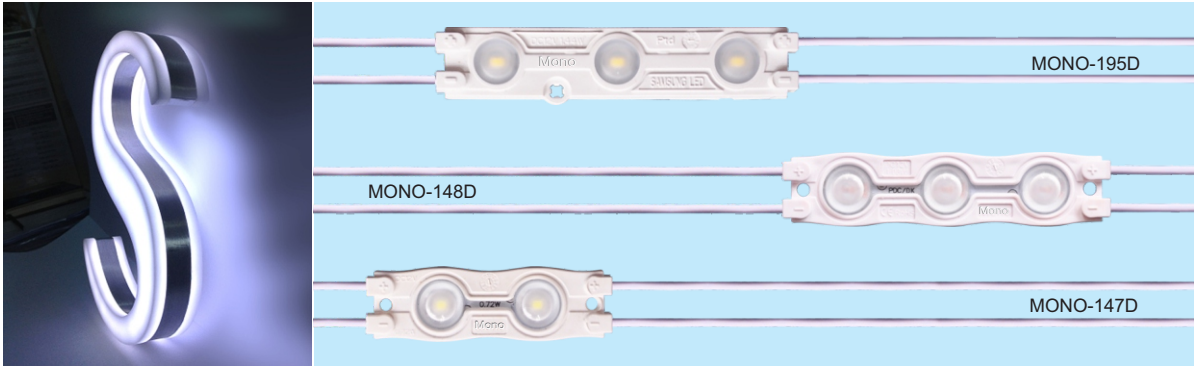


# Channel Letter LED module

**MONO-147D/148D/195D**  
Wide Beam Angle 150 degree



## Features

- 150 Wide beam angle lens applied
- Reliable power consumption (0.72 watt)
- High Brightness and Efficacy (80 lm, 110 lm/W)
- Longer Life time (50,000 hours based on 70% light output)
- 100% water proof (IP 68)
- Safety due to low working voltage (DC 12V)

## Applications

- Sign applications (For channel letters or glow sign boards)
- Indoor & Outdoor lighting installation

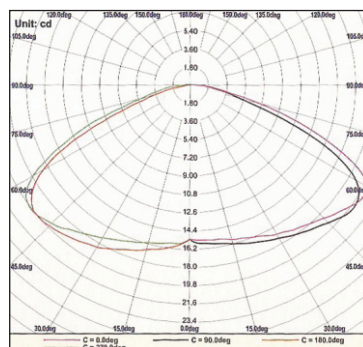
## Specifications

Color	Wh, R, G, B, WW	Wh, R, G, B, WW	Wh, R, G, B, WW
Model Name	MONO-147D	MONO-148D	MONO-195D
Input Voltage	DC 12V	DC 12V	DC 12V
Operating Current	60 mA	120 mA	150 mA
CRI (Ra)	80 Ra	80 Ra	80 Ra
LED Spec	2835 pkg	2835 pkg	5630 pkg, SAMSUNG LED
Operating Temp	From -20°C to max+80°C	From -20°C to max+80°C	From -20°C to max+80°C
Module Pitch	120±5mm	180±5mm	180±5mm
Power Consumption	0.72W	1.08W	1.44W
Dimension	53(L) x 16(W) x 7(H) mm	70(L) x 16(W) x 7(H) mm	80(L) x 16(W) x 7(H) mm
View Angle	150 degree	150 degree	160 degree
Luminance Efficiency	110 lm/W	110 lm/W	110 lm/W
Luminous Flux (Typ.)	80 lm	120 lm	160 lm
Color Temperature (Typ.)	2,700 / 4,000 / 6,500 / 10,000K	2,700 / 4,000 / 6,500 / 10,000K	2,700 / 4,000 / 6,500 / 10,000K

1. There might be 5-10% tolerance for specifications
2. Above Specifications are subject to change without prior notice for improvement of performance.

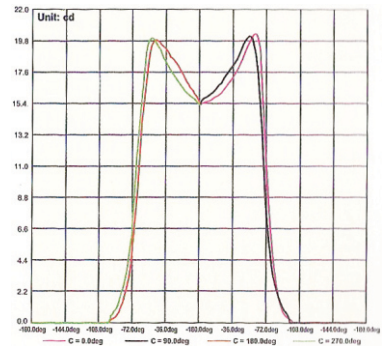
## Luminous intensity distribution (White, Unit: cd)

Polar Luminous Intensity Distribution



Luminous intensity values are shown radially from center.  
Elevation angle values shown around the outside of the graph.

Cartesian Luminous Intensity Distribution



Luminous intensity values are shown on the vertical axis.  
Elevation angle values are shown on the horizontal axis.

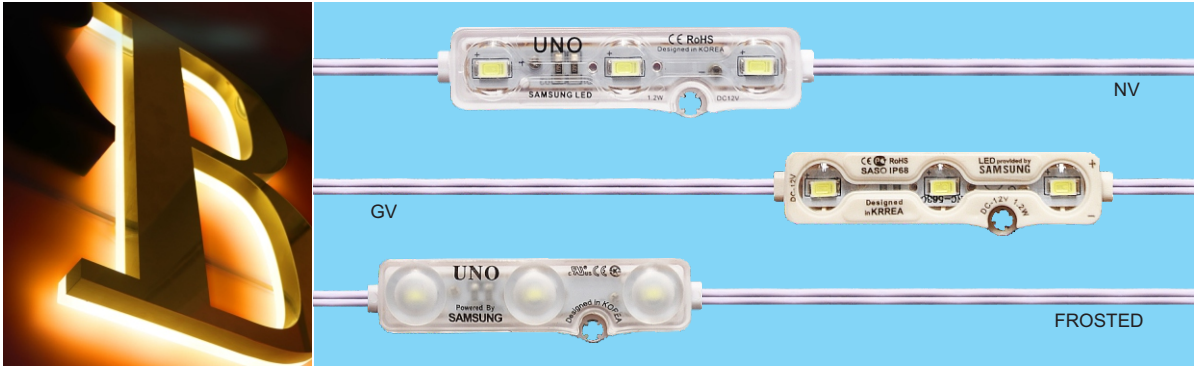


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# Channel Letter LED module

**MONO-Frosted/GV/NV**  
Wide Beam Angle 150 degree



## Features

- 150 Wide beam angle lens applied
- Reliable power consumption (1.5 watt)
- High Brightness & Efficacy (90 lm/W)
- Longer Life time (50,000 hours based on 70% light output)
- Water proof (IP 67)
- Safety due to low working voltage (DC 12V)

## For the combining module,

- Double brightness
- More easier & efficient production
- Secure way installation
- Thermal Safety

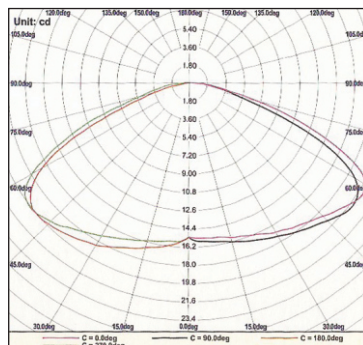
## Specifications

Color	Wh, R, G, B, WW	Wh, R, G, B, WW	Wh, R, G, B, WW
Model Name	FROSTED	GV	NV
Input Voltage	DC 12V	DC 12V	DC 12V
Operating Current	85 mA	85 mA	85 mA
CRI (Ra)	80 Ra	80 Ra	80 Ra
LED Spec	2835 pkg/5730 pkg	2835 pkg/5730 pkg	2835 pkg/5730 pkg
Operating Temp	From-20°c to max+60°c	From-20°c to max+60°c	From-20°c to max+60°c
Module Pitch	160±5	160±5	160±5
Power Consumption	1.5W	1.5W	1.5W
Dimension	66(L) x 16(W) x 11(H) mm	66(L) x 15(W) x 9(H) mm	67(L) x 15(W) x 9(H) mm
View Angle	150 degree	150 degree	150 degree
Luminance Efficiency	100 lm/W	100 lm/W	100 lm/W
Luminous Flux (Typ.)	150 lm	150 lm	150 lm
Color Temperature (Typ.)	2,700 / 4,000 / 6,500 / 10,000K	2,700 / 4,000 / 6,500 / 10,000K	2,700 / 4,000 / 6,500 / 10,000K

1. There might be 5-10% tolerance for specifications
2. Above Specifications are subject to change without prior notice for improvement of performance.

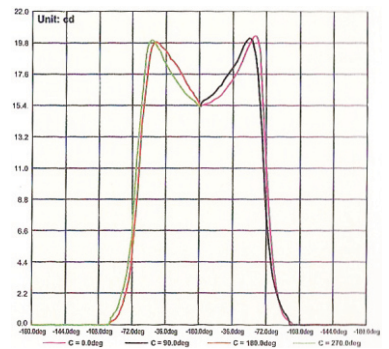
## Luminous intensity distribution (White, Unit: cd)

Polar Luminous Intensity Distribution



Luminous intensity values are shown radially from center.  
Elevation angle values shown around the outside of the graph.

Cartesian Luminous Intensity Distribution



Luminous intensity values are shown on the vertical axis.  
Elevation angle values are shown on the horizontal axis.

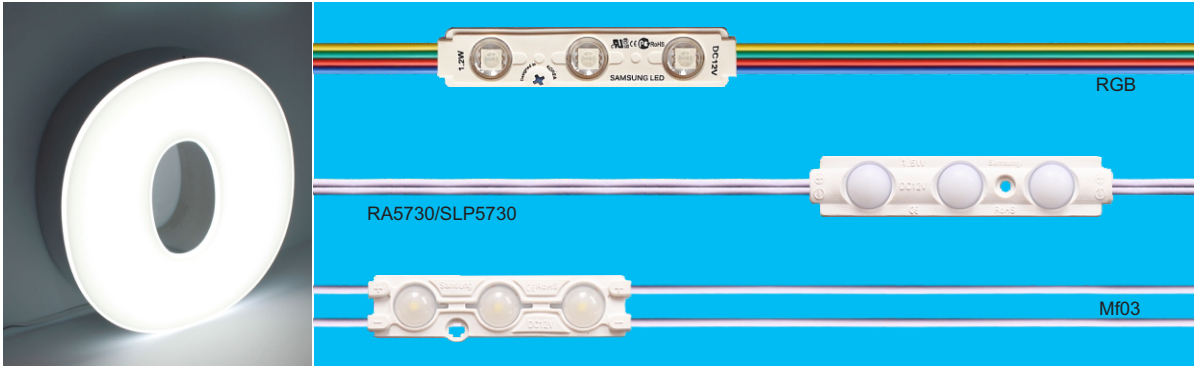


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# Channel Letter LED module

**UNO-MF03/RA5730/SLP5730/RGB**  
Wide Beam Angle 150 degree



## Features

- 150 Wide beam anHgle lens applied
- Reliable power consumption
- High Brightness & Efficacy
- Longer Life time (50,000 hours based on 70% light output)
- Water proof (IP 67)
- Safety due to low working voltage (DC 12V)

## Applications

- Sign applications (For channel letters or glow sign boards)
- Indoor & Outdoor lighting installation

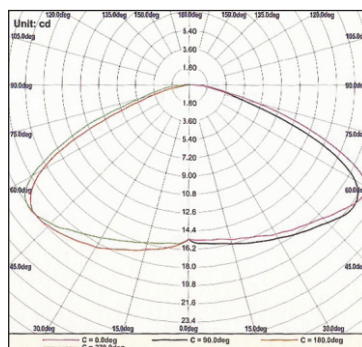
## Specifications

Color	Wh, R, G, B, WW	Wh, R, G, B, WW	RED	GREEN	BLUE
Model Name	MF03	RA5730/SLP5730	RGB		
Input Voltage	DC 12V	DC 12V	DC 12V		
Operating Current	95 mA	95 mA	60 mA		
CRI (Ra)	80 Ra	80 Ra	-	-	-
LED Spec	2835 pkg	5730 pkg	5054 pkg		
Operating Temp	From-20°c to max+60°c	From-20°c to max+60°c	From-20°c to max+60°c		
Module Pitch	140±5	140±5	140±5		
Power Consumption	0.72 W	1.2 W/1.5 W	0.72W		
Dimension	66(L) x 16(W) x 8(H) mm	70(L) x 14(W) x 8(H) mm	75(L) x 15(W) x 6(H) mm		
View Angle	150 degree	150 degree/135 degree	135 degree		
Luminance Efficiency	120 lm/W	100lm/W	25 lm/W	46 lm/W	10 lm/W
Luminous Flux (Typ.)	87 lm	120 lm/ 150 lm	18 lm	33 lm	8 lm
Color Temperature (Typ.)	3,000 / 6,500 / 9,500 / 12,000K	3,000 / 6,500 / 9,500 / 12,000K	-	-	-

1. There might be 5-10% tolerance for specifications
2. Above Specifications are subject to change without prior notice for improvement of performance.

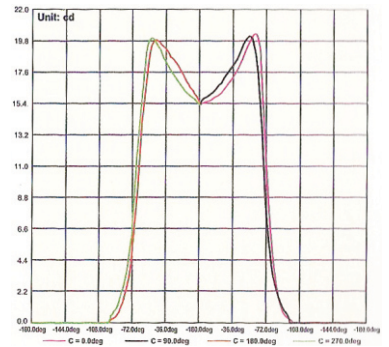
## Luminous intensity distribution (White, Unit: cd)

Polar Luminous Intensity Distribution



Luminous intensity values are shown radially from center.  
Elevation angle values shown around the outside of the graph.

Cartesian Luminous Intensity Distribution



Luminous intensity values are shown on the vertical axis.  
Elevation angle values are shown on the horizontal axis.



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# LED Linear Bar (Fabric Box)

UNO-Back Light/Side-Edge Light/4mm



## Features

- SPECIAL beam angle lens applied
- Reliable power consumption
- High Brightness & Efficacy
- Longer Life time (50,000 hours based on 70% light output)
- Safety due to low working voltage (DC 12V)

## Applications

- Aluminium Profile Fabric boxes - Backlit / Side-edge lit
- 4mm Bar for LED clip on frames / translite frames

## Specifications

Color	White	White	White
Model Name	Backlight	Side-edge Light	4mm
Input Voltage	DC 12V	DC 12V	DC 12V
Operating Current	95 mA	95 mA	95 mA
CRI (Ra)	80 Ra	80 Ra	80 Ra
LED Spec	3030 pkg	3030 pkg	2835 pkg
Operating Temp	From-20° c to max+60° c	From-20° c to max+60° c	From-20° c to max+60° c
Module Pitch	45±5	65±5	140±5
Power Consumption	14.4 W	27 W	24 W
Dimension	1 mtr	1 mtr	1 mtr
View Angle	170 degree	15 degree - 25 degree	120 degree
Luminance Efficiency	110 lm/W	100lm/W	100 lm/W
Luminous Flux (Typ.)	1600 lm	2700 lm	2400 lm
Color Temperature (Typ.)	3,000 / 6,500 / 9,500 / 12,000K	3,000 / 6,500 / 9,500 / 12,000K	3,000 / 6,500 / 9,500 / 12,000K

1. There might be 5-10% tolerance for specifications
2. Above Specifications are subject to change without prior notice for improvement of performance.

## Power Supply

Water proof/Rain proof/Non water proof



**Capacity :** Use max, 90% of SMPS Capacity  
**Installation :** SMPS must be installed within 10m distance from sign.  
**Wire :** Wire for sign and SMPS connection must be thicker than 1SQ(appr,1mm) per 100pcs LED module, and must use thicker wire depends on quantity.

### Certifications

IP67    CE    BIS Approved

#### Water Proof

- 60 W ~ 300 W
- Constant Voltage
- Constant Current
- In built surge protection
- 12 Volt DC

#### Rain Proof

- 100 W ~ 400 W
- Compact size
- Outdoor used
- High Efficiency
- 12 Volt DC

#### Non Water Proof

- 24 W ~ 360 W
- Compact Size
- Easy Installation
- Low Cost
- 12 Volt DC



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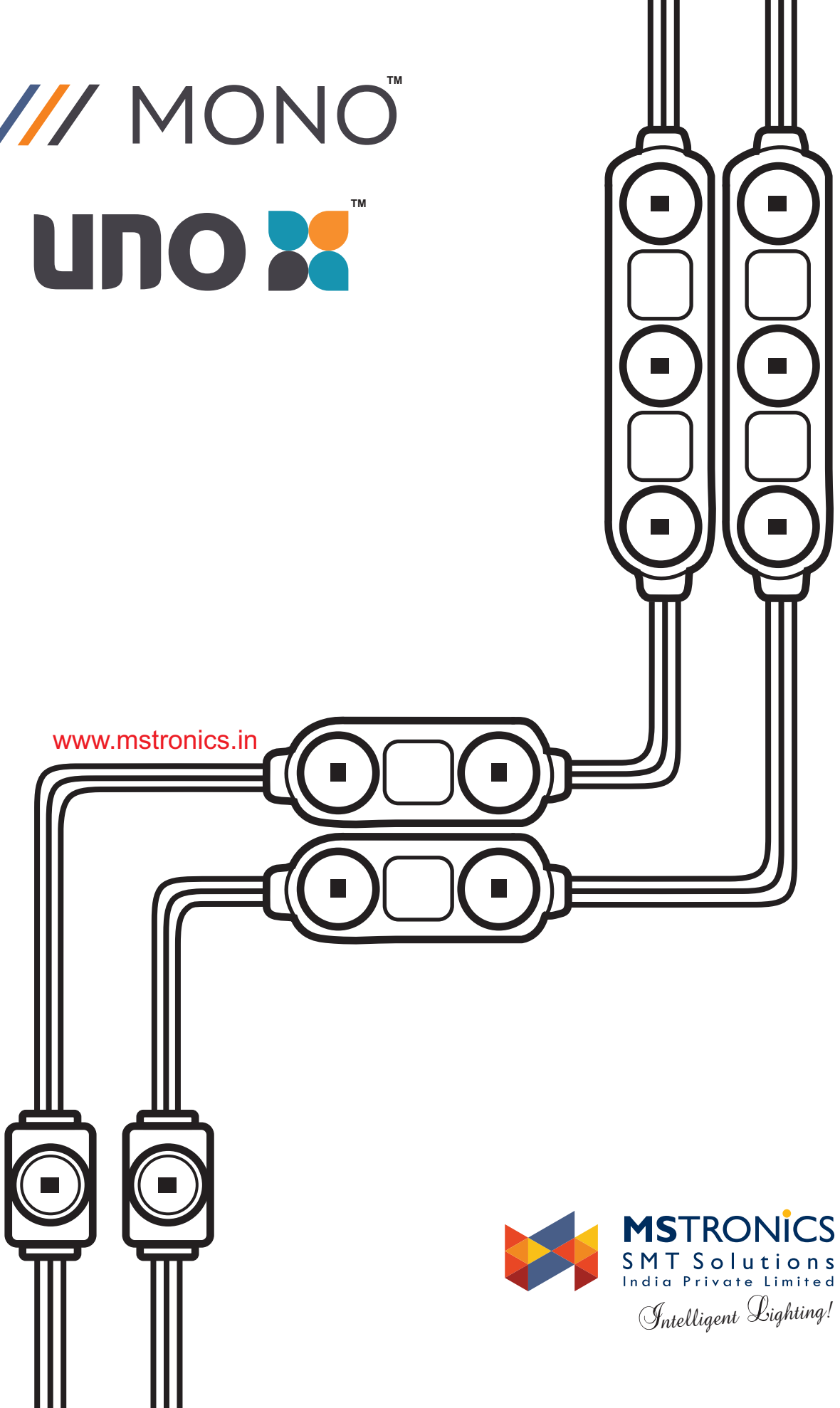
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# MONO™



# MSTronics™



## Who We Are?

**MSTronics** is a subsidiary of the MONO GROUP engaged in Manufacturing of LED MODULES & Power Supply for Signage Industry.

**MSTronics** has been an aggressive player in the manufacturing, representation and distribution of products used in the Signage industry. **MSTronics** has been keen to enter this segment. MSTronics will try to supply the LED light for saving energy consumption has one of leading companies has environment-friendly enterprise

**MSTronics** did not and does not want to be associated with any Company / Brand which has a short term vision on Quality, Consistency in supplies, Brand Value and approach to marketing strategies.