

# Cree® LMH2 850-lm and 1250-lm LED Modules with TrueWhite® Technology

Cree LED modules provide lighting designers and manufacturers with simple, easy-to-adopt LED lighting solutions that reduce luminaire development time and speed time-to-market. The Cree LMH2 850-lm and 1250-lm LED modules are the ideal choice for enabling rapid luminaire development where bright, beautiful, long-life lighting is required. The LMH series of modules incorporates Cree’s award-winning TrueWhite LED technology into a system of driver electronics, optics and primary thermal management for use in residential and commercial lighting applications. This versatile LED lighting module jump-starts the design process for recessed downlights, wall sconces or pendant lights in demanding end markets such as retail, museums, hospitality and restaurants.

## BENEFITS FOR LUMINAIRE DESIGNERS

- Faster time-to-market and lower system cost with concurrently designed and tested optics, driver electronics, and primary thermal management
- Design flexibility provided by separated light source and power supply with broad selection of mounting and wiring options
- Wide variety of design applications enabled with 2700 K, 3000 K, 3500 K and 4000 K CCT
- Industry-leading 5-year limited system warranty backed by patented, reliable Cree LED technology
- Rapid regulatory approval and voluntary qualification of final luminaire enabled by:
  - UL approval (120 V and 277 V)
  - CE certification (230 V)
  - California Title 24 compliance (120 V and 277 V)
  - LED LM-80 data for US ENERGY STAR

Light Source



120 V & 277 V Driver



## BENEFITS FOR END USERS

- Vibrant color rendering showcases the full beauty of people, rooms, and merchandise with  $\geq 90$  CRI
- Significant energy savings over traditional lighting sources through superior efficacy  $> 80$  lm/W
- Proprietary optics provide a uniform, visually comfortable appearance whether the module is powered on or off
- Designed to last 50,000 hours at  $L_{70}$
- Consistent light quality over time and temperature delivered by built-in optical and thermal management system
- Specification grade dimmability down to 5% of rated light output using standard incandescent and electronic low-voltage dimmers (120 V and 230 V only)
- No UV or mercury

230 V Driver



## FEATURES

- Industry-leading module efficacy (light source + driver) at 80 lm/W
- 850- and 1250-lumen lighting units, the first members of an extended family of modules
- Optional heat sink



## CHARACTERISTICS

Cree TrueWhite technology is a revolutionary way of generating white light with LEDs. It delivers high efficacy with beautiful light characteristics and color accuracy, while maintaining color consistency over the life of the product.

| LMH2 Light Source | Luminous Flux (lm) <sup>1,2</sup> | CCT (K) | CRI  | Average Input Power (W) <sup>1</sup> | Module Efficacy (lm/W) <sup>3</sup> | Order Code               |
|-------------------|-----------------------------------|---------|------|--------------------------------------|-------------------------------------|--------------------------|
| 850               | 4000                              | 4000    | ≥ 90 | 10.5                                 | 80                                  | LMH020-0850-40G9-00000TW |
|                   | 3500                              | 3500    | ≥ 90 | 10.5                                 | 80                                  | LMH020-0850-35G9-00000TW |
|                   | 3000                              | 3000    | ≥ 90 | 10.5                                 | 80                                  | LMH020-0850-30G9-00000TW |
|                   | 2700                              | 2700    | ≥ 90 | 10.5                                 | 80                                  | LMH020-0850-27G9-00000TW |
| 1250              | 4000                              | 4000    | ≥ 90 | 15.5                                 | 80                                  | LMH020-1250-40G9-00000TW |
|                   | 3500                              | 3500    | ≥ 90 | 15.5                                 | 80                                  | LMH020-1250-35G9-00000TW |
|                   | 3000                              | 3000    | ≥ 90 | 15.5                                 | 80                                  | LMH020-1250-30G9-00000TW |
|                   | 2700                              | 2700    | ≥ 90 | 15.5                                 | 80                                  | LMH020-1250-27G9-00000TW |

| LMD125 Driver | Max. Rated Input Power (W) <sup>1</sup> | Input Voltage (V) <sup>1</sup> | Frequency (Hz) | Power Factor |         | Dimming | Order Code               |
|---------------|---|--------------------------------|----------------|--------------|---------|---------|--------------------------|
|               |   |                                |                | 850 lm       | 1250 lm |         |                          |
|               | 18                                      | 120                            | 60             | .97          | .99     | TRIAC   | LMD125-0018-C440-1010000 |
|               | 17                                      | 277                            | 60             | .92          | .98     | N/A     | LMD125-0017-C440-3000000 |
|               | 18                                      | 230                            | 50/60          | .90          | .95     | TRIAC   | LMD125-0018-C440-2010000 |

- ±10% variance
- Measured at steady state, T<sub>c</sub> = 55 °C
- Includes LMD125 driver losses

The operating temperature at the case temperature (T<sub>c</sub>) point is 0-70 °C.

## CHROMATICITY

The Cree LMH2 LED module provides high color consistency within a 3-step MacAdams ellipse around the specified color temperature. Individual LEDs are tested and matched to meet our designed chromaticity specification.

Secondary optics can be added to the module but will reduce light output and may also alter the color characteristics of the final luminaire design.

## THERMAL MANAGEMENT GUIDELINES

The Cree LMH2 LED module is designed to perform in a variety of environments without the need for active cooling. To achieve lifetime and performance estimates, and to maintain the warranty, the final luminaire design cannot allow the T<sub>c</sub> point shown on page one to exceed 70 °C for the light source or power supply when the luminaire is at thermal equilibrium. Follow the mechanical and thermal design guidelines listed in the "Cree LMH2 LED Module Design Guide" to ensure proper thermal management. An optional heat sink is available.

Note: The heat sink is designed to work with all LMH2 lumen levels.

| Optional Heat Sink Order Code |
|-------------------------------|
| LMH020-HS00-0000-0000001      |

## PHOTOMETRY



Intensity (Candlepower)

| Angle | 850 | 1250 |
|-------|-----|------|
| 0°    | 402 | 575  |
| 5°    | 399 | 571  |
| 15°   | 375 | 539  |
| 25°   | 331 | 479  |
| 35°   | 270 | 394  |
| 45°   | 202 | 297  |
| 55°   | 136 | 202  |
| 65°   | 79  | 118  |
| 75°   | 30  | 45   |
| 85°   | 3   | 5    |
| 90°   | 0   | 0    |

Zonal Lumens - 850

| Zone   | Lumens | %   |
|--------|--------|-----|
| 0-30°  | 295    | 34  |
| 0-40°  | 464    | 54  |
| 0-60°  | 742    | 87  |
| 0-90°  | 858    | 100 |
| 0-180° | 858    | 100 |

Zonal Lumens - 1250

| Zone   | Lumens | %   |
|--------|--------|-----|
| 0-30°  | 426    | 34  |
| 0-40°  | 672    | 54  |
| 0-60°  | 1082   | 86  |
| 0-90°  | 1256   | 100 |
| 0-180° | 1256   | 100 |

## MECHANICAL DESIGN

### Light Source



### 120 V & 277 V Driver



### Optional Heat Sink



### 230 V Driver



units: mm

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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