

# LEDELS- LED Signage Lighting Solution

Series Name: M60 Waterproof

Item No: LL-F12T6416W3A160



## Product Feature:

- 1.SMD2835 TopLED as light source from Epistar leds.
- 2.large viewing angle (160degrees) makes light distributed evenly.
3. lower light decay and long life span up to 35000 hours.
- 4.Low cost against high performance, good color uniformity.
- 5.Energy saving,environment-friendly.
- 6.Suitable for backlighting to channel letters and light boxes.
7. Suitable for accent lighting, edge lighting, cove lighting.
8. Waterproof, IP65, ideal for outdoor use. UL, CE, RoHS approved.
9. Maintenance free. Wide angle for even light distribution.

## Series Number:

LL-F12T6416R3A160	<b>Red</b>
LL-F12T6416G3A160	<b>Green</b>
LL-F12T6416B3A160	<b>Blue</b>
LL-F12T6416Y3A160	<b>Yellow</b>
LL-F12T6416W3A160	<b>White</b>
LL-F12T6416N3A160	<b>Warm white</b>

## Specification

LED Type SMD2835 Top LED, powered by Epistar

Available Color Pure White

Angle( $2\theta_{1/2}$ )  $\geq 160^\circ$

### Luminous Flux (lm/ LED)

Red Light	Green Light	Blue Light	Yellow Light	White Light	Warm White
				84 lumens	75 lumens

### Wavelength Scope (nm / K)

Red Light	Green Light	Blue Light	Yellow Light	Pure White	Warm White
				6000-7000K	2800~3500K

LED Qty 3pcs  
Life Span 35,000Hours

## Electrical Parameter

Working Voltage 12VDC

Power **0.72Watt**

Driving Method constant voltage

## Wires & Serial connection per link

Wires 88mm long, 20#AWG gray wire and white wires.  
gray: positive, white: negative

Standard Length In Serial Connection 20PCS

Maximum Length In Serial Connection  $\leq 25$ pcs

## Outer Parameter

Shell/ housing material ABS grease white, Aluminium base

Module dimension 64mm (L)\*16mm (W)\*6.8mm (H)

PCB Color White Aluminium

## Way of installation

Screw /

Double-sided adhesive tape tape size: 60mm\*12mm\*0.2mm, foamed double-sided adhesive tape

## Environment Parameter

Working Temperature  $-40^\circ\text{C} \sim 60^\circ\text{C}$

Storage Temperature  $-50^\circ\text{C} \sim 80^\circ\text{C}$

IP Degree **IP65**



RoHS



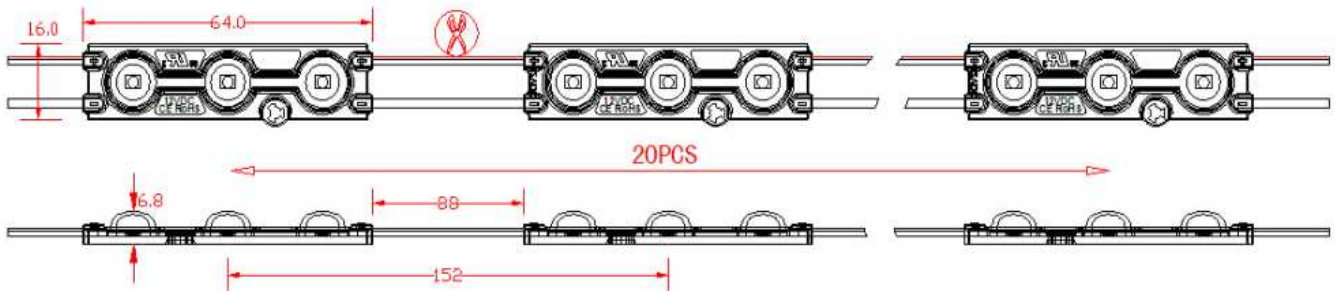
## Backlighting to lightbox

Depth of lightbox Quantity per m<sup>2</sup>

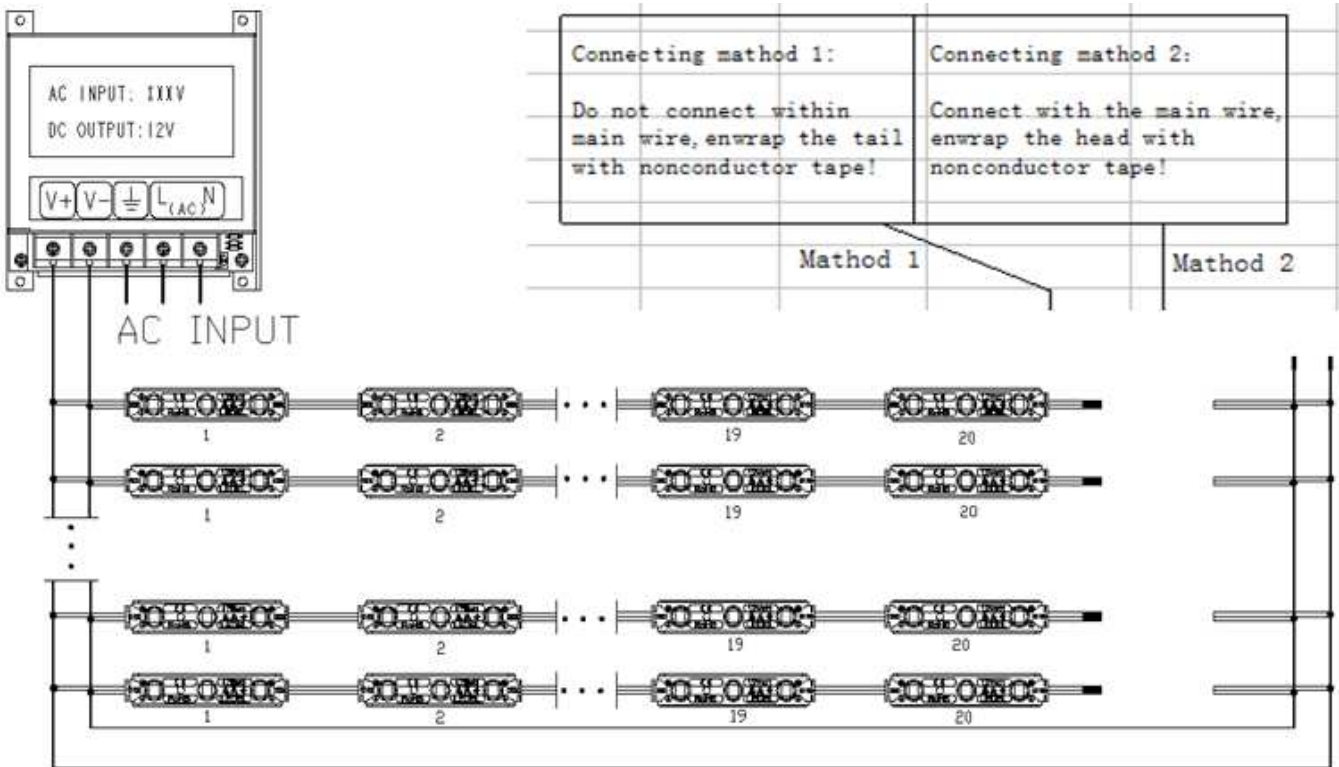
**80~100mm 35pcs**

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Module dimension (Unit: mm) :



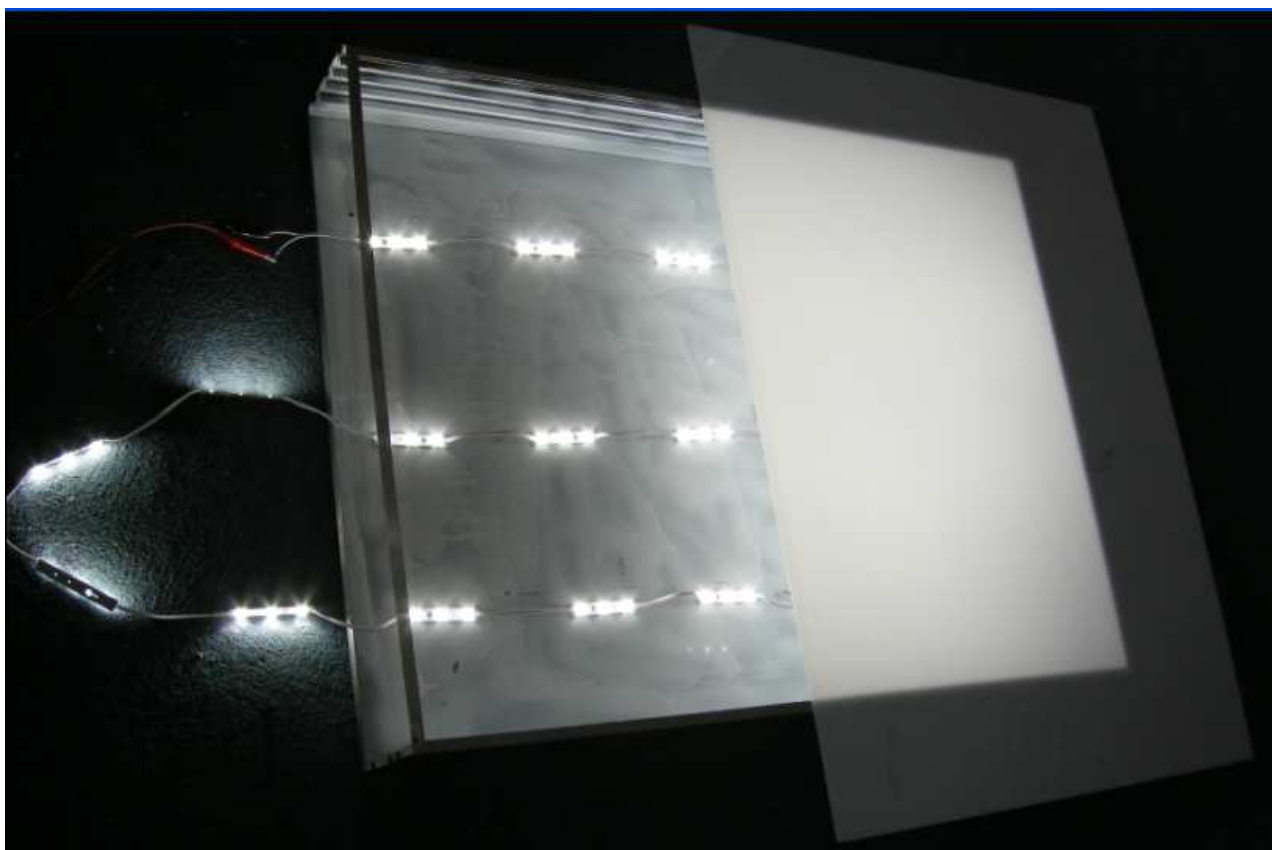
Connection Diagram (Unit: mm) :



Box size:  
85cm\*60cm\*10  
cm (depth)



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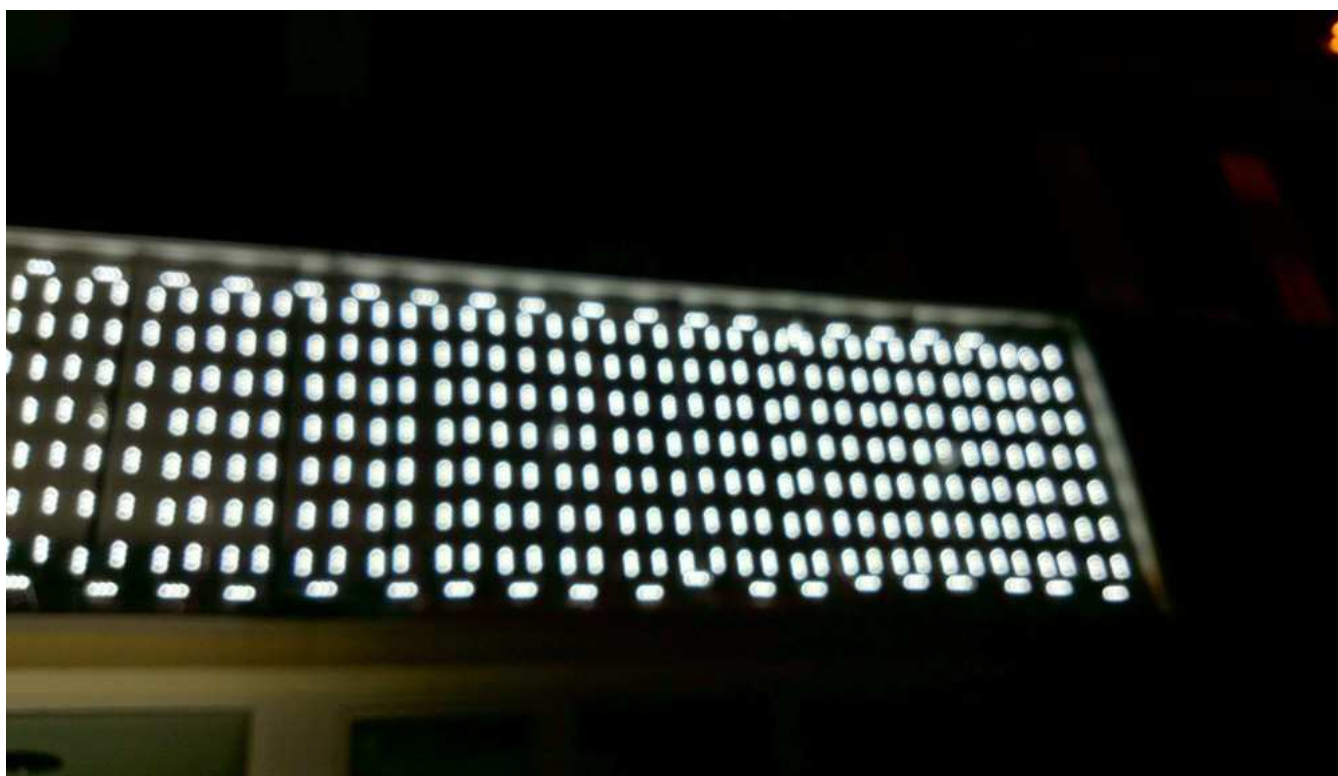


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Sample application case from customer located in Germany  
Size of box letter: 1250mm (H) \* 15500mm (L) \* 90mm (Thickness)

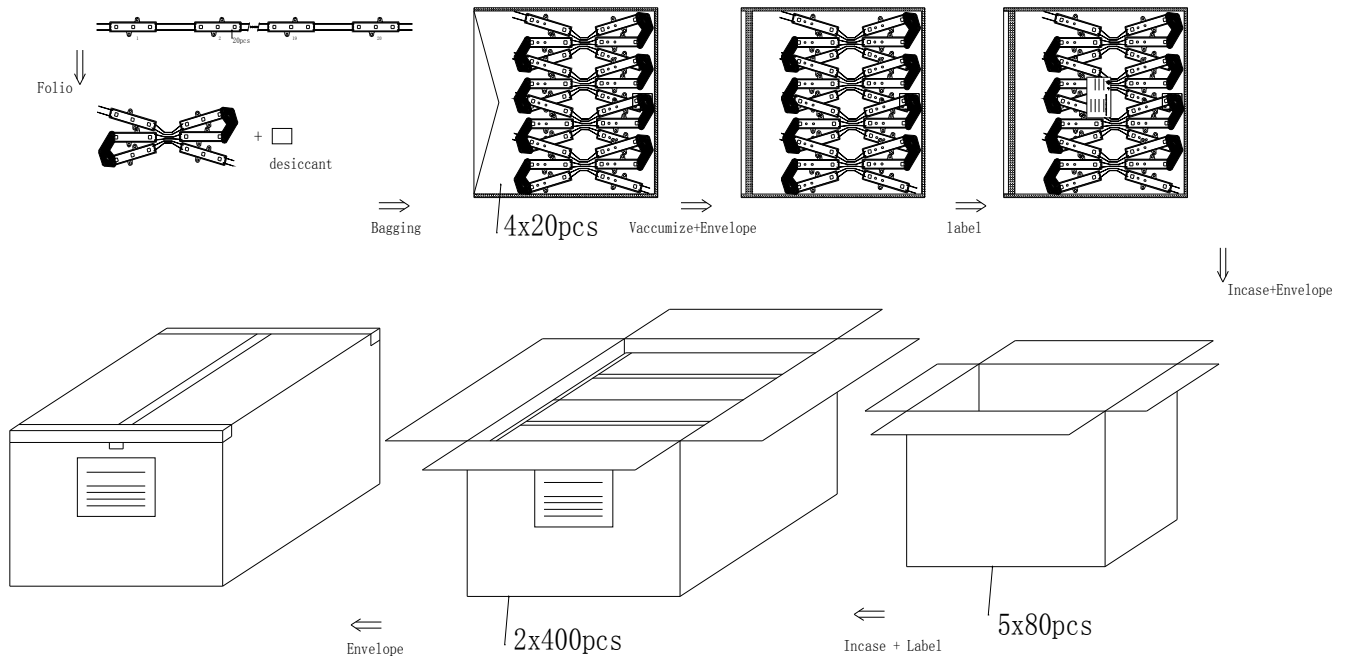


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Outer Package Dimension (Unit: mm) :



## Cautions:

1. 20pcs of modules per chain and 5 chains ( 100pcs of modules) in one plastic bag.
2. 15 bags ( 1500 pcs of modules) in one inner cardboard carton. 2 inner cartons inside an outer box (3000pcs).
3. Size OF Cardboard Carton: 46\*25\*46\*17 (cm).
4. Net Weight: 12.2Kg/1000PCS
5. Gross Weight :12.8kg /1000PCS