

i-STOP[®]

Solar-Powered LED-Illuminated Transit Stop



Carmanah[®]



○ **Solar-powered energy system**
Integrated solar-powered low voltage system: no additional battery or power-source required.

○ **High intensity, bright LEDs**

○ **No bulb replacement**
Uses long lasting LEDs (light emitting diodes) (rated for 100,000 hours) - which means no bulb replacement.

○ **Sleek design**
Sleek styling, makes for an aesthetically pleasing addition to any community.

○ **Fits standard poles**
Affixes to round, square or octagonal poles.

○ **No maintenance for over 5 years**
Scheduled maintenance or servicing should not be required for over 5 years (and often only the battery pack requires replacement after 5 years of use).

○ **Rugged construction**
Water and vandal resistant with security hardware and fasteners used throughout.

○ **Easy installation**
Installs easily and inexpensively in minutes, with zero trenching and no external wiring required.



i-STOP[®]

The i-STOP[®] solar-powered LED lighting system provides a safer bus stop environment with the following features:



i-SIGNAL[™] Flashing Beacon

- An efficient day/night signaling device enables waiting passengers to notify oncoming buses that a stop is required
- This unique patented feature, reduces or eliminates rider pass-bys
- Increases ridership



Security Downlighting

- Bright white safety lighting
- User activated at the push of a button
- Provides enhanced security and convenience for waiting passengers
- When mounted on a 10 foot pole, provides direct lighting of approximately 6 ft in diameter and ambient light for a larger area



Illuminated Schedule

- On demand illumination using unique LED edge-lighting
- Sleek, compact, vandal-resistant design offering maximum viewing area

New and Improved Activation Buttons

- UL compliant
- ADA compliant
- 2" round stainless steel
- Self illuminating with an LED in the center of each button
- Vandal resistant
- Braille button identification plate for visually impaired persons

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CHANGE THE WORLD WITH US[™]



What do transit agencies say about the benefits of the i-STOP® system?

The i-STOP® system is a wise investment

"Whenever you have light at night, you have a safer area regardless of where you are. It reduces rider pass-bys by clearly signaling bus operators... This project is a smart infrastructure investment from a cost-benefit perspective. Installations are quick and inexpensive because each unit is self-contained and requires no digging or electrical hookup." - TJ Ross, Executive Director, PACE Suburban Bus

The i-STOP® system intensifies customer satisfaction and increases safety

"Our drivers really like the signal and say it makes their jobs safer and easier...also, the security down-lighting provides a bright halo of light that greatly improves safety and convenience for our customers. Our analysis...also found the i-STOP by far to be the easiest product to assemble and install. Last, but not least, we judged the i-STOP to be the most aesthetically pleasing product available on the market..." - Joe Meer, Morongo Basin Transit Authority, Joshua Tree, CA

The i-STOP® system can increase ridership

"Last month, Pace [installed] solar-powered illuminated bus stops installed along the Sibley Boulevard route in Harvey, Dolton and Calumet City. 'They want to make sure the drivers are seeing them at night,' said Blaine Krage, a Pace spokesman. 'With it getting dark early now, and if you're at a stop where you can have a light turned on for added safety, we think that definitely helps,' Krage said. 'Conveniences like that help draw people to public transit when you are making it easier for them to ride,' Krage said." - Virginia Groark, Tribune staff reporter. Chicago Tribune. Chicago, Ill.: Dec 6, 2003. pg. 4

SPECIFICATIONS

i-SIGNAL™ Flashing Beacon (US Patent #6,355,989)

Night visibility range	~ 1 Mile (1.6km)
Day visibility range	~ 0.25 Mile (0.4km)
Flasher colors	White
Illumination technology	Bright, high-intensity LEDs
Flash pattern	60 fpm
Duration of flashing per activation	60 seconds default *

Security Downlighting

Illumination technology	Bright, high-intensity LEDs
Output color	White
Illumination area	~ 6ft. (182 cm) diameter circle from 10ft. (304 cm) pole
Output Orientation	Four options in relation to i-Signal™
"On" time per activation	5 minutes default *

Illuminated Schedule (Patent Pending)

Illumination technology	Bright, high-intensity LEDs, edge-lit acrylic panel
"On" time per activation	30 seconds default *
Dimensions (viewable area)	5.9 inches (15 cm) wide x 19.9 inches (51 cm) long *
Actual dimension of schedule	6.25 inches (15.88 cm) wide x 19.75 inches (50.17 cm) long*
Construction	Vandal-resistant aluminum extrusion
Trim	Powder coated any color

Solar Engine (Patent issued)

Solar panel	High-efficiency mono-crystalline solar cells. Potted with UV-resistant polyurethane. Domed for superior protection and efficiency
Battery	Pure-lead thin plate with starved-electrolyte (fully recyclable)
Light control	Automatic Light Control (ALC) adjusts illumination intensity/autonomy according to prevailing weather and solar conditions
Power Management System	MICROSOURCE® Energy Management System
Minimum autonomy	35 Hours
Minimum equivalent peak sun hours to maintain minimum autonomy	2 Hours
Operating temperature range	-40°F to 176°F (-40°C to +80°C)
Housing	Injection-molded high-impact polycarbonate, UV-protected
Patent	ALC patent #: 6,573,659 and 5,782,552

* Contact Carmanah for different options
All specifications are subject to change without notice.

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Document: SPC_TRAN-istop_vB

