General Description:
R-9811 Solar Light Bollards increase safety and visibility for vehicles and pedestrians—ideal for parking lots, walkways and plazas. Intelligent energy management systems ensure maximum outputs based on weather and time of year. High-capacity batteries allow lights to operate for 14 days without direct sunlight. Lighting systems are fully contained, requiring no additional hardwiring or underground conduits. Choose from a range of custom lighting colors, distribution areas and scheduling options. Powder coatings are available in 1 of 6 colors.

Specifications:
- Height: 36”
- Base Diameter: 6”
- Weight: 51 lbs (Bollard Only)
- Material: Steel Base with Aluminum Cap
- Max. Interior Security Post Size: 4 1/2” x 20” (Diameter x Height)

Finish Options:
- Polyester Powdercoated

See Reliance Foundry’s standard color options at:
www.reliance-foundry.com/bollard/colors-bollards

Installation Options:
- Fixed - Anchor Casting in New Concrete
  (see sheet 2 of 6)
- Fixed - Concrete Insert Anchor in Existing Concrete
  (see sheet 3 of 6)
- Fixed - Adhesive Anchor in Existing Concrete
  (see sheet 4 of 6)
- Post Cover - New Post in New Concrete
  (see sheet 5 of 6)
- Post Cover - Existing Post with Adhesive Anchor
  (see sheet 6 of 6)

For more information on bollard post installation, please visit:
www.reliance-foundry.com/bollard/installation-bollards

Light Color Options:
- 4500K Neutral White
- 3000K Warm White

On-Off Program Options:
- Dim to 30% @ 5 hours
- Off @ dawn
- Off @ 6 hours
- Dim to 30% @ 6 hours
- Off @ 5 hours

Optional Accessories:
- Chain Eye
- Quick Link
- Chain (5/16”)
- Padlock, Brass (1 3/4”)
- Padlock, Stainless Steel (2”)

See Reliance Foundry’s optional accessories at:
www.reliance-foundry.com/bollard/accessories-bollards
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Finish Options:
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- See Reliance Foundry’s standard color options at: www.reliance-foundry.com/bollard/colors-bollards

Installation Options:
- Fixed - Anchor Casting in New Concrete (see sheet 2 of 6) 
- Fixed - Concrete Insert Anchor in Existing Concrete (see sheet 3 of 6) 
- Fixed - Adhesive Anchor in Existing Concrete (see sheet 4 of 6) 
- Post Cover - New Post in New Concrete (see sheet 5 of 6) 
- Post Cover - Existing Post with Adhesive Anchor (see sheet 6 of 6)

For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

Light Color Options:
- 4500K Neutral White 
- 3000K Warm White 

On-Off Program Options:
- Dim to 30% @ 5 hours 
- Off @ dawn 
- Off @ 6 hours 
- Dim to 30% @ 6 hours 
- Off @ 5 hours

Notes:
1) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others. 
2) Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements. 
3) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation. 
4) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

Tools needed: 
1) Measuring tape 
2) 1 1/2" wrench 
3) Special hex key
**General Description:**

R-9811 Solar Light Bollards increase safety and visibility for vehicles and pedestrians—ideal for parking lots, walkways and plazas. Intelligent energy management systems ensure maximum outputs based on weather and time of year. High-capacity batteries allow lights to operate for 14 days without direct sunlight. Lighting systems are fully contained, requiring no additional hardwiring or underground conduits. Choose from a range of custom lighting colors, distribution areas and scheduling options. Powder coatings are available in 1 of 6 colors.

**Specifications:**

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  - 4 1/2" x 20" (Diameter x Height)

**Finish Options:**

- Polyester Powdercoated
  
  See Reliance Foundry's standard color options at:
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**Installation Options:**

- Fixed - Anchor Casting in New Concrete
  (see sheet 2 of 6)
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  (see sheet 3 of 6)
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  (see sheet 5 of 6)
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  (see sheet 6 of 6)

For more information on bollard post installation, please visit:
- [www.reliance-foundry.com/bollard/installation-bollards](http://www.reliance-foundry.com/bollard/installation-bollards)

**Light Color Options:**

- 4500K Neutral White
- 3000K Warm White

**On-Off Program Options:**

- Dim to 30@5 hours
- Off @ dawn
- Off @ 6 hours
- Dim to 30@6 hours
- Off @ 5 hours

**Tools needed:**

1) Measuring tape
2) 1 1/8" wrench
3) Special hex key
4) Hammer drill
5) 1" Masonry drill bit
6) Hammer
7) Drop-in concrete insert setting tool

**Notes:**

1) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.
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**PARTS LIST**

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<th>QTY</th>
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<th>MATERIAL</th>
<th>WEIGHT</th>
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<td>1</td>
<td>R9811B</td>
<td>R9811 Bollard Base</td>
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<td>1/2 lbs</td>
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<tr>
<td>1</td>
<td>1</td>
<td>R9811C</td>
<td>R9811 Bollard Solar Light Cap (Option of SYM or ASYM)</td>
<td>Cast Aluminum Powder Coated</td>
<td>19 lbs</td>
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<tr>
<td>1</td>
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<td>R9810B</td>
<td>Drop-in Concrete Insert 3/4&quot;</td>
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<td>1/2 lbs</td>
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<td>1/2 lbs</td>
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<td>Washed 3/4&quot; OD 2&quot;</td>
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<td>1/8 lbs</td>
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<tr>
<td>1</td>
<td>1</td>
<td>Hex Nut 3/4&quot;</td>
<td>Hex Nut 3/4&quot; - requires 1 1/8&quot; wrench</td>
<td>Steel Plated</td>
<td>1/8 lbs</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Button Head Bolt TK 1/4&quot; x 1/2&quot;</td>
<td>Hexagon Socket Button Head Cap Bolt Tamper Resistant 1/4&quot; x 1/2&quot; - requires special hex key</td>
<td>Stainless Steel</td>
<td>1/16 lbs</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Hex Nut 3/4&quot;</td>
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<td>1/8 lbs</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>Button Head Bolt TK 1/4&quot; x 1/2&quot;</td>
<td>Hexagon Socket Button Head Cap Bolt Tamper Resistant 1/4&quot; x 1/2&quot; - requires special hex key</td>
<td>Stainless Steel</td>
<td>1/16 lbs</td>
</tr>
</tbody>
</table>

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**Bollard R-9811**

**General Description:**
R-9811 Solar Light Bollards increase safety and visibility for vehicles and pedestrians—ideal for parking lots, walkways and plazas. Intelligent energy management systems ensure maximum outputs based on weather and time of year. High-capacity batteries allow lights to operate for 14 days without direct sunlight. Lighting systems are fully contained, requiring no additional hardwiring or underground conduits. Choose from a range of custom lighting colors, distribution areas and scheduling options. Powder coatings are available in 1 of 6 colors.

**Specifications:**
- **Height:** 36"  
  - **Base Diameter:** 6"  
  - **Weight:** 51 lbs (Bollard Only)  
  - **Material:** Steel Base with Aluminum Cap  
  - **Max. Interior Security Post Size:** 4 1/2" x 20" (Diameter x Height)

**Finish Options:**
- Polyester Powdercoated

See Reliance Foundry's standard color options at:  

**Installation Options:**
- Fixed - Anchor Casting in New Concrete  
  (see sheet 2 of 6)  
- Fixed - Concrete Insert Anchor in Existing Concrete  
  (see sheet 3 of 6)  
- Fixed - Adhesive Anchor in Existing Concrete  
  (see sheet 4 of 6)  
- Post Cover - New Post in New Concrete  
  (see sheet 5 of 6)  
- Post Cover - Existing Post with Adhesive Anchor  
  (see sheet 6 of 6)

For more information on bollard post installation, please visit:  

**Light Color Options:**
- 4500K Neutral White  
- 3000K Warm White

**On-Off Program Options:**
- Dim to 30% @ 5 hours  
- Off @ dawn  
- Off @ 6 hours  
- Dim to 30% @ 6 hours  
- Off @ 5 hours

**Notes:**
1) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.  
2) Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.  
3) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.  
4) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

**Tools needed:**
- Measuring tape  
- 1 1/2" wrench  
- Special hex key  
- Hammer drill  
- 1 1/8" Masonry drill bit  
- Caulking gun and utility knife

**Notes:**
- Use hammer drill to make hole 1 1/8" dia. x 4" depth.  
- Clean drill hole of debris.  
- Cauk adhesive into hole from bottom up and fill 2/3 full.  
- Push threaded bar into adhesive and turn to ensure bonding.  
- Ensure bar is perpendicular and extend no more than 23" above grade.  
- Wait at least 45 minutes for adhesive to set.

**New Plan Drawing and Design are, and at all Times Remain, the Exclusive Property of Reliance Foundry Co. Ltd.**

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<th>WEIGHT</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>R9811B</td>
<td>R9811 Bollard Base</td>
<td>Steel Powder Coated</td>
<td>32 lbs</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>R9811C</td>
<td>R9811 Bollard Solar Light Cap (Option of SYM or ASYM)</td>
<td>Cast Aluminum Powder Coated</td>
<td>19 lbs</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>R7500BAR1</td>
<td>R7500 Threaded Bar 1&quot; x 27&quot;</td>
<td>Steel Plated</td>
<td>5 lbs</td>
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<tr>
<td>4</td>
<td>1</td>
<td>2 1/8&quot; Wash</td>
<td>Washer 1&quot; OD 2&quot; Thick 1/8&quot;</td>
<td>Steel Plated</td>
<td>1/8 lbs</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>Hex Nut 1&quot;</td>
<td>Hex Nut 1&quot; - requires 1 1/2&quot; wrench</td>
<td>Steel Plated</td>
<td>1/4 lbs</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>Bollard Head Bolt TR 1/4&quot; x 1/2&quot;</td>
<td>Hexagon Socket Button Head Cap Bolt Tamper Resistant 1/4&quot; x 1/2&quot; - requires special hex key</td>
<td>Stainless Steel</td>
<td>1/4 lbs</td>
</tr>
</tbody>
</table>

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**Bollard R-9811**

**General Description:**
R-9811 Solar Light Bollards increase safety and visibility for vehicles and pedestrians—ideal for parking lots, walkways and plazas. Intelligent energy management systems ensure maximum outputs based on weather and time of year. High-capacity batteries allow lights to operate for 14 days without direct sunlight. Lighting systems are fully contained, requiring no additional hardwiring or underground conduits. Choose from a range of custom lighting colors, distribution areas and scheduling options. Powder coatings are available in 1 of 6 colors.

**Specifications:**
- Height: 36”
- Base Diameter: 6”
- Weight: 51 lbs (Bollard Only)
- Material: Steel Base with Aluminum Cap
- Max. Interior Security Post Size: 4 1/2” x 20” (Diameter x Height)

**Finish Options:**
- Polyester Powdercoated

See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

**Installation Options:**
- Fixed - Anchor Casting in New Concrete (see sheet 2 of 6)
- Fixed - Concrete Insert Anchor in Existing Concrete (see sheet 3 of 6)
- Fixed - Adhesive Anchor in Existing Concrete (see sheet 4 of 6)
- Post Cover - New Post in New Concrete (see sheet 5 of 6)
- Post Cover - Existing Post with Adhesive Anchor (see sheet 6 of 6)

For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

**Light Color Options:**
- 4500K Neutral White
- 3000K Warm White

**On-Off Program Options:**
- Dim to 30% @ 5 hours
- Off @ dawn
- Off @ 6 hours
- Dim to 30% @ 6 hours
- Off @ 5 hours

**Notes:**
1) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.
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4) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

**Tools needed:**
1) Measuring tape
2) 1 1/2” wrench
3) Special hex key

**Lighting System Design:**
1) Use 1 piece of 1” nut on bar as anchor in wet concrete.
2) Ensure the bar is centered and extend no more than 23” above grade.
3) Wait until concrete is cured.

**Parts List:**

<table>
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<tr>
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<th>WEIGHT</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>R9811B</td>
<td>R9811 Bollard Base</td>
<td>Steel Powder Coated</td>
<td>32 lbs</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>R9811C</td>
<td>R9811 Solar Light Cap (Option of SYM or ASYM)</td>
<td>Cast Aluminum Powder Coated</td>
<td>19 lbs</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>R7500BAR 1”</td>
<td>R7500 Threaded Bar 1” x 24”</td>
<td>Steel Plated</td>
<td>4 1/8 lbs</td>
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<tr>
<td>4</td>
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<td>Washer 1” OD 2”</td>
<td>Washer 1” OD 2” Thick 1/8”</td>
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<td>1/8 lbs</td>
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<td>Hex Nut 1”</td>
<td>Hex Nut 1” - requires 1 1/2 wrench</td>
<td>Steel Plated</td>
<td>1/4 lbs</td>
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<tr>
<td>6</td>
<td>3</td>
<td>Button Head Bolt 1/4” x 1/2”</td>
<td>Hexagon Socket Button Head Cap Bolt Tamper Resistant 1/4” x 1/2” - requires special hex key</td>
<td>Stainless Steel</td>
<td>1/4 lbs</td>
</tr>
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Bollard R-9811

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Finish Options:
- Polyester Powdercoated

See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

Installation Options:
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For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

Light Color Options:
- 4500K Neutral White
- 3000K Warm White

On-Off Program Options:
- Dim to 30% @ 5 hours
- Off @ dawn
- Off @ 6 hours
- Dim to 30% @ 6 hours
- Off @ 5 hours

Tools needed:
1) Measuring tape
2) 1 1/2" wrench
3) Special hex key
4) Hammer drill
5) 1 1/8" Masonry drill bit
6) Caulking gun and utility knife

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Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada
1-877-789-3245    info@reliance-foundry.com
www.reliance-foundry.com

Bollard R-9811

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<th>MATERIAL</th>
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<tr>
<td>A</td>
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<td>R811B</td>
<td>R811 Bollard Base</td>
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<tr>
<td>B</td>
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<tr>
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<td>Stainless Steel</td>
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