

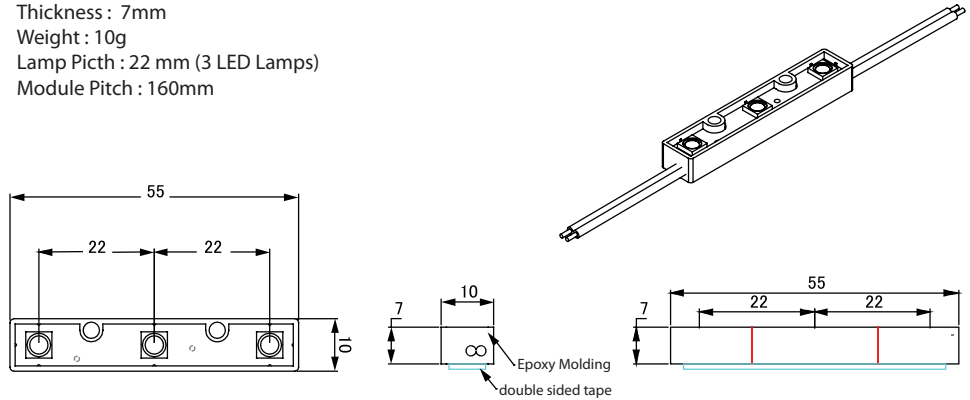


The STAR N03, IP65 LED module lighting system perfect for those of who need maximum lighting output at lowest cost. The STAR N03 is perfect for people who seeks for high power led module for various applications. Its constant white color temperature makes itself highly reliable to be used for outdoor lighting, not only for signs but also for large-scale application and outdoor productions. While maintaining its extreme energy efficiency, it also provides reliable assurance with Samsung LED technology that lighting output remains 70% level out of initial output after using 42,500 hours. You will realize what the word outstanding should mean when you see them on.

- Guaranteed life time up to 42,500 hours with 70% lighting output  
\*24 hour constant load may result less operating hours with lower lighting output. Estimated lifetime is based on normal usage of 10 hours per day.
- Uniform color temperature by strictly controlled system of bin rank
- Extremely small and light solution for low-profile channel letters, hidden recessed lighting
- 70% more energy efficiency compared to conventional sign lighting source
- Quality and reliability assured

**PHYSICAL**

Length : 55mm  
 Width : 10mm  
 Thickness : 7mm  
 Weight : 10g  
 Lamp Pitch : 22 mm (3 LED Lamps)  
 Module Pitch : 160mm



**OPTICAL CHARACTERISTICS**

Available Color	Luminous Flux (lm)			CCT (Kelvin) & Dominant Wave Length			Viewing Angle
	Min	Typical	Max	Min	Typical	Max	2 $\Theta_{1/2}$
Cool White	48	67		9,000K	10,000K	11,000K	120
Daylight White	48	67		5,000K	6,500K	7,000K	120
Neutral White	42	61		4,000K	4,200K	4,400K	120
Warm White	42	61		2,700K	3,000K	3,200K	120
Red	6			623nm	625nm	628nm	120
Green	18			525nm	527mm	530nm	120
Blue	3			455nm	460nm	465nm	120

\*CRI (Color Rendering Index) for white product types is 70 / \*Luminous Flux measuring equipment is CAS140B  
 \*Viewing angle is the off axis angle from lamp centerline where the luminous intensity is half of the peak value / \*CCT 5% tester tolerance  
 \*Dominant wavelength is derived from the CIE 1931 Chromaticity diagram and represents the perceived color  
 \*Color temperature for white is strictly controlled by bin rank system and it consists of three ranks which should not be used simultaneously.

### ELECTRICAL CHARACTERISTICS

Current dissipation : 55mA (Colored:35mA)  
 Power Consumption : 0.66W (Colored:0.42W)  
 Operating power : DC 12V  
 Quantity for maximum connection in serial : 50 modules  
 Electronic dimming control supported

### THERMAL

Cooling : Ambient air  
 Maximum operating temperature : 40°C  
 Minimum operating temperature : -20°C  
 Maximum storage temperature : 60°C  
 Minimum storage temperature : -30 C

### SAFETY FEATURES

IP65 : Prevents water & dust penetration  
 Nonpolar Voltage Protection : STAR N03 is nonpolar DC powered device

### CONSTRUCTION

White LED Lamp : Single-Die chip, 5252  
 Color LED Lamp : Double-Die chip, 5252  
 Body : ABS case filled with transparent Epoxy resin  
 Lead wire : 18AWG

### APPLICATIONS

Channel letters - open & closed cover  
 Reverse halo lighting  
 Border lighting  
 Point-Of-Purchasing signage  
 Art & sculpture and cove lightin  
 Facade lighting

### APPROVAL

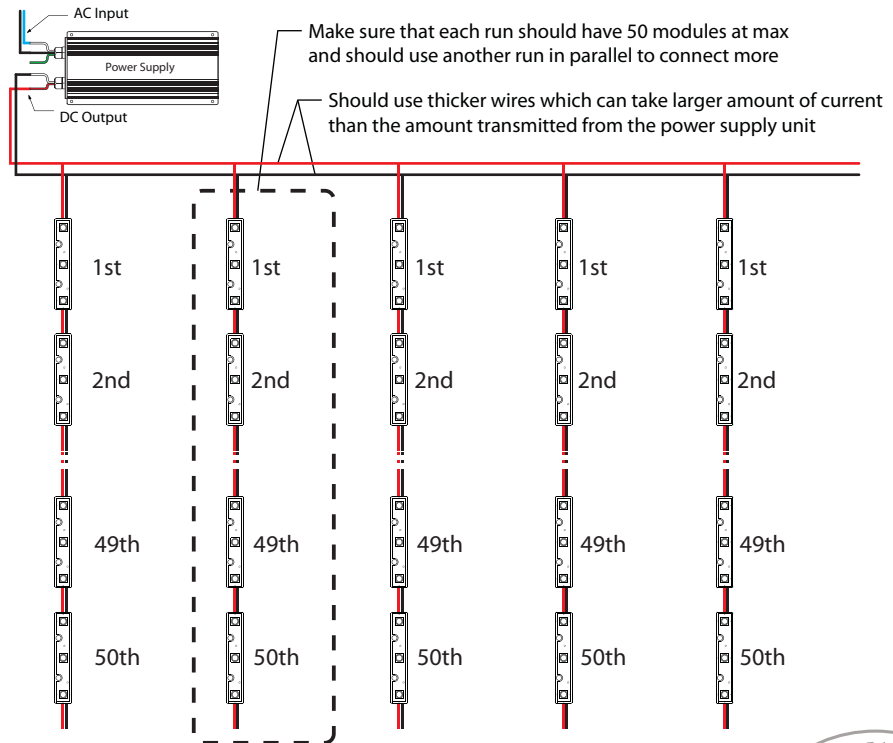
EN 55015/A2 : 2009  
 EN 61547/2009  
 EN 62031/2008



### FEATURES



### WIRING GUIDE



Specifications subject to change without notice