

## Product datasheet

**MYNICE®**  
LED Signage Lighting

**YOUNICE®**  
LED Strip Linear Lighting

LUNA, the fourth-generation of signage products, features comprehensive improvements in optical, circuit, mechanical, and reliability design to more perfectly enhance the performance in channel letter and light box application.



### LUNA-M

LUNA-M1: M21GW51x

LUNA-M3: M23GW51x

LUNA-M2: M22GW51x

LUNA-M4: M24GW51x

### Areas of application

- Signage and illuminated advertising.
- Backlighting of channel letters and light box.
- Best for 40mm to 250mm depth (1.5inch to 10inch).

### Product main benefits

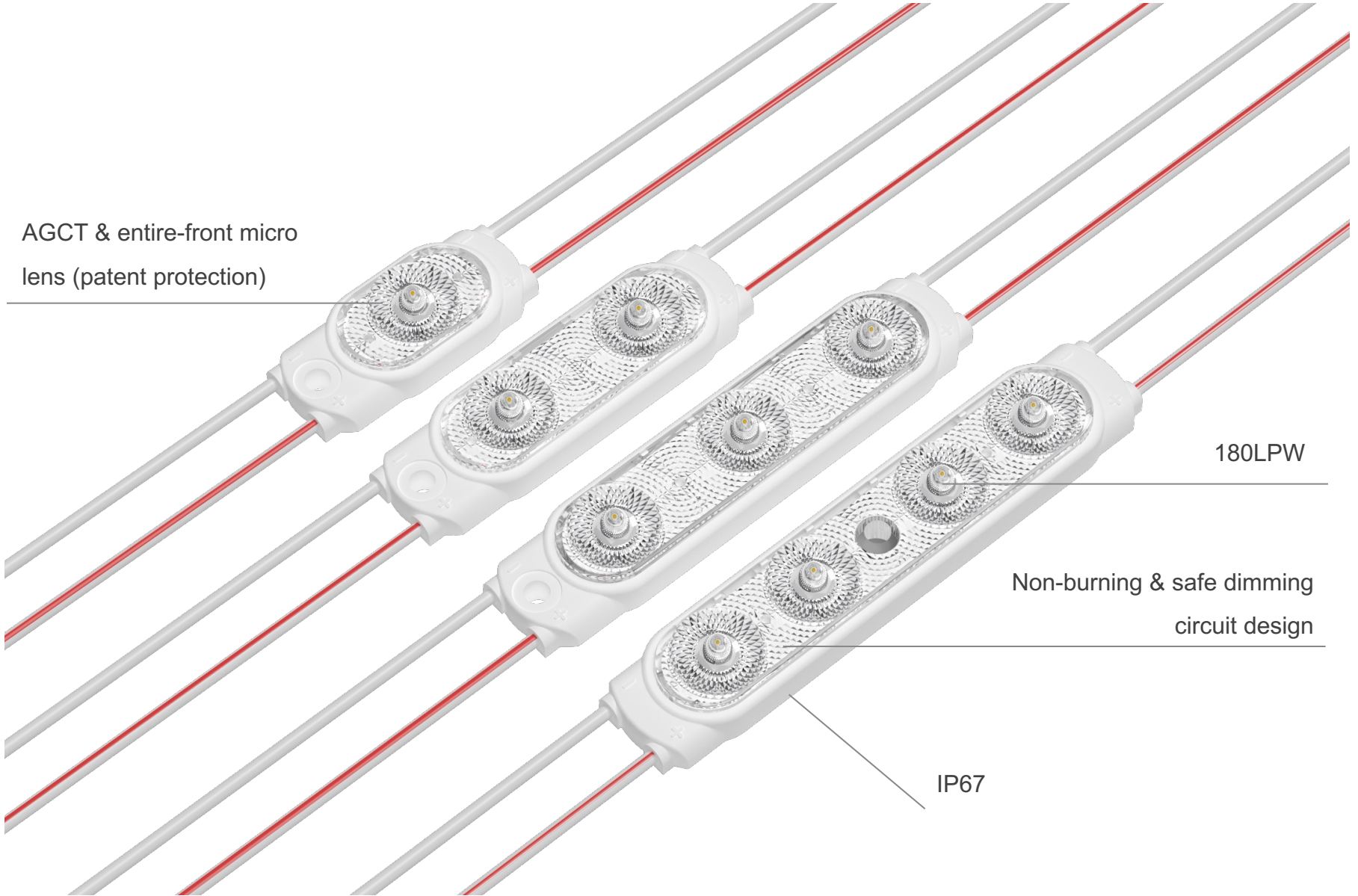
- Patent AGCT (asymmetrical gradient convex type) micro-lens design and entire-front micro lens integral lens.
- Non-burning & safe dimming circuit design.
- 5 years warranty.
- 180lm/W.
- IP67.

AGCT & entire-front micro  
lens (patent protection)

180LPW

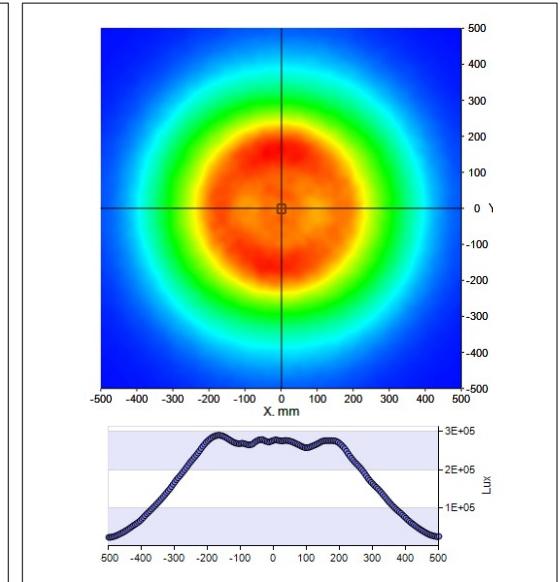
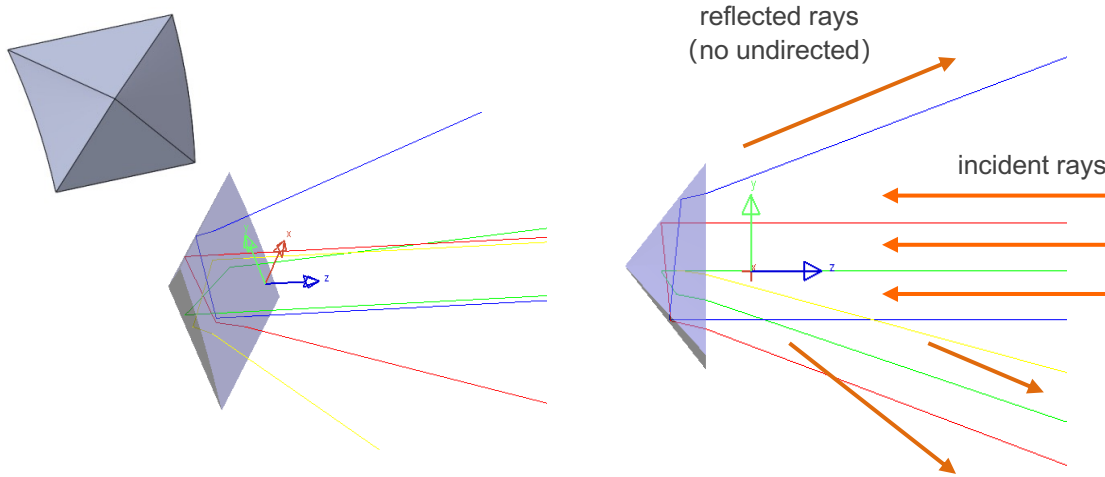
Non-burning & safe dimming  
circuit design

IP67

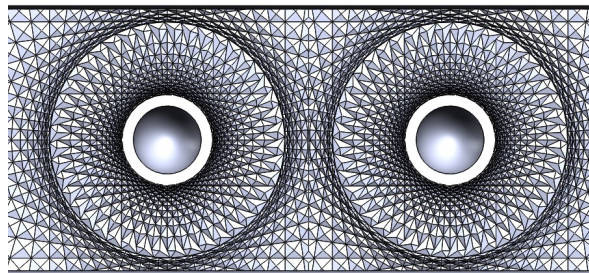
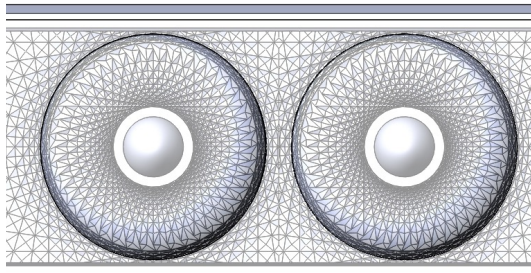


## ■ AGCT (asymmetrical gradient convex type) micro-lens:

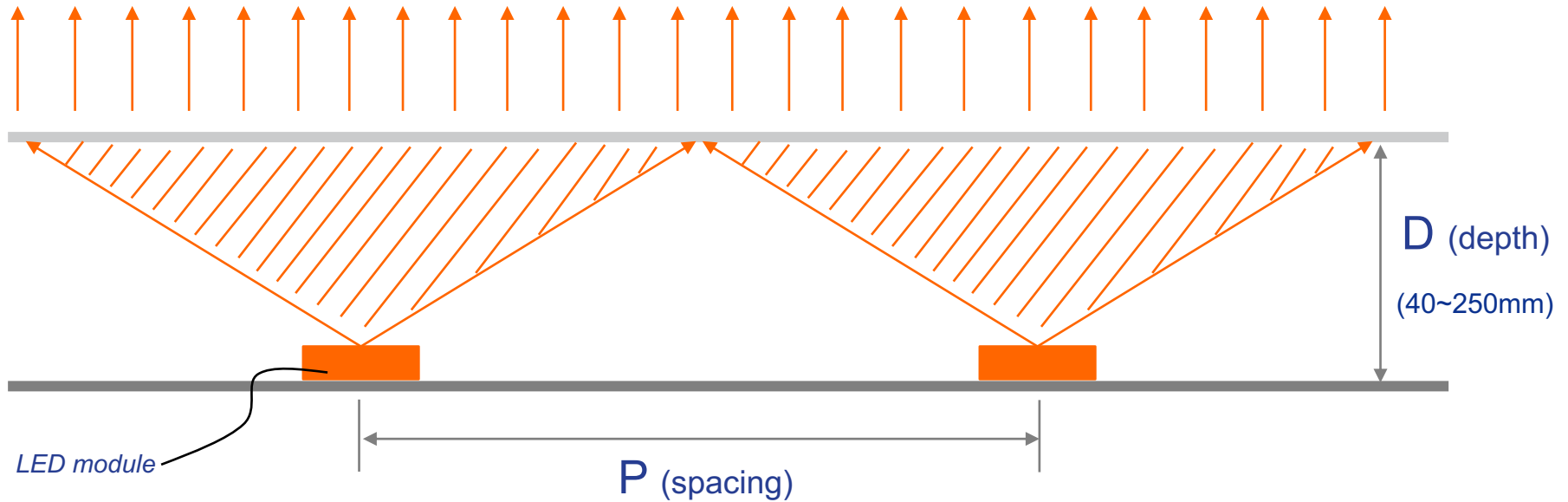
Ray trace for AGCT micro-lens (single cell)



## ■ Entire-Front micro-lens:



Entire-Front micro-lens technology combine with AGCT micro-lens can maximum optimize for stray reflected light, finally achieve perfect optical uniformity both brightness and color.

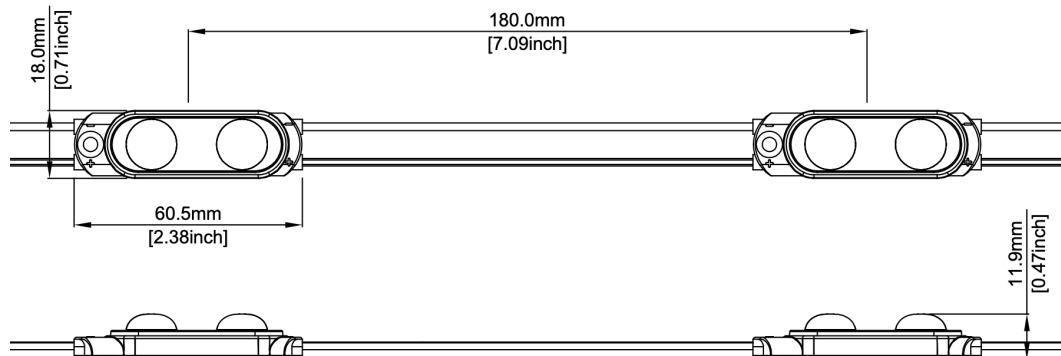
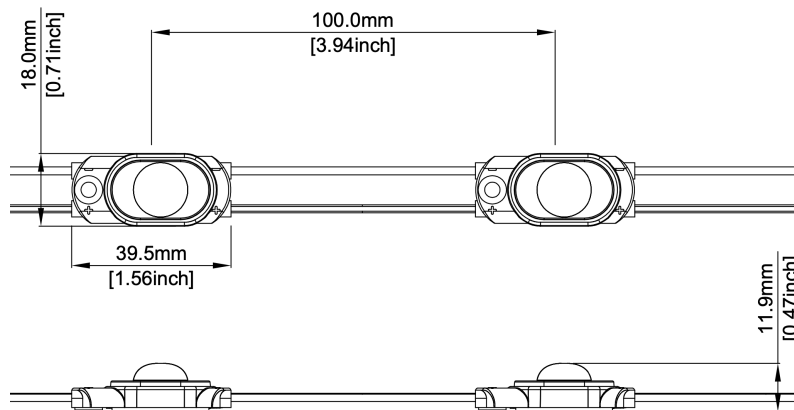
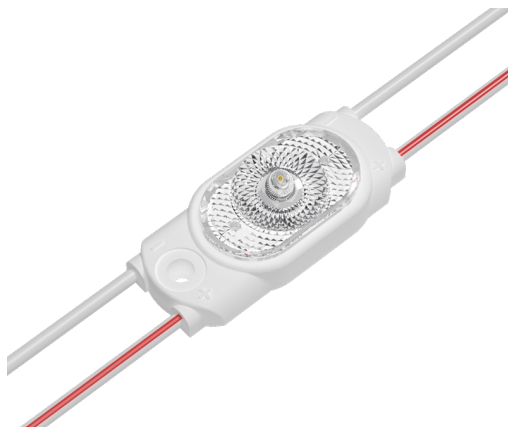


$$\text{optical performance proportion} = \frac{D(\text{depth})}{P(\text{spacing})} = 1:3$$

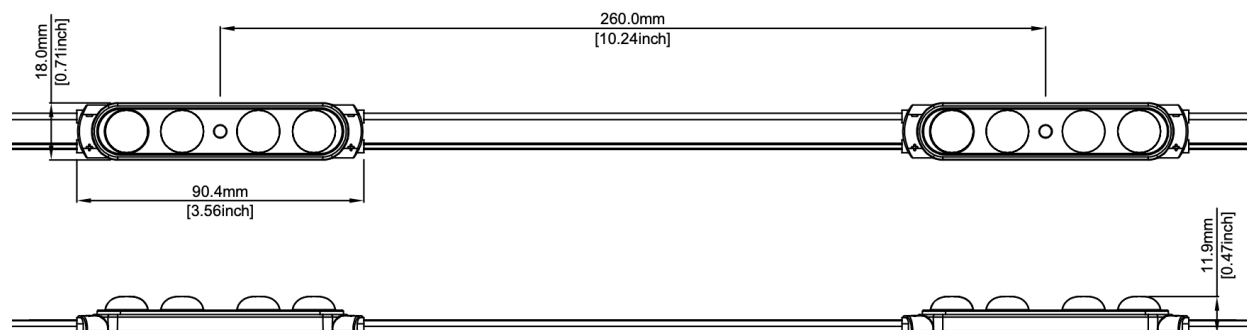
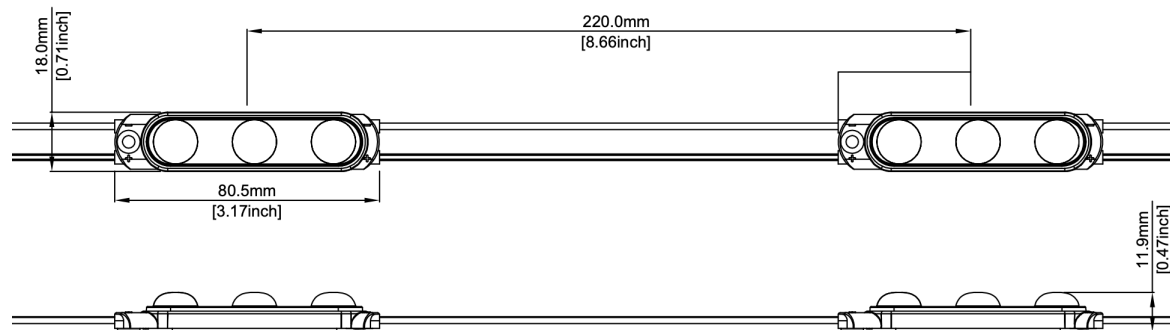
- The proportion of “P” and “D” can show the performance of lens optics design.
- The bigger proportion, the wider light spot.
- The proportion is for reference from lab, actual layout need based on real application.

| Product | Model (6500K) | Voltage | Circuit<br>CC: constant current<br>CV: constant voltage | Energy Consumption |         |       | Brightness |        |        | Cascade    |
|---------|---------------|---------|---|--------------------|---------|-------|------------|--------|--------|------------|
|         |               |         |   | W/module           | W/chain | W/ft. | lm/module  | lm/ft. | E. LPW | /chain     |
| LUNA-M1 | M21GW51A      | 12VDC   | CV  | <b>0.36</b>        | 14.4    | 1.1   | <b>65</b>  | 198    | 180    | <b>40</b>  |
| LUNA-M2 | M22GW51A      | 12VDC   | CV  | <b>0.72</b>        | 14.4    | 1.2   | <b>130</b> | 219    | 180    | <b>20</b>  |
| LUNA-M3 | M23GW51A      | 12VDC   | CV  | <b>1.08</b>        | 21.6    | 1.5   | <b>194</b> | 269    | 180    | <b>20</b>  |
| LUNA-M4 | M24GW51A      | 12VDC   | CV  | <b>1.44</b>        | 28.8    | 1.7   | <b>259</b> | 304    | 180    | <b>20</b>  |
| LUNA-M1 | M21GW51D      | 12VDC   | CC  | <b>0.36</b>        | 21.6    | 1.1   | <b>65</b>  | 198    | 180    | <b>60</b>  |
| LUNA-M2 | M22GW51D      | 12VDC   | CC  | <b>0.72</b>        | 28.8    | 1.2   | <b>130</b> | 219    | 180    | <b>40</b>  |
| LUNA-M3 | M23GW51D      | 12VDC   | CC  | <b>1.08</b>        | 32.4    | 1.5   | <b>194</b> | 269    | 180    | <b>30</b>  |
| LUNA-M4 | M24GW51D      | 12VDC   | CC  | <b>1.44</b>        | 28.8    | 1.7   | <b>259</b> | 304    | 180    | <b>20</b>  |
| LUNA-M2 | M22GW51B      | 24VDC   | CV  | <b>0.72</b>        | 28.8    | 1.2   | <b>130</b> | 219    | 180    | <b>40</b>  |
| LUNA-M4 | M24GW51B      | 24VDC   | CV  | <b>1.44</b>        | 43.2    | 1.7   | <b>259</b> | 304    | 180    | <b>30</b>  |
| LUNA-M2 | M22GW51E      | 24VDC   | CC  | <b>0.72</b>        | 72.0    | 1.2   | <b>130</b> | 219    | 180    | <b>100</b> |
| LUNA-M4 | M24GW51E      | 24VDC   | CC  | <b>1.44</b>        | 86.4    | 1.7   | <b>259</b> | 304    | 180    | <b>60</b>  |


1. The tolerance of all parameters data is  $\pm 10\%$ , the brightness deviation between the 1<sup>st</sup> module and the latest module is  $< 5\%$  for constant current design.
2. Can be 2700K, 3000K, 4000K, 5000K, 7100K,  $> 8000K$  or other CCT, Ra70.



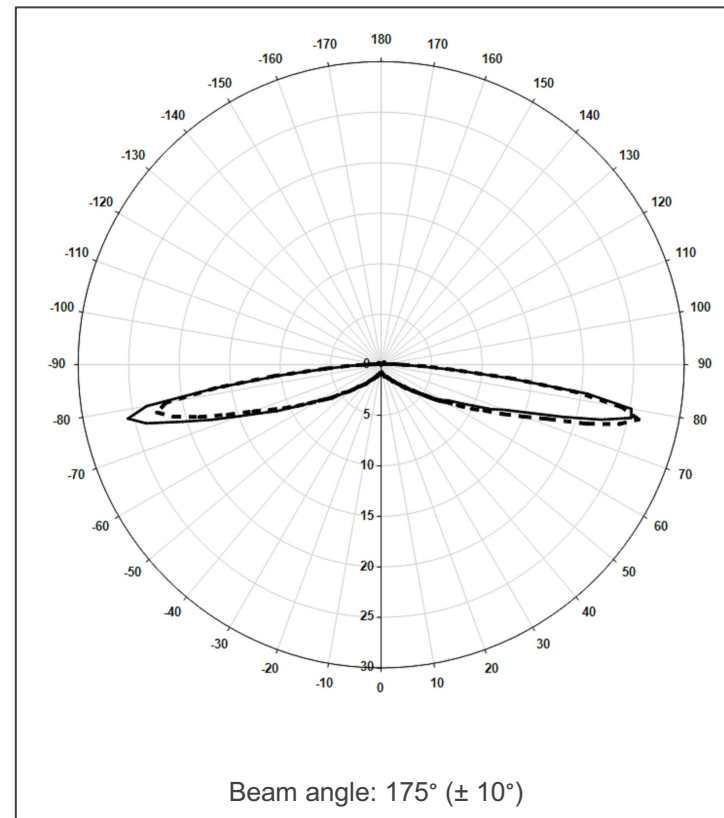




# Application Conditions and light distribution

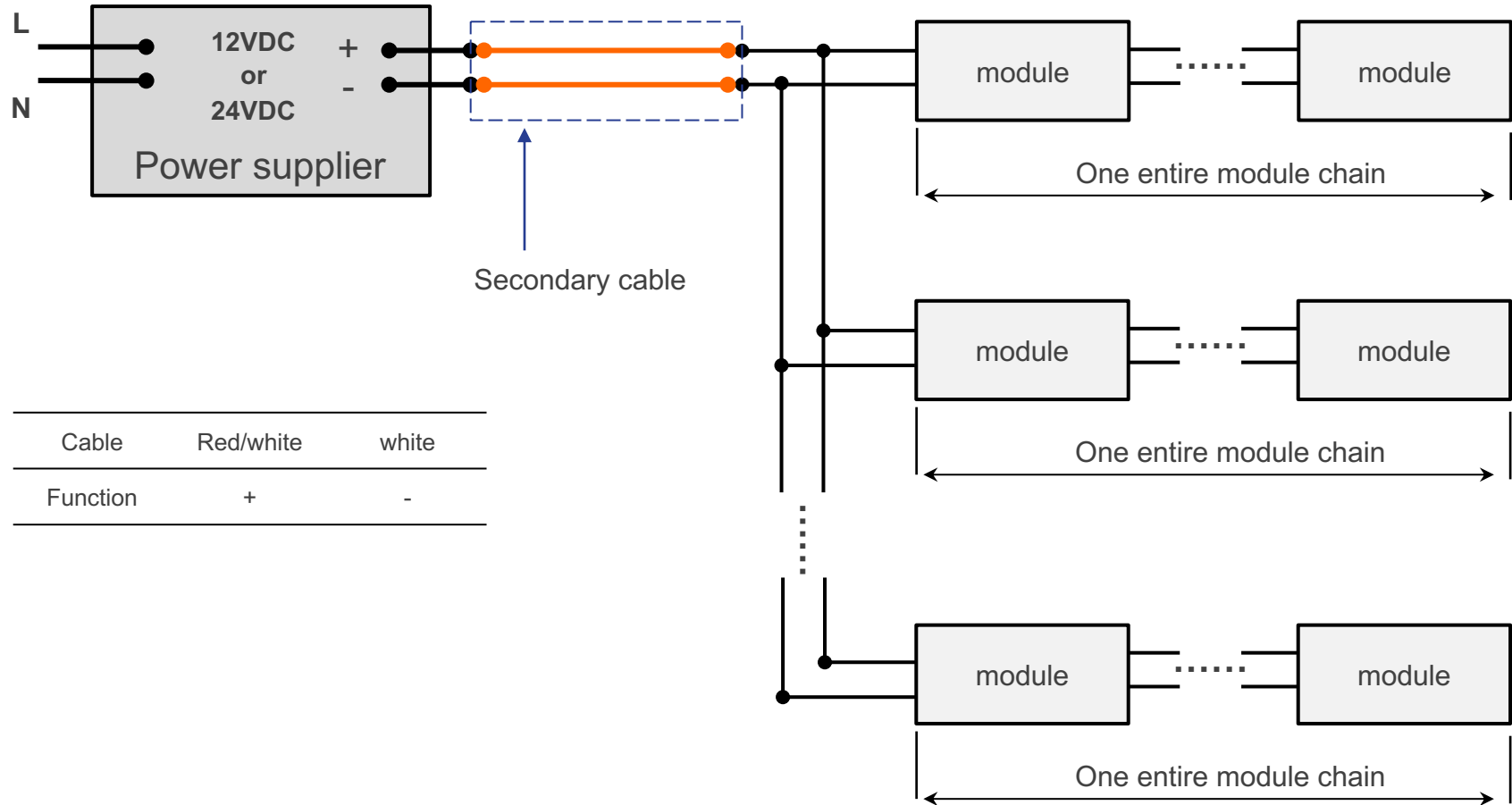
|  |   |
|--|---|
| Operating Environment ( $t_a$ )  | -25°C to +60°C                                  |
| Storage Temperature Range ( $t_s$ )  | -40°C to +85°C                                  |
| IP Rating  | IP67  |
| Lifetime Warranty (L70B50)   | 5 years   |
| $t_c$ temperature  | 80°C  |
| Energy Efficacy Class (180 LPW)  | C<br>( $\eta_{TM} = 194 \text{lm/W}$ )          |
|  |   |
| Dimming mode   | PWM dimmable                                    |
| Cutting Solution   | Cut on wire between every module                |
| Certification  | UL, CE, BIS                                     |
| Safety Requirements  | IEC/EN 62031, IEC/EN 60598-1,<br>IEC/EN 61347-1 |

Distribution Graph





# Wiring method



# Package and additional information

| Product | Model    | Package unit (modules/carton box) | Carton box | Dimensions (length x width x height) |
|---------|----------|-----------------------------------|------------|--------------------------------------|
| LUNA-M1 | M21GW51x |                                   |            | 52 x 37 x 26 cm                      |
| LUNA-M2 | M22GW51x |                                   |            | 52 x 37 x 26 cm                      |
| LUNA-M3 | M23GW51x |                                   |            | 52 x 37 x 26 cm                      |
| LUNA-M4 | M24GW51x |                                   |            | 52 x 37 x 26 cm                      |

## Additional information:

1. Installation of LED modules (with power supplies) needs to be made under consideration of all valid regulations and norms.
2. Installation by qualified electrician only.
3. Parallel connection is mandatory for safe electrical operation. Serial connection of LED modules is discouraged.  
Unbalanced voltage drop in serial connection can cause hazardous overload
4. Electrical contact is achieved with the contact cables or the terminals of the module. Please refer to the technical data for maximum number of LED modules that can be operated on one control gear.
5. To avoid mechanical damage, the LED modules have to be attached securely to the intended mounting surface. It is recommended to avoid heavy vibration.
6. LED modules are dimmable by means of PWM (pulse width modulation).