	41.7	780	1440	S5620D90C1440F9N35CRM282D8A
4000K			5696	176				S5620D90C1440F9N40CRM282D8A
5000K			5696	176				S5620D90C1440F9N50CRM282D8A

Mechanical Dimensions

Image 1. Mechanical Drawing

Marking References

Figure 1. Marking Resistor

Marking Resistor
for CCT

Figure 2. Laser Markings

04/10/2023 - - - - - - - - - - - - - - Production Date
S5620D90C1440F8N40CRM282D8A - - - - - - Module Number

34403-1 - - - - - - - Work Order Number
0001 - - - - - - - Serial Number
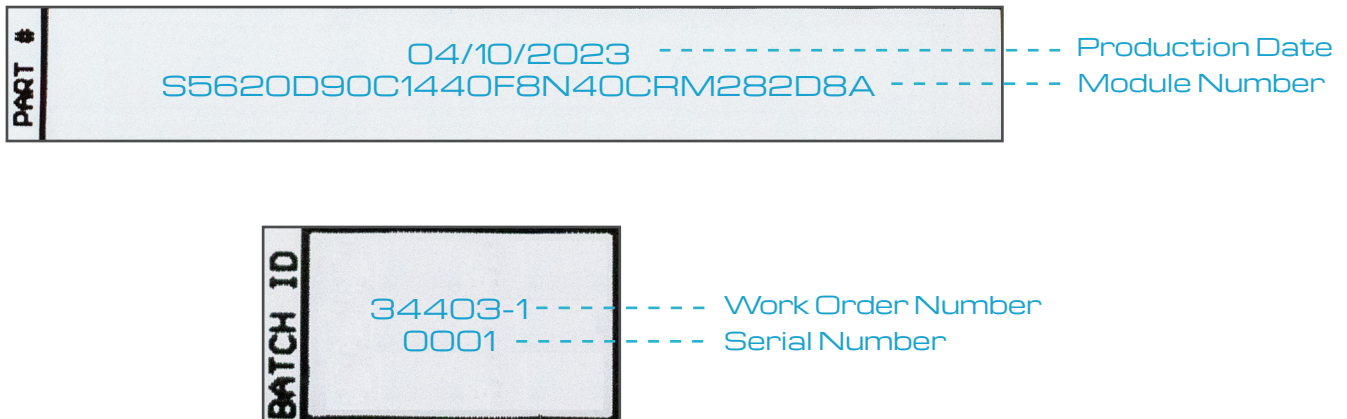
Notes :

1) All dimensions are in millimeters
2) Drawings and Figures not to Scale
3) Module Thickness: 1.6mm

Customization Capabilities

In-house capabilities to quick-turn customized board layout. Available customizations include, but are not limited to:

- PCB width, length and/or thickness
- Positioning and/or size of the mounting holes
- LED count, string configuration
- Connector position
- PCB material
- Color of solder mask

* Depending on the extent of your modification, a layout/tooling NRE may apply.
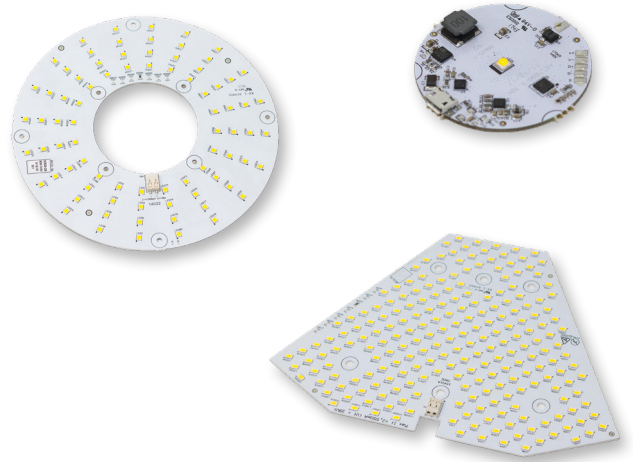
Wire Diagrams

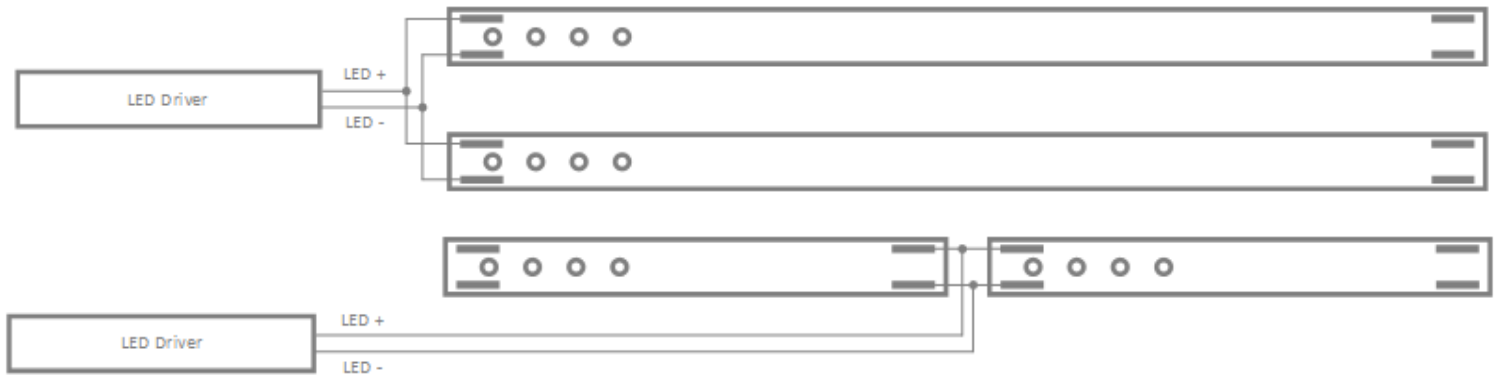Figure 3. Parallel Wiring - Physical Connection

Figure 4. Series Wiring - Physical Connection

Notes :

All wiring configurations above connect the LED modules in parallel electrically.

Table 3 : Wire Specifications

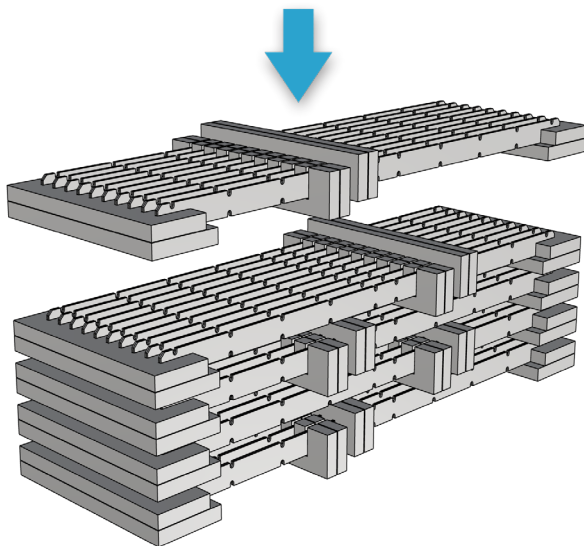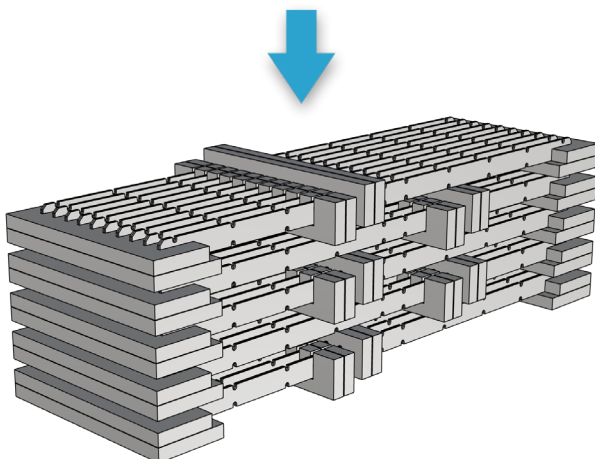| Wire Specifications	
Connector Type	Poke-in Terminal
Wire Type	Solid or Fine-Stranded Conductor
Strip Length	0.275-0.350 in. (7-9mm)
Wire Size	18-22 AWG

Packing

Table 4 : Packaging Dimensions

Tray			Box		
Size (mm)	Module Qty (EA)	Material	Size (mm)	Tray Qty (EA)	Module Qty (EA)
605x197x46	20	Anti-static Foam	686x224 x229	5 Trays	100
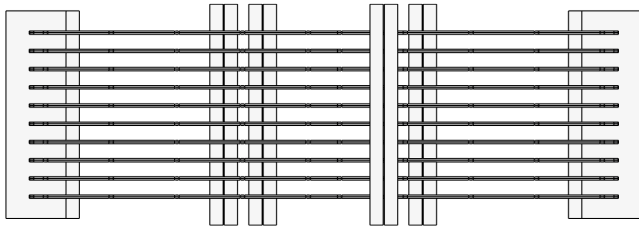
20pcs LED Module per Tray

5pcs Tray with LED Module

5pcs Tray go into a 27x9x9 Box

Figure 5. Box Label*

MODEL: S5620D90C1440F8N40CRM282D8A

QTY: 100

INSP: 10

PO: SALES

4000K

AB23153AA

manufacture and design electronics
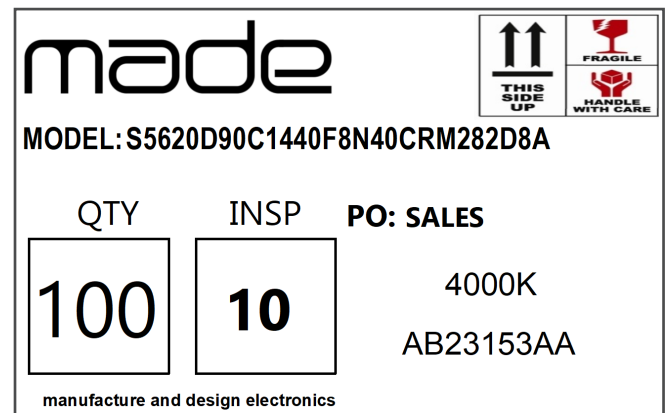
*Customizable per Customer Specifications

Conditions of Acceptable Usage

This component has been judged on the basis of the required spacing distances in the Standard for LED Equipment for Use in Lighting Products.

1) The LED modules are intended for connection to a constant current, Class 2 power supply. When the arrays are connected and used with power supplies other than class 2, the need for an additional evaluation shall be considered in the end use product investigation.

2) The LED modules shall be installed in compliance with the mounting, spacing, casualty, and the segregation requirements applicable to the ultimate application.

3) The LED modules were not subjected to the Normal Temperature Test. A Temperature Test shall be conducted in the end product with considerations for the following components, their ratings, and LED-to-LED spacing:

      Printed Wiring Board – 105°C

      Connectors – 105°C

4) The LED modules are intended for use in dry and damp locations when connected to a Class 2 power supply. Use in other than dry and damp locations powered by a Class 2 power supply shall be evaluated to the end use application.

5) All models shall be marked with any voltage and current rating that doesn't exceed the maximum ratings in the ELECTRICAL RATINGS table of this report. All modules are to be used within their marked ratings.

6) Electrical over-stress may result in permanent damage to the device if the device is subjected to a current or voltage beyond the maximum specification limits cited.

7) Events causing over-stress must be prevented through the use of proper surge protection circuits or voltage limiting devices.

Precaution for Use

1) Do not touch the optic with bare hands. Use cotton gloves to prevent oils from contaminating the optics.

2) Do not flex or bend the PCB.

3) The circuit board operates a high voltage, do no touch any of the circuit board, components or terminals with body or metal while circuit is active.

4) Please do not assemble in conditions of high moisture and/or oxidizing gas such as Cl, H_2S,NH_3,SO_2,NOX,etc.

5) Please do not make any modification to the module.

6) Please be cautious when soldering to board so as not to create a short between different trace patterns.

Handling with Regards to Static Electricity

1) Please handle using equipment that prevents static electricity and ESD ("electro-static discharge").

2) Do not touch unless personal ESD protection is used, such as wrist/heal straps, anti-static shoes, or anti-static clothes.

3) Humidity control is recommended to prevent dry environment.

Handling with Regards to VOCs

1) This device is not intended to be stored, transported, installed, tested, or used in the vicinity of adhesives or other materials as the outgas from these materials can damage the silicone encapsulating LEDS.

2) LEDs may appear discolored when exposed to VOCs, resulting in significant loss of light output.

3) VOCs are often present in the facilities, environment or installation, packaging, fixture or construction materials.

Storage Before Use

1) Do not impact or place pressure on this product because even a small amount of pressure can damage the product.

2) The product should also not be placed in high temperatures, high humidity or direct sunlight. The device is sensitive to these conditions.

3) When storing devices for a long period of time before usage, please following these guidelines.

    -The device should be stored in the anti-static foam trays and fingers they were shipped in.

    -Store in a cool dry place preventing air and moisture from being present.

Company Information

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Table 5. Revision History

Revision	Date	Remarks
Rev 1.1	04.11.2023	Initial Design Release