



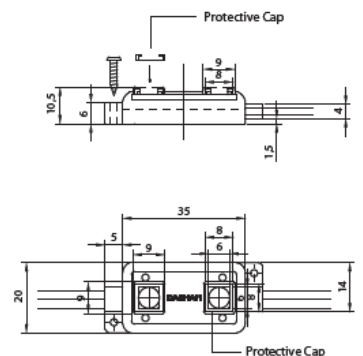
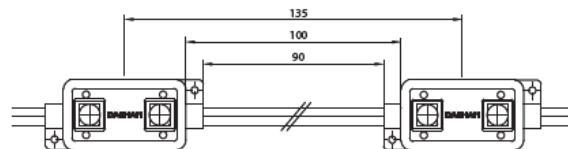
LOW PROFILE VERSATILE LED MODULE FOR SIGNS

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, especially with its transparent resin body to protect itself against tough weather like rain, snow, direct sun light, and dust. 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.
- Weather proof system
- 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

PHYSICAL

Length : 35mm (1.38 in.)
 Width : 20mm (0.79 in.)
 Thickness : 10.5mm (0.41 in.)
 Weight : 12g
 Lamp Pitch : 20 mm (0.79 in., 2 LED Lamps)



OPTICAL CHARACTERISTICS

Available Color	Luminous Flux (lm)			Dominant Wave Length & Color Temperature			Spectral Half Width	Viewing Angle
	Min	Typical	Max	Min	Typical	Max	$\lambda_{1/2}$	$2\Theta_{1/2}$
White	-	25	27	9,100K	10,000K	12,000K	-	120
Warm White	-	24	26	3,200K	3,600K	3,800K	-	120
Red	-	5	6	623nm	625nm	628nm	20	120
Green	-	13	14	525nm	527nm	530nm	35	120
Blue	-	3	4	455nm	460nm	465nm	25	120

*CRI (Color Rendering Index) for white product types is 70 / *Spectral width at half of the peak intensity / *Luminous Flux measuring equipment is CASI40B
 *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 (white, and warm white), 35mA (red, green, and blue)
 Power Consumption : 0.60 W (white, and warmwhite, 32 lumen per watt), 0.42 W (red, green, and blue)
 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

ESD Protection : Industry standard electro-static discharge protection
 IP65 : Prevents water & dust penetration, operative under water
 Reverse voltage protection : Device will prevent incoming power source on improper input connection

CONSTRUCTION

White LED Lamp : 3 chips white phosphor LED lamp, chip & packaging by Samsung
 Color LED Lamp : 2 chips LED lamp, chip & packaging by Samsung
 Body : PVC(Polyvinyl Chloride) transparent resin, 96% transparency
 PCB : FR-4 fiber glass epoxy resin, quad layered
 Lead wire : Copper solid wire, semi-rigid PVC, UL VW-1, CSA 80 celsius 300V

APPLICATIONS

Channel letters - open & 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 55015:2000+A1:2001+A2:2002 Class B
 EN 61547:1995+A1:2000



FEATURES

42,500H LIFETIME

WEATHER PROOF

CONSTANT CURRENT DRIVING SYSTEM



DC12V

CONNECTION GUIDE WITH SMPS

