

# LEDEL- LED Signage Lighting Solution

Series name: Lightbox LED, edge lit  
Item No: LL-F24P600W6L550



## Product Feature:

1. Cree 3.0Watt LED\*6 as light source, super luminous flux.
2. Rectangular viewing angle with light spreaded evenly.
3. Lower light decay and long life span up to 35000 hours.
4. Lower cost against high performance, good color uniformity.
5. Low operating voltage, energy saving, environment-friendly.
6. Suitable for illumination of lightbox, both signleside & doublesided.
7. Light emitted from the edges of light boxes.
8. Waterproof, IP65, ideal for outdoor use
9. Easy installation and maintenance free.

## Specification

LED Type	Cree 3.0Watt LED, XP-E series	
Available Color	Pure white (Snow white)/ Warm white	
Beam Angle	56°*12°	
<b>Luminous Flux (lm/ LED Bar)</b>		
Pure White	Warm White	
1200~13800	1150~1250	
<b>Color temperature (Kelvin)</b>		
Pure White	Warm White	
6350~7000°K	2700~3500°K	

LED Qty 1 pcs  
Life Span 50,000Hours

## Electrical Parameter

Working Voltage 12VDC  
Power Maximum power consumption 18.0Watt  
Driving Method constant current (700mA)

## Wires & Serial connection per link

Wire size AWG 18#  
Standard Length In Serial Connection 1 PCS  
Maximum Length In Serial Connection ≤1pcs

## Outer Parameter

Shell/ housing material ABS grease white  
Module dimension 550mm (L)\*30.0mm (W)\*20.5mm (H)  
PCB Color White

## Way of installation

Screw /  
Double-sided adhesive tape Thermal conductivity 2.0, "3M"

## Environment Parameter

Working Temperature -40°C~60°C  
Storage Temperature -50°C~80°C  
IP Degree **IP65**

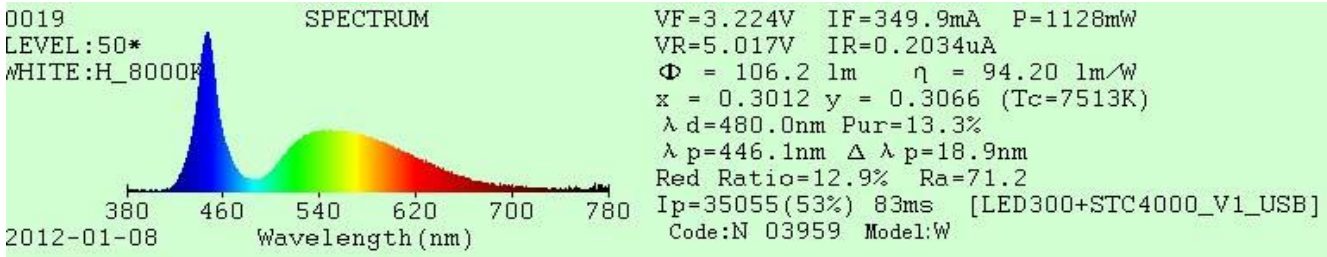
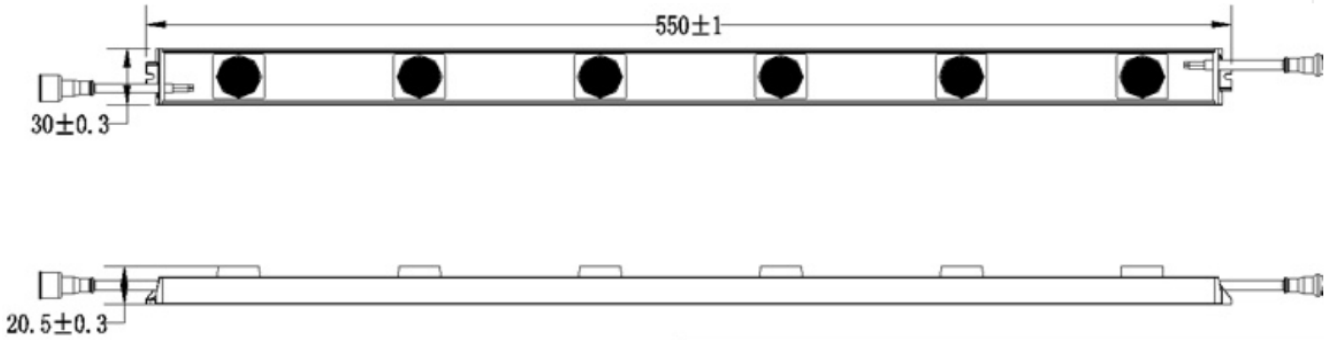
CE

RoHS



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Module dimension (Unit: mm) :



## Absolute maximum ratings

Parameter	Symbol	Value	Unit
Forward current	If	700	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-40 ~+100	°C
Storage temperature range	Tstg	-40~+100	°C
Pulse forward current	Ifp	1000	mA
Electrostatic discharge	ESD	6000(HBM)	V
Thermal resistance	θth	12	°C/W
Junction temperature	Tj	100	°C

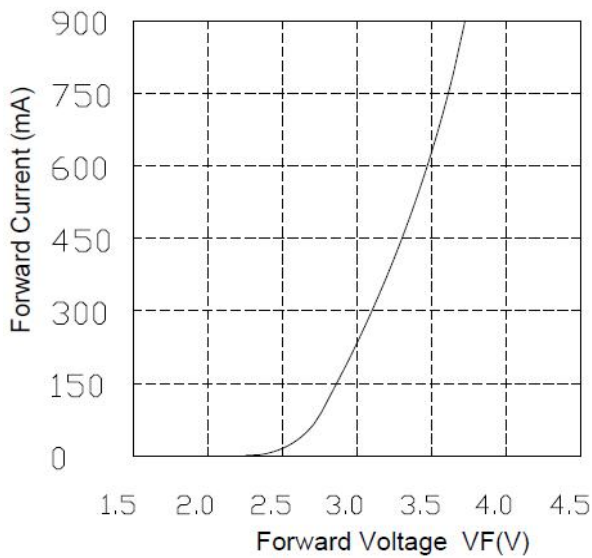
## Reliability

	Test item	Ref. standard	Test condition	Note	Damaged
environment sequence	Resistance to soldering heat (Reflow Soldering)	JESD22-B106	Tsld=260°C,10sec	2 times	0/22
	Temperature cycle	JESD22-A104	-40 30min ↑ ↓ 5min	1000 cycle	0/100
	Thermal shock	JESD22-A106	-40 15min ↑ ↓	1000 cycle	0/100
	High temperature	JESD22-A103	Ta=100°C	1000 cycle	0/100
	Low temperature	JESD22-A119	Ta=40°C	1000 cycle	0/100
	Power temperature	JESD22-A105	On 5min -40 >15min ↑ ↓ <15min Off 5min 100 >15min	1000 cycle	0/100
	Life test	JESD22-A108	Ta=25°C If=120mA	1000 cycle	0/100
	High humidity heat life test	JESD22-A101	60°C RH=90% If=60mA	1000 cycle	0/100

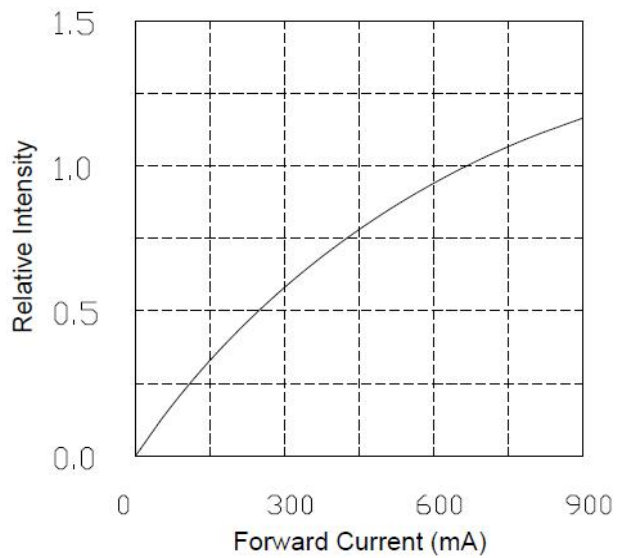
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## Typical optical characteristics curves

Forward Voltage vs. Forward Current (Ta=25°C)

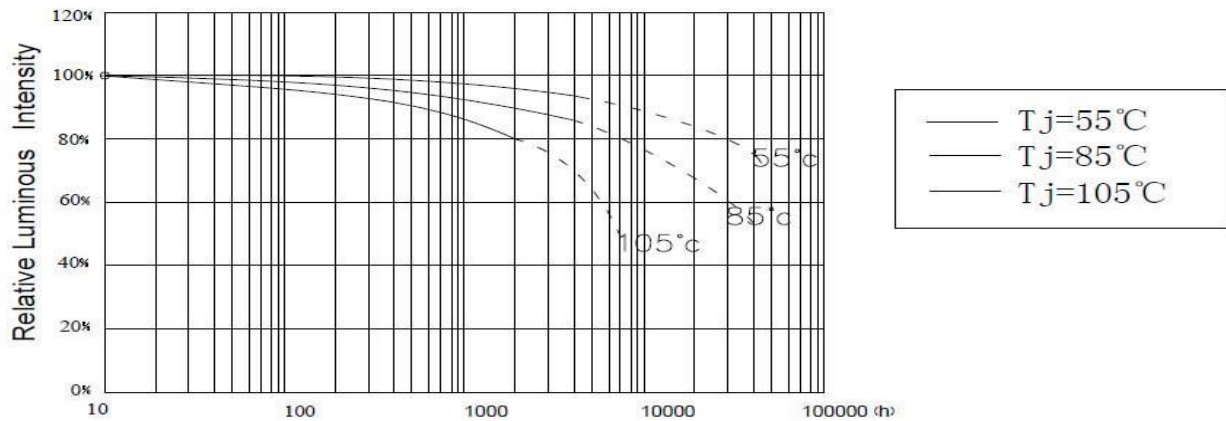


Relative Intensity vs. Forward Current (Ta=25°C)

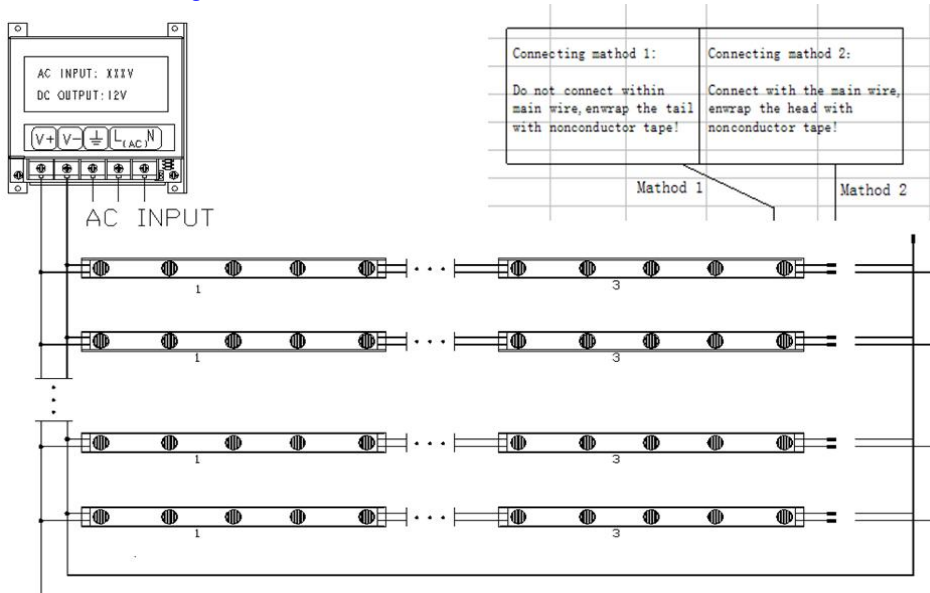


### life test:

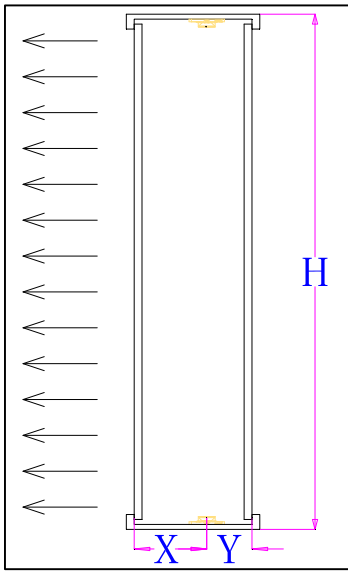
Affect of Tj on Luminous Maintenance  
(If=350 mA)  
(Dot line: Expected Life)



### Connection Diagram (Unit: mm) :

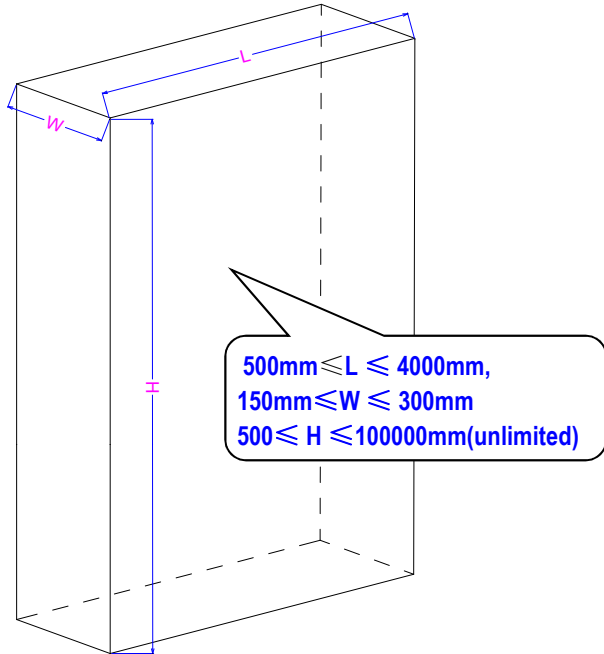
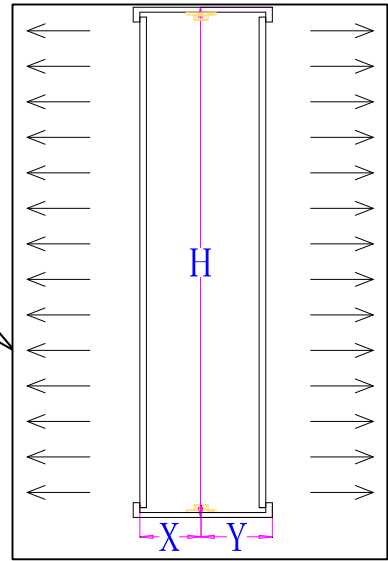


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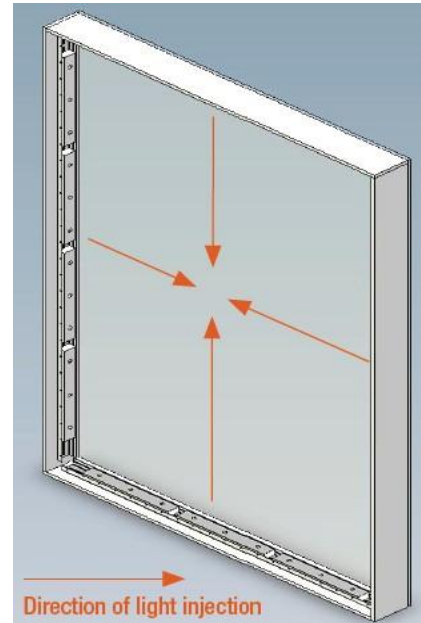
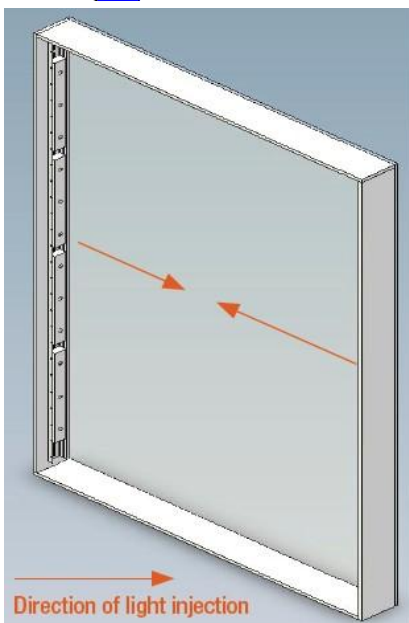
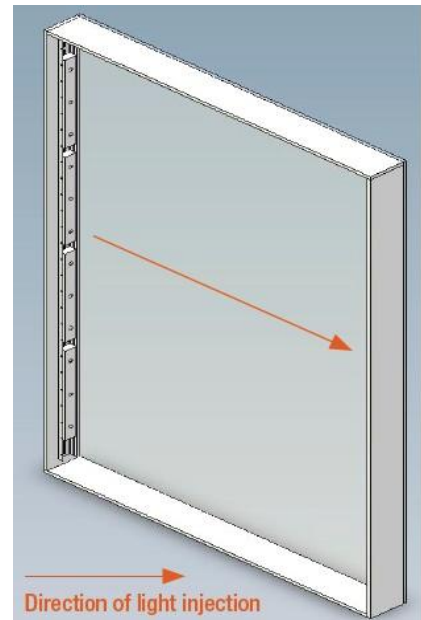


Installation guide of single side illumination  
 $X \geq 80\text{mm}$ ,  $Y \geq 0\text{mm}$ ,  $H \leq 2000\text{mm}$

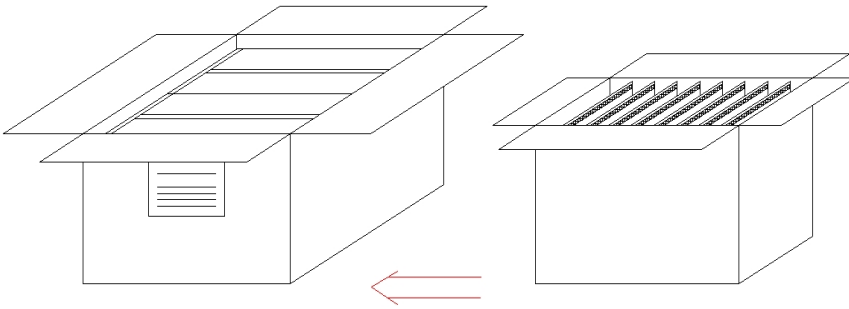
Installation guide of double-side illumination  
 $X \geq 100\text{mm}$ ,  $Y \geq 100\text{mm}$ ,  $H \leq 2000\text{mm}$



$500\text{mm} \leq L \leq 4000\text{mm}$ ,  
 $150\text{mm} \leq W \leq 300\text{mm}$   
 $500 \leq H \leq 100000\text{mm}(\text{unlimited})$



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CONSTANT CURRENT  
DRIVING SYSTEM

C E RoHS



## Cautions:

1. 20pcs of modules per chain and 5 chains ( 100pcs of modules) in one plastic bag.
2. 17 bags ( 1700 pcs of modules) in one cardboard carton.
3. Size OF Cardboard Carton: 46\*25\*46\*17 (cm).
4. Net Weight: 19Kg/1000pcs and Gross Weight: 20.6kg /1000PCS