



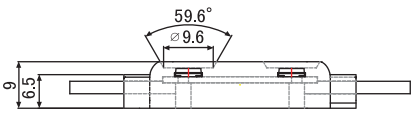
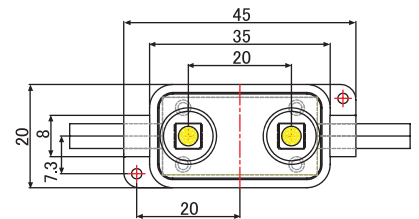
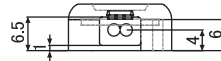
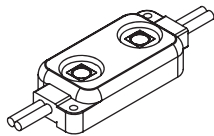
LOW PROFILE VERSATILE LED MODULE FOR SIGNS

The STAR C02 is versatile LED module which is perfect for low-profile channel letters. Its compact size allows itself to be suitable for all sorts of lighting applications also it is the uppermost solution for replacement of conventional lighting source like neon tubes and fluorescent bulbs. It is brilliant for both indoor and outdoor, with covering. It also features user fault-free environment harmonized with reverse voltage protection to prevent damages while installation, and constant current system to stabilize the current thoroughly for extended lifetime. STAR C02 will be your best solution for all of your needs.

- 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
- Transparent PVC body for tough environment
- Reverse voltage protection to minimize hassles during installation
- 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 : 45mm
 Width : 20mm
 Thickness : 9mm
 Weight : 12g
 Lamp Pitch : 20 mm (0.79 in., 2 LED Lamps)
 Module Pitch : 130mm



OPTICAL CHARACTERISTICS

Available Color	Luminous Flux (lm)			CCT (Kelvin) & Dominant Wave Length			Viewing Angle 2θ _{1/2}
	Min	Typical	Max	Min	Typical	Max	
White	31	43		9,000K	10,000K	11,000K	120
Daylight White	31	43		5,000K	6,500K	7,000K	120
Mid-Warm White	28	40		4,000K	4,200K	4,400K	120
Warm White	28	40		2,700K	3,000K	3,200K	120
Red	9	12		620nm		625nm	120
Green	18.8	25		525nm		530nm	120
Blue	3.7	4.4		455nm		460nm	120

*CRI (Color Rendering Index) for white product types is 70 / *Luminous Flux measuring equipment is CA5140B
 *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 : 50 mA
 Power Consumption : 0.6 W
 Operating power : DC 12V
 Quantity for maximum connection in serial : 50 modules
 Electronic dimming control supported
 Constant current drive
 Reverse voltage protection

THERMAL

Cooling : Ambient air
 Maximum operating temperature : 60°C (140°F)
 Minimum operating temperature : -25°C (-13°F)
 Maximum storage temperature : 60°C (140°F)
 Minimum storage temperature : -30 C (-22 F)

SAFETY FEATURES

Reverse voltage protection : Device will prevent incoming power source on improper input connection

CONSTRUCTION

White LED Lamp : Single-Die chip, 5252
 Color LED Lamp : Double-Die chip, 5252
 Body : PVC(Polyvinyl Chloride) transparent resin, 96% transparency
 PCB : FR-4 fiber glass epoxy resin, quad layered
 Lead wire : 18 AWG

APPLICATIONS

Channel letters - closed cover
 Reverse halo lighting
 Border lighting
 Point-Of-Purchasing signage
 Art & sculpture and cove lighting
 Replacement for conventional lighting system
 Maximum output white

APPROVAL

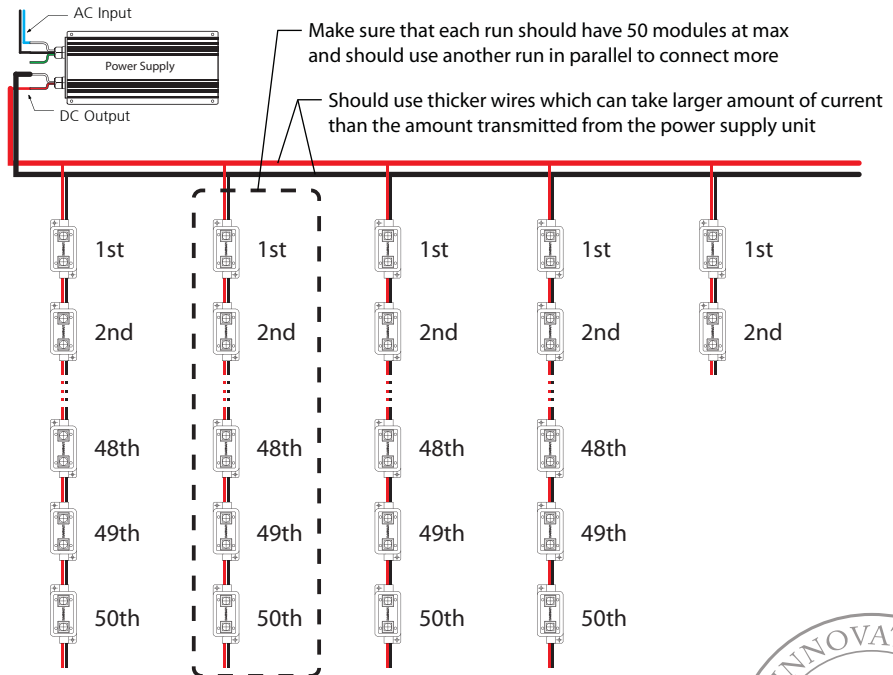
EN 55015/A2 : 2009
 EN 61547/2009
 EN 62031/2008



FEATURES



WIRING GUIDE



Specifications subject to change without notice