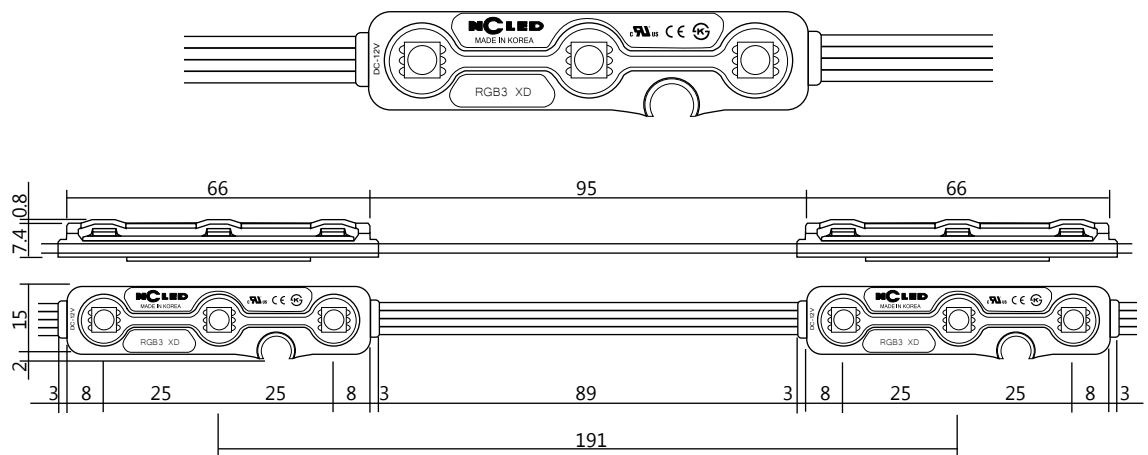


Characteristic



- **3 Chips in 1 SMD LED lighting system creates 16-Million color**
- Specialized lens covered design for perfect humid & waterproof (IP68)
- Protection from Sulfur Dioxide(SO2)
- High luminosity & compact design
- Guaranteed life time up to 50,000 hours
*24 hour constant load may result less operating hours with lower lighting output. Estimated lifetime is based on normal usage
- SMD LED mounted (Made in Korea)
- Slight current drop through wire to wire connection(vs soldering)
- 120° viewing angle creates more uniform backlighting effects and better silhouettes
- Quality and reliability assured

Physical



Length : 66mm Weight : 10g
 Width : 15mm LED Pitch : 25mm
 Thickness : 8.2mm Module Pitch : 191mm

Optical Characteristic

Color	Luminous Flux(lm)	Luminance Efficiency(lm/W)	Dominant Wave Length & Color Temperature	Viewing Angle
	Typical	Typical	Typical	2θ _{1/2}
Red	6.3	26	625	120
Green	12.6	53	537	120
Blue	2.7	11	465	120
White	21.6	30	-	120

Electrical Characteristics

Current dissipation : 60mA
 Power consumption : 0.72W
 Operating powewr : 12V
 Quantity for maximum connection in serial : 100 modules
 Color controller supported : Voltage controlled color change system

Thermal

Operating temperature : -20~60°C
 Storage temperature : -20~70°C

Waterproof Rating

IP68 : Complete protection against dust ingress and water

Construction

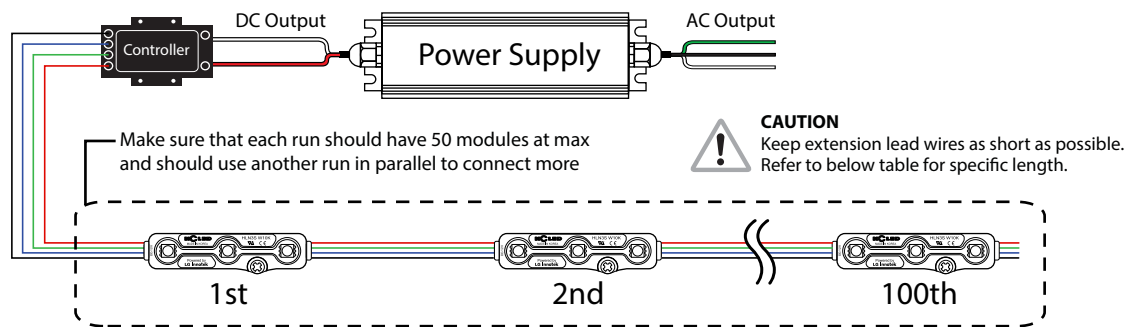
LED type : SMD5050
 Case materials : ABS, UL-94
 Cable : UL-1007, AWG18x4C
 Cover materials : Polycabonate, UL-94

Approval

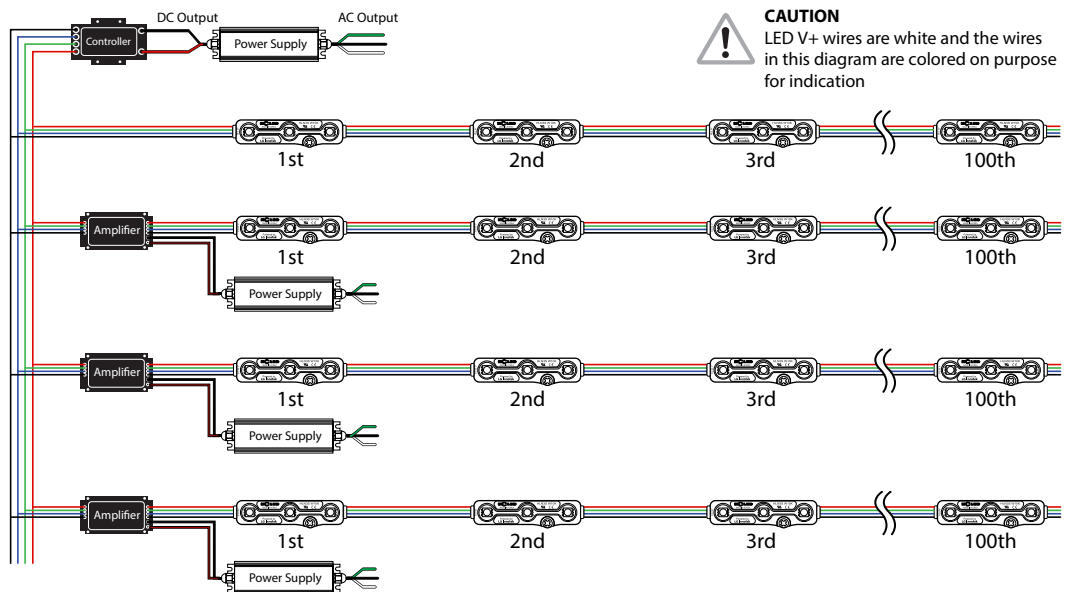
UL Certified E347462
 KS Certified

Wiring Guide

Single Controller



Parallel Connection with Signal Amplifiers



Specifications subject to change without notice

**CONNECTION WITH
POWER SUPPLY**

EXTENSION OF POWER SUPPLY LEAD WIRES

Model Name	HMA-30N-R12	UP60S12TH	UP100S12W1	UP120S12WH	UP150S12W1
Output (W)	30W	60W	100W	120W	150W
Output (A)	2.5A	5A	8.4A	10A	12.5A
Max Q'TY per Run*	35pcs	70pcs	110pcs	140pcs	170pcs
Recommended Extension Wire	AWG18	AWG14	AWG12	AWG4	AWG2
Maximum Length	5M (15FT)	5M (15FT)	5M (15FT)	15M (50FT)	15M (50FT)

*Maximum quantity of LED is based on 80% of specified capacity of power supplies for extended lifespan

Specifications subject to change without notice