

Channel Letter LED module

F-LED 168 (Wide Beam Angle 155 °)



Hyundai LED Co.,Ltd.

INTRODUCTION

HYUNDAI LED **F-LED 168** is a LED illumination system for front-lit, back-lit channel letters especially for small depth channel letter and also indoor & outdoor decorations. **F-LED 168** has **155° wide beam angle and uniformed lighting distribution** so that it can be applied to the smaller depth channel letters and boxes like 40~100mm and also total module numbers in the letters can be reduced as compared to 120° beam angle LED modules. White color(7500k) and Red, Blue are available. **F-LED 168** provides many advantages like the brilliant light output, energy cost saving and maintenance cost reduction.



FEATURES

- **155° Wide beam angle lens applied**
- Lower power consumption (0.24W)
- **High Brightness and Efficacy (20lm, 83lm/W in White)**
- Longer Life time (40,000~50,000hrs based on 70% light output)
- Easy installation and maintenance
- 100% waterproof (IP67)
- Safety due to low working voltage(12VDC)
- **5 years warranty**

APPLICATIONS

- Sign applications (**smaller depth channel letters and boxes like 40~100mm**)
- Indoor & Outdoor lighting decorations

CERTIFICATIONS

- UL(E258512), CE, RoHS

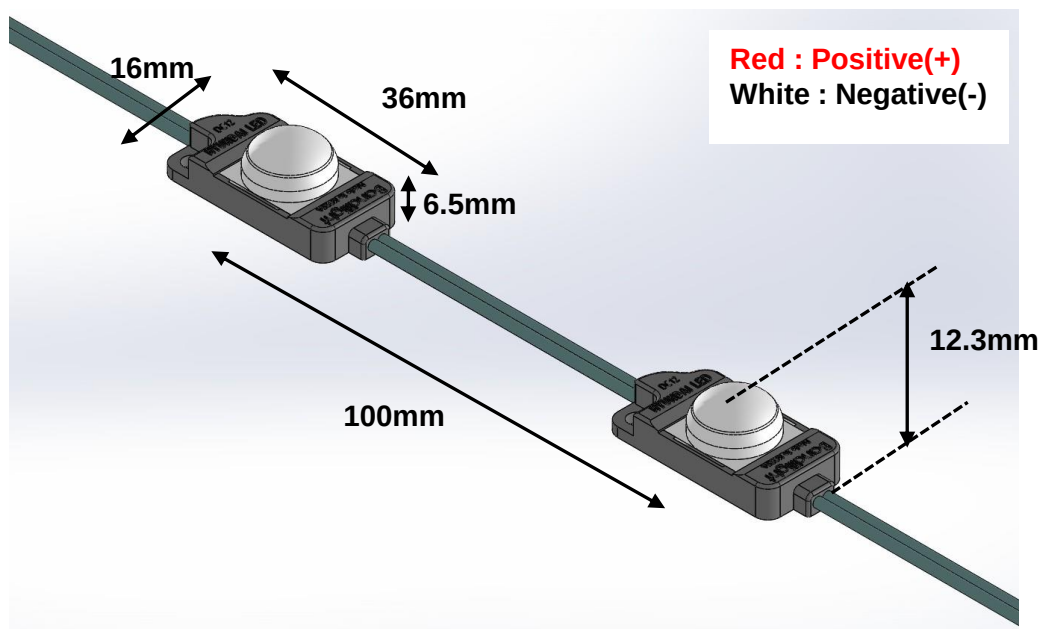


SPECIFICATIONS

- Operating Temp. : -20°C~+70°C

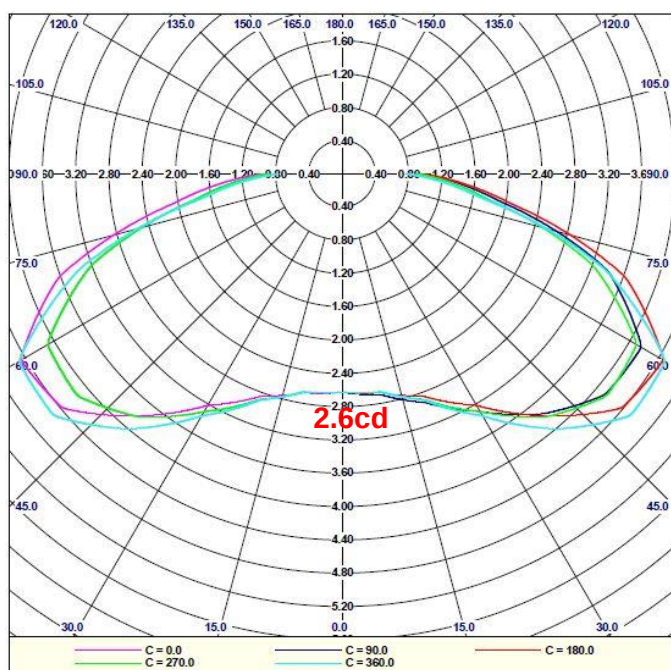
Color	White	Red	Blue
Model No.	BFL168-DW12	BFL168-DR12	BFL168-DB12
Input Voltage	12VDC		
Operating Current	0.02A (Max.)		
Power Consumption	0.24W (Max.)		
Dimension	36mm(L) x 16mm(W) x 12.3mm(H)		
View angle	155°		
Luminous Flux (Typ.)	20lm	5.5lm	3lm
Color Temperature(Typ.)	6500k	625nm	465nm

PHYSICAL SPECIFICATION (Unit : mm)

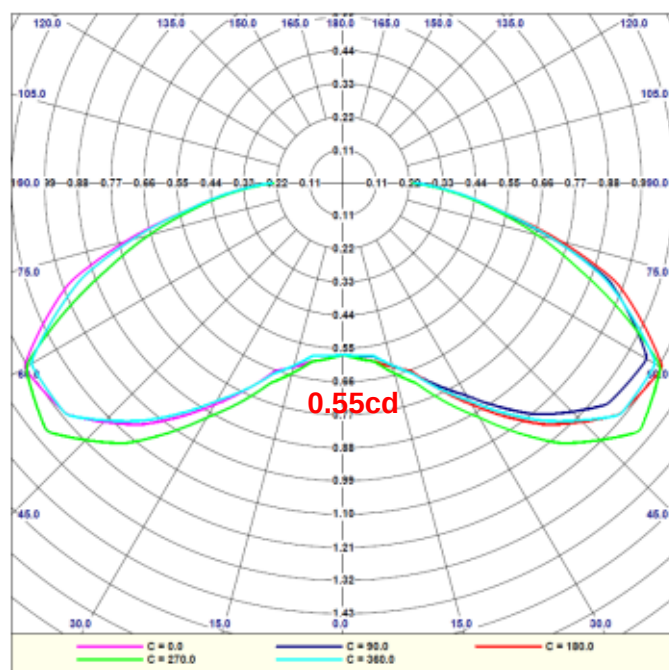


LUMINOUS INTENSITY DISTRIBUTION (WHITE, Unit : cd)

White(7500K)



Red

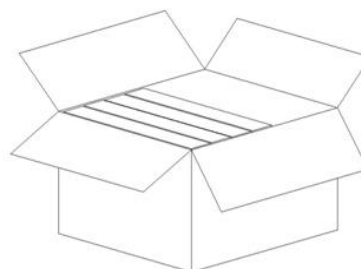
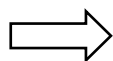


SERIAL No.

M8W	
M	Manufacturing year - 2001 : A,2013 : M.....
8	Month - 1~9 : 1~9 Ex) July. - "7" - 10 : "X" - 11 : "Y" - 12 : "Z"
W	White(7500K)
R	Red
B	Blue

PACKAGE

1pack =50 modules(5m)

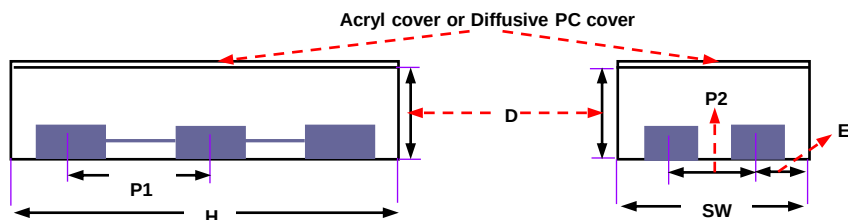
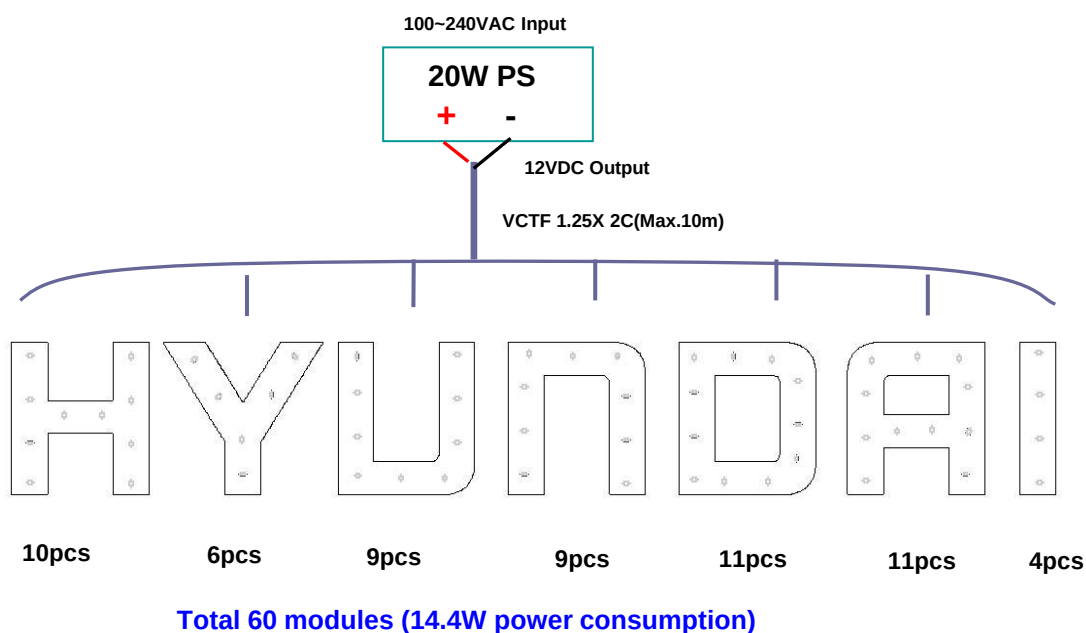


2000modules



INSTALLATION

- Recommendable channel depth : **40mm~100mm**
- Recommendable Installation pitch between centers of the modules :
60~80mm at 40mm~60mm depth, 80~100mm at 60~100mm depth
- Max. Module Number connected in series : **50modules**
- Installation layout (Example) : Channel height – 350mm, Channel depth-80mm, Stroke width -75mm



H	Channel Letter Height	
D	Channel Letter Depth	40mm~100mm
SW	Channel Letter Stroke Width	
E	Distance between the center of the LED module to the edge of the Channel Letter	30mm~50mm
P1	Installation pitch in a row	60mm~100mm
P2	Installation pitch in a column	60mm~100mm

■ Primary DC Cable Specification Table

Module Number connected	Cable Specification
~400modules	VCTF 1.25X2C
~600modules	VCTF 2.0X2C
~1000modules	VCTF 3.5X2C

■ Power Supply Capacity Table

Power Supply	Max. Module Number connected
20W 12VDC	75modules
40W 12VDC	150modules
60W 12VDC	215modules
100W 12VDC	375modules