Municipal Lighting Systems
About

Whelen Engineering has been designing and manufacturing professional lighting system solutions for over fifty years. Engineered to meet all demands of the heavy-duty truck market, Whelen is proud to provide lighting solutions that are designed for all operating conditions.

Providing safe, reliable systems to both operators and the motoring public is at the forefront of Whelen’s mission. As an industry leader, Whelen prides itself in providing flexible system programmability and introducing innovative, high quality products for further safety enhancement.

We appreciate your loyalty as we continue to drive innovation.
MUNICIPAL SYSTEM
FEATURES

Optics

- Certified by an AMECA-accredited testing laboratory to meet or exceed SAE warning lighting requirements in the appropriate specified safety colors
- Lighting profile easily defines the width and height of a highway vehicle
- Wide-angle Super-LED® lightheads ensure visibility when dump body is raised or lowered, including forward dump bodies
- All warning lighthead colors are Amber. For other colors, contact factory
- Multiple flash patterns and sequence options provide improved reference for motorists in determining the distance to and location of maintenance vehicles

Design

- Pure copper stranded conductors used in all TPE cables are tin coated, providing superior longevity
- A 12” protective section of flex-tubing and coupling to the housing prevents cable chafing
- All rear lightheades are furnished with Deutsch® waterproof connectors
- Each system includes a complete installation kit, including cable harnesses
- 400 and 700 Series lighthead housings are 7 gauge welded stainless steel
Municipal System Components

Front System Components
Front system components are offered in four Super-LED® models with combined 360° warning visibility. Includes 60’ of heavy-duty TPE cable.

- Micro Freedom™
  - 3-3/4” (95mm) H x 9-5/16” (236mm) D x 12-5/16” (312mm) L

- Micro 400
  - 3-3/4” (95mm) H x 10-3/4” (272mm) D x 10” (254mm) L

- Stainless Steel Micro 400
  - 3-5/8” (92mm) H x 8-1/4” (209mm) D x 8-1/4” (209mm) L

- Remote L31 Beacon
  - 4-1/2” (102mm) H x 7-3/16” (182mm) Dia.

Rear Lightheads
Rear lightheads are offered in three sizes. Super-LED lightheads have specially designed lenses for wide light output. All lightheads are supplied with Deutsch® waterproof connectors.

- 400 Series
  - Height: Single: 5-7/8” (149mm)
  - Double: 11-3/8” (290mm)
  - Triple: 17” (430mm)
  - Width: 3-1/2” (88mm)
  - Depth: 4-3/4” (120mm)

- 700 Series
  - Height: Single: 8-3/8” (213mm)
  - Double: 16-1/4” (412mm)
  - Triple: 24” (608mm)
  - Width: 3-1/2” (88mm)
  - Depth: 5” (127mm)

Rear Housings
Rear mounted lightheads include 30’ heavy-duty, oil resistant TPE jacketed cable with strain relief flex-tubing and couplings that provide added safeguard against the elements.

- 400 Series

- 700 Series

*Five year warranty.

WARNING: These products may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, visit whelen.com/regulatory.
**Light Systems**

**SYS401 & SYS701**  
*4 Light System*  
Two Micro Freedom™ lighthead assemblies with extended corner modules and two rear lighthead options

**SYSTEM 401** with 400 Series Lightheads

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS401A</td>
<td>Warning</td>
</tr>
<tr>
<td>SYS401B</td>
<td>Warning and brake/tail/turn</td>
</tr>
<tr>
<td>SYS401D</td>
<td>Warning, brake/tail/turn, and back-up</td>
</tr>
</tbody>
</table>

**SYSTEM 701** with 700 Series Lightheads

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS701A</td>
<td>Warning</td>
</tr>
<tr>
<td>SYS701B</td>
<td>Warning and brake/tail/turn</td>
</tr>
<tr>
<td>SYS701D</td>
<td>Warning, brake/tail/turn, and back-up</td>
</tr>
</tbody>
</table>

**SYS402 & SYS702**  
*3 Light System*  
One L31 remote beacon and two rear lighthead options

**SYSTEM 402** with 400 Series Lightheads

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS402A</td>
<td>Warning</td>
</tr>
<tr>
<td>SYS402B</td>
<td>Warning and brake/tail/turn</td>
</tr>
<tr>
<td>SYS402D</td>
<td>Warning, brake/tail/turn, and back-up</td>
</tr>
</tbody>
</table>

**SYSTEM 702** with 700 Series Lightheads

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS702A</td>
<td>Warning</td>
</tr>
<tr>
<td>SYS702B</td>
<td>Warning and brake/tail/turn</td>
</tr>
<tr>
<td>SYS702D</td>
<td>Warning, brake/tail/turn, and back-up</td>
</tr>
</tbody>
</table>

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*Five year warranty.*
**SYS103**
*2 Light System*
Two Micro Freedom™ lighthead assemblies with extended corner modules

**SYSTEM 103**
SYS103 Two front Amber warning lights

**SYS404 & SYS704**
*2 Light System*
Two rear lighthead options

**SYSTEM 404**
with 400 Series Lightheads
- SYS404A Warning
- SYS404B Warning and brake/tail/turn
- SYS404D Warning, brake/tail/turn, and back-up

**SYSTEM 704**
with 700 Series Lightheads
- SYS704A Warning
- SYS704B Warning and brake/tail/turn
- SYS704D Warning, brake/tail/turn, and back-up

**SYS405 & SYS705**
*4 Light System*
Two Micro 400s and two rear lighthead options

**SYSTEM 405**
with 400 Series Lightheads
- SYS405A Warning
- SYS405B Warning and brake/tail/turn
- SYS405D Warning, brake/tail/turn, and back-up

**SYSTEM 705**
with 700 Series Lightheads
- SYS705A Warning
- SYS705B Warning and brake/tail/turn
- SYS705D Warning, brake/tail/turn, and back-up

**SYS406 & SYS706**
*4 Light System*
Two L31 remote beacons and two rear lighthead options

**SYSTEM 406**
with 400 Series Lightheads
- SYS406A Warning
- SYS406B Warning and brake/tail/turn
- SYS406D Warning, brake/tail/turn, and back-up

**SYSTEM 706**
with 700 Series Lightheads
- SYS706A Warning
- SYS706B Warning and brake/tail/turn
- SYS706D Warning, brake/tail/turn, and back-up

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*Five year warranty.*
**SYS107**  
*2 Light System*  
Two L31 Beacons

**SYSTEM 107**

SYS107  Two front Amber warning lights

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**SYS108**  
*2 Light System*  
Two Micro 400s

**SYSTEM 108**

SYS108  Two front Amber warning lights

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**SYS109**  
*2 Light System*  
Two stainless steel Micro 400s

**SYSTEM 109**

SYS109  Two front Amber warning lights

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**SYS410 & SYS710**  
*4 Light System*  
Two stainless steel Micro 400s and two rear lighthead options

**SYSTEM 410**  
with 400 Series Lightheads

SYS410A  Warning  
SYS410B  Warning and brake/tail/turn  
SYS410D  Warning, brake/tail/turn, and back-up

**SYSTEM 710**  
with 700 Series Lightheads

SYS710A  Warning  
SYS710B  Warning and brake/tail/turn  
SYS710D  Warning, brake/tail/turn, and back-up

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SmartLogic™ Programmable Flasher

Engineered to maintain situational awareness of the operator, the SmartLogic Programmable Flasher houses numerous innovative technologies that deliver highly effective visual warning.

- Housed in a junction box for ease of mounting, along with wiring and connection protection
- Software is configurable via USB port
- All 8 outputs are internally protected and fused
  - Each solid-state output is rated for 5 amps
- 8 inputs
  - 5 activating inputs
  - 3 non-activating inputs for low power, photocell, and brake/tail/turn cut-off
- Default flash pattern
- LED onboard diagnostic indicators signify active outputs and blown fuses
- Day and night mode truck set-ups

*Five year warranty.*

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Introducing industry-first technology for preventing snow build up on rear corner post lights in most conditions.

- Tempered glass heats uniformly and keeps lenses at 45° F in most conditions
- Switches on automatically when the temperature drops below 40° F, providing zero operator involvement
- LED indicator light in the cab automatically notifies operator that the system is on or off
- On/Off switch located in the cab allows operator to manually control the system if needed
- Tempered glass uses between 1-4 amps (colder temperature increases amp draw)
- Housing and lens design accommodates three lightheads
- 14 gauge wire included

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H400SD</td>
<td>400 Series Heated Lens System</td>
</tr>
<tr>
<td>H400VD</td>
<td>400 V-Series™ Heated Lens System</td>
</tr>
</tbody>
</table>

NOTE: Municipal lighting system sold separately. Option includes heated lens system only. Works with following system models: SYS401D, SYS402D, SYS404D, SYS405D, SYS406D and SYS410D

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400 Series
Super-LED® Back-Up Light

The 400 Series Super-LED Back-Up Light provides high intensity work zone illumination to increase operator and workforce safety.

- Downward ground illumination optics
- Available in horizontal or vertical mount
- Mounts into 400 Series housings
- Hard-coated lenses minimize environmental damage from sand, sun, salt, and road chemicals

SUB40BUH Substitute (2) 400 Horiz Back-ups for Vert

400 V-Series™

Dual purpose optics provide maximum rear corner post warning for all dump body positions.

- SAE Class 1 Certified
- Single color warning utilizing linear technology placed in both directions
- Hard-coated lenses minimize environmental damage from sand, sun, salt, and road chemicals
- Vibration, moisture, and corrosion resistant
- Mounts vertically into stainless steel housing
- Works in conjunction with current flasher models
- Conformal coated PC boards
- 12” pigtail with Deutsch® waterproof connector and strain relief

SUB4V400 Substitute (2) Amber 400VV for 400 Linear Warning

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*Five year warranty.
Municipal Options

Switch Control Panels

- Compact rocker style single pole/single throw switches
- Black epoxy-finished steel housing
- Individual spade-type fuses conveniently located on rear mounted fuse strip
- Active LED indicators light up to indicate function in use
- Ignition controlled backlit legend windows for easy visibility in any light
- Backlight circuit can be connected to vehicle dimmer switch to control backlight intensity
- 72 commonly used press-on switch function label legend tabs
- 25 amps peak

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCC4W</td>
<td>Four 25 amp switches</td>
<td>2-1/4” (57mm) H x 3” (76mm) W x 4” (102mm) D</td>
</tr>
<tr>
<td>PCC6W</td>
<td>Six 25 amp switches</td>
<td>2-1/4” (57mm) H x 6” (152mm) W x 3-9/16” (91mm) D</td>
</tr>
</tbody>
</table>

L31 Branch Guard
Cast aluminum brush guard for one beacon.

ADD4TIR3 400 Series
ADD7TIR3 700 Series

TIR3® Super-LED® Lighthead
Add visibility with a TIR3 lighthead mounted to the side of a 400 or 700 Series housing, providing 90° of warning light coverage. Offered in pairs.

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*Five year warranty.*
**Photocell**
Photocell option for Hi/Low power, includes Black flange

**Pioneer Micro™**
- Die-cast aluminum Black powder coated housing
- Powder coated stainless steel bail bracket with 3/8" stud carriage bolt mount
- Optic lens changes easily via four screws in picture frame fixture
- Includes three additional lenses:
  - Flood lens with 90° x 20° wide optics
  - Flood lens with 40° x 20° optics
  - Flood lens with 40° x 8° horizontal optics
- 12 VDC

<table>
<thead>
<tr>
<th>MPBB</th>
<th>Pioneer Micro</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPBBA</td>
<td>Pioneer Micro, Amber</td>
</tr>
</tbody>
</table>

**Wing Plow™ Lighting Systems**
- Two styles of Amber lightheads provide complete coverage whether snowplow wing is in the operation position or in the stowed travel position
- Pairs can be synchronized for alternating or simultaneous flashing
- Fully encapsulated for vibration, moisture, and corrosion resistance

<table>
<thead>
<tr>
<th>WPLOW3AA</th>
<th>TIR3™ light modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPLOW1A</td>
<td>Wing Plow Operating Amber TIR3</td>
</tr>
<tr>
<td>WPLOWZ1A</td>
<td>Wing Plow Operating Amber LINZ6™</td>
</tr>
<tr>
<td>WPLOW2A</td>
<td>Wing Plow Stowed Amber TIR3</td>
</tr>
<tr>
<td>WPLOWZ2A</td>
<td>Wing Plow Stowed Amber LINZ6</td>
</tr>
<tr>
<td>WPLOWZ3A</td>
<td>LINZ6 light modules</td>
</tr>
</tbody>
</table>

**PAR-36 Work Light**
- Combination spot/floodlight with rubber housing and stainless steel swivel bracket and hardware
- Polycarbonate outer lens resists scratches and UV damage
- Reverse polarity protected

| P36SLCHG   | PAR-36              |

**Cable Lengths**
Substitute 45’ or 30’ cables for standard 60’ cables. Offered in single or pairs.

<table>
<thead>
<tr>
<th>SUBF4C45</th>
<th>Pair, 45’</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBF4C30</td>
<td>Pair, 30’</td>
</tr>
<tr>
<td>SUBF2C45</td>
<td>Single, 45’</td>
</tr>
<tr>
<td>SUBF2C30</td>
<td>Single, 30’</td>
</tr>
<tr>
<td>SUBR2C45</td>
<td>Substitute 45’ 2/C Rear Cable</td>
</tr>
<tr>
<td>SUBR5C45</td>
<td>Substitute 45’ 5/C Rear Cable</td>
</tr>
</tbody>
</table>

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Whelen has supported NASCAR and its grass roots racing series for over 25 years. Whelen sponsors the Whelen All-American Series, the Whelen Euro Series, and the Whelen Modified Tour. Additionally, Whelen is proud to provide the Official Warning Lights of NASCAR.