



Internally Illuminated Street-Name Sign

Typical Applications

- Overhead street-name signs for:
- Large signalized intersections
  - Tourist corridors
  - Business Districts
  - Streetscape projects

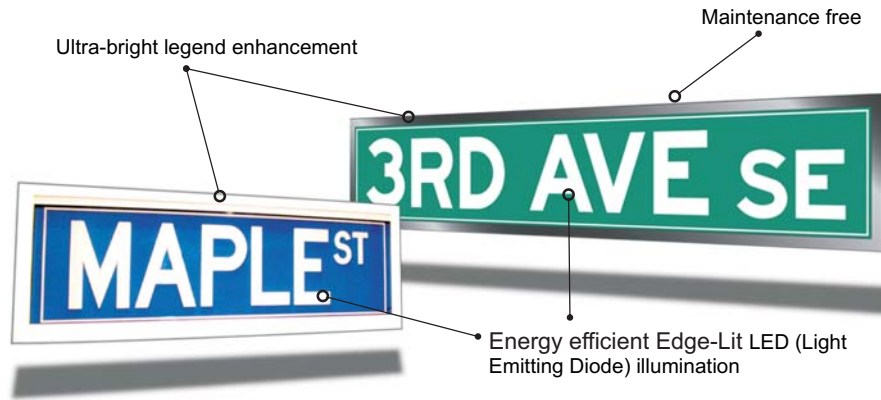
Features

- Maintenance free operation for 50,000 hrs +
- MUTCD Compliant illumination of letters and characters
- Ultra-bright legend enhancement process provides 5 times the brightness of other edge-lit signs
- Crisp, uniform illumination
- Thin profile (1.38" thick single sided, 1.77" double sided)
- Durable construction
- Cold temperature (-40° F) performance
- Strapping bracket mounting or underhang mounting

Benefits

- No bulbs or ballast to replace
- Consumes 1/10th the energy of a fluorescent sign and ½ the energy of LED retrofit kits
- Avoid EPA regulations for fluorescent bulb disposal
- Addresses visibility needs of older drivers
- Low-power requirements facilitates use of battery back-up systems
- High legend-background contrast ratio optimizes sign visibility and legibility

For more information, visit [www.roadlights.com](http://www.roadlights.com)



**Carmanah's LED Edge-lit technology provides exceptional visibility and legibility of street-name signs.**

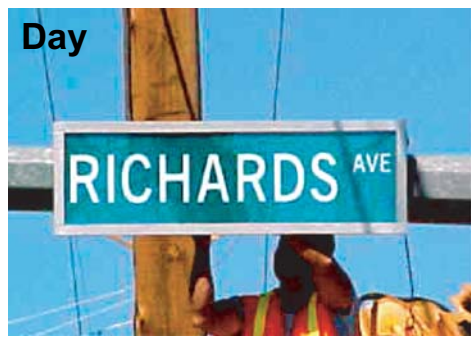
LED Edge-lit technology consists of LEDs mounted on the edges of the sign that illuminate the sign surface, as opposed to the light source being behind the sign. Carmanah's Edge-lit manufacturing process was originally developed for the commercial sign industry and is in use by corporations worldwide. Through Carmanah's proprietary legend enhancement processes, light output of the sign legend is optimized, providing highly visible, crisp character definition that is far more effective than back-lit illumination.

**SAVINGS**

Agencies already using traditional fluorescent illuminated signs will realize tremendous savings in energy and maintenance costs by replacing the signs. Signs require an average of just 10% of the energy required by traditional signs, and there are no bulbs or ballasts to replace, ever.

**SAFETY**

Advanced visibility and legibility of street-name signs is critical for safe maneuvering, particularly for drivers unfamiliar with an area. Overhead signs receive only 10% of headlamp illumination compared to roadside signs, making retro-reflective signs far less effective in this application. Additionally, changes in headlamp specifications will reduce overhead sign illumination by 33%. The 2003 MUTCD recommends illuminating overhead signs.



**STREETScape BEAUTIFICATION**

Carmanah has been manufacturing custom illuminated signs in all shapes and colours for over 10 years. Major multinational customers include McDonalds, Hilton Hotels, Bicardi and many more. Carmanah can create signs with custom logos, colours and sizes to highlight special traffic corridors, historic town centers, and other purposes.

EDGE-LIT LED STREET-NAME SIGN

Model R409

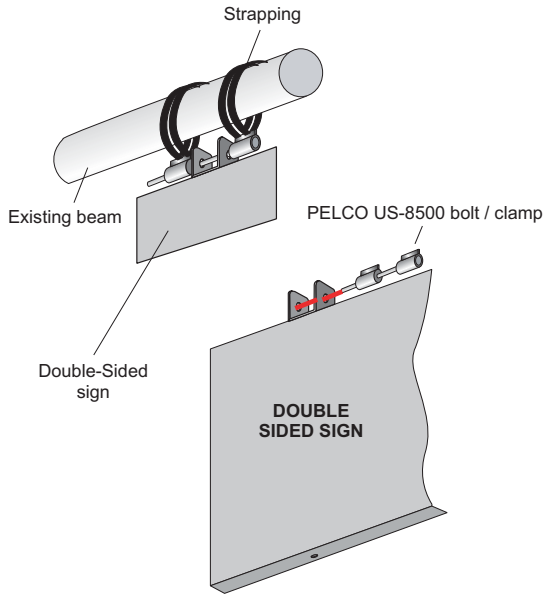
THE LEADER IN LED LIGHTING SOLUTIONS



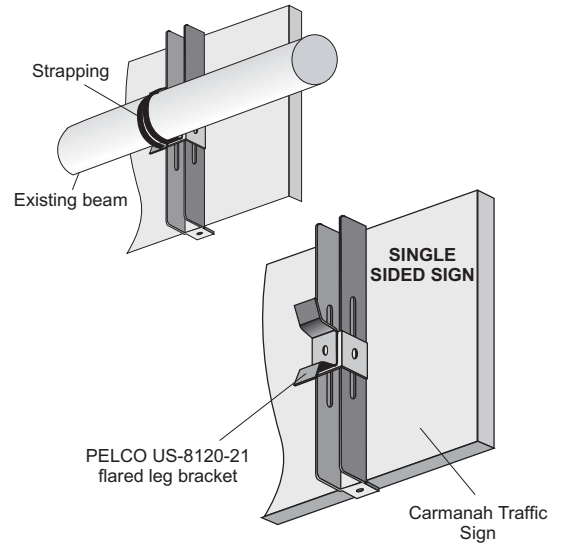


Internally Illuminated Street-Name Sign

**Underhang Mounting**



**Strapping Bracket Mounting**



**SPECIFICATIONS**

**MECHANICAL**

Length	48" - 96" at 6" increments
Height	15", 18", 20", 24"
Thickness	1.38" Single sided, Double sided 1.77"
Weight	Maximum: 6 lbs/sqft single sided, 8lbs/sqft double sided

**MATERIAL**

Frame	6063-T5 Aluminum housing with durable non-glare powder coat finish
Lens	High impact strength / UV and abrasion resistant Polycarbonate

**MOUNTING OPTIONS**

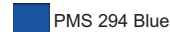
Under-hang mount (accepts Pelco Part US-8500 or equivalent)  
 Strap mount (accepts Pelco Part US-8120-21 or equivalent)

**LIGHT OUTPUT**

Luminance of sign characters	250 cd/m <sup>2</sup>
Energy requirements	Maximum: Two Watts per square foot maximum (single-sided), Four Watts per square foot (double-sided)
Power Supply	120 VAC in, UL Class 2 and UL Outdoor damp location rated
Operating Temperature	-40 deg. F to +140 deg. F

**STANDARD MUTCD COLORS**

PMS 342 Green and PMS 294 Blue Standard MUTCD colors available. Retro-reflective sheeting available for sign visibility during power outages



**FONTS**

Standard MUTCD HWY E Series B, C, D, E Modified, Custom fonts available

All specifications are subject to change without notice.



**Carmanah**

Contact:  
 Roadways Division

**Carmanah Technologies Inc.**  
 Building 4, 203 Harbour Road  
 Victoria, British Columbia  
 Canada V9A 3S2

Toll-Free: 1-877-722-8877  
 General: (250) 380-0052  
 Fax: (250) 380-0062  
 E-mail: info@roadlights.com  
 URL: www.roadlights.com

Carmanah is a public corporation - TSX VE: CMH

Carmanah is an ENERGY STAR® partner.

© 2004 Carmanah Technologies Inc.  
 "Carmanah" and Carmanah logo are trademarks of Carmanah Technologies Inc.  
 Document: Rd-R409-v1r02-190704

**Model R409**

THE LEADER IN LED LIGHTING SOLUTIONS

