

# E3 SERIES

Includes fixtures E3-R, E3-RL, E3-SQ, E3-SQL, and E3-M.

**LAMP TYPE:** MR11 LED, GU4 bi-pin base – Maximum 3 Watts  
LED module – Maximum 3 Watts

**SUITABLE FOR:** *INDOOR USE • WET LOCATIONS • COMBUSTIBLE SURFACES  
IN-GROUND • CEILING MOUNTING • RECESSED IN WALL*

**CAUTION — RISK OF FIRE.** Verify that power is OFF before installing this fixture.

USE ONLY CLASS 2 POWER SUPPLY OR TRANSFORMER.  
DO NOT INSTALL INSULATION WITHIN 3 in. / 76 mm OF ANY PART OF THE LUMINAIRE.  
FOR REPLACEABLE LIGHT BULB MODELS, MAKE SURE TO NOT EXCEED THE RATED WATTAGE.  
WHEN INSTALLING IN A CEILING, CEILING MUST BE COVERED.



**WARNING — RISK OF ELECTRIC SHOCK.** This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved. Failure to do so may result in serious personal injury or death.

This is a low-voltage fixture for use with maximum 25A, 15V power units only. A remote transformer is required. Do not overload the transformer by installing or relamping with higher wattage lamps that together exceed the capacity of the transformer.



CSA Listed  
File # 190030  
[www.BeachsideLighting.com](http://www.BeachsideLighting.com)  
808-405-6732



## INSTALLATION – Core Drill

1. For existing masonry, use a 2" core drill to make a cavity 3-½" deep (Figure 1a) or up to 5" deep if wire connections will be made directly behind the fixture (Figure 1b). Follow with a small center hole for supply wire access if necessary.
2. Clean hole of any dust or debris.
3. Insert the PVC Housing into the cavity so the end with the inside taper faces out. Construction adhesive such as Liquid Nails is recommended to help secure the Housing.
4. **End of PVC Housing should be flush with finished surface.** Housing cannot be recessed more than ½" from finished surface (back surface of faceplate) or the fixture will not secure properly.
5. Use included silicone-filled wire nuts to join fixture wires to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
6. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

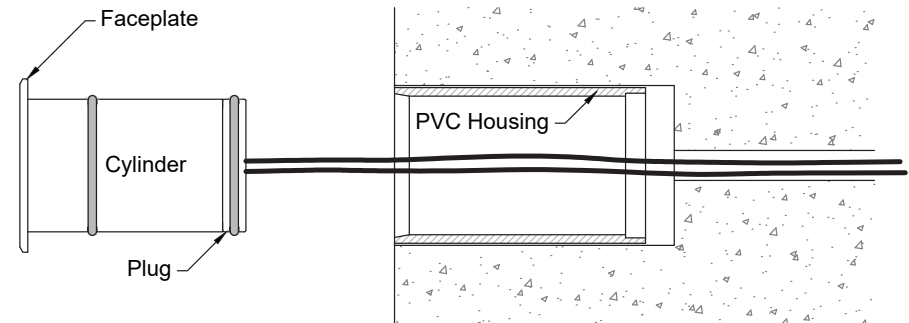


Figure 1a

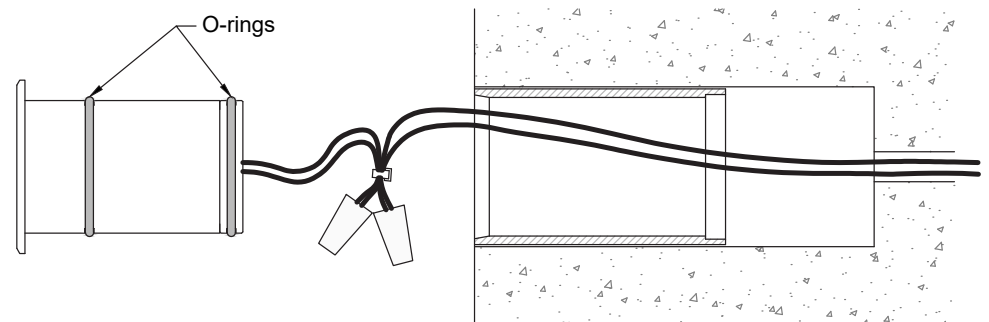


Figure 1b

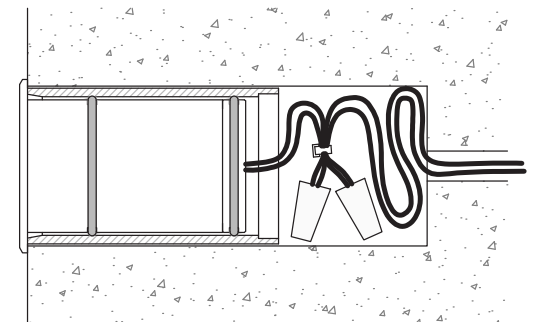


Figure 1c

## INSTALLATION – Concrete Form

### Concrete Form Kit (available separately) includes:

Gray Sch. 40 PVC pipe, 5" long, with Set Screws  
Pipe cap with (3) ½" NPT tapped holes

Form Cylinder with O-rings  
PVC Flange with Screws

### OPTION A: For when the concrete is the finished surface or there will be less than ¼" of material added (e.g. stucco). See Figure 2a.

1. Attach conduit fitting(s) to the PVC Cap. Plug any unused holes.
2. Determine fixture locations and attach the conduit(s) necessary for supply wire access. Run supply wires into Cap.
3. Locate the center of the fixture and drill a 1-¾" hole in the form.
4. Insert the Form-Cyl into the end of the PVC Housing with the inside taper until all three o-rings are fully inside the Housing.
5. Feed the exposed end of the Form-Cyl through the form from the inside until the Housing is tight against the inside of the form. [NOTE: Using this method, the Housing will be flush with the concrete. **End of PVC Housing should be flush with finished surface.** The Housing must not be recessed more than ½" from finished surface (back surface of faceplate) or the fixture will not secure properly.]
6. Slide the Flange over the Form-Cyl. Secure it to the outside of the form with the two included ¾" sheet metal screws, then evenly tighten the three #8 machine screws through the flange and against the Form-Cyl.
7. Test fit the PVC Pipe and Cap. There must be a minimum 1" gap between the back of the Cap and the rear form member (Figure 2c). If the Pipe is too long to leave the recommended 1" gap between it and the front form, then the Pipe must be cut to fit. Only remove material from the end WITHOUT the taps.
8. Apply construction adhesive or silicone around the outside end of the Housing. Slide the end of the Pipe with the three tapped holes over the Housing, holding it back from the form by about 1". (That gap is necessary to allow the concrete to fill in in front of the Pipe, obscuring it from view. The faceplate will not cover all of the Pipe if left exposed.) Lock the Pipe in place by snugging the three included #10-24 set screws against the Housing. Do not tighten too much or the Housing may distort.
9. Pull supply wires from inside the Cap and feed them into the Pipe, Housing, and Form-Cyl. Glue the Cap onto the end of the Pipe with PVC cement.
10. After concrete has cured, remove Flange and Form-Cyl and discard. After the forms are removed, trim fixture wires to 7" and use included silicone-filled wire nuts to join them to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
11. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

### OPTION B: For when the surface finish material is between ¼" and 1" thick (e.g. stucco, tile). See Figure 2b.

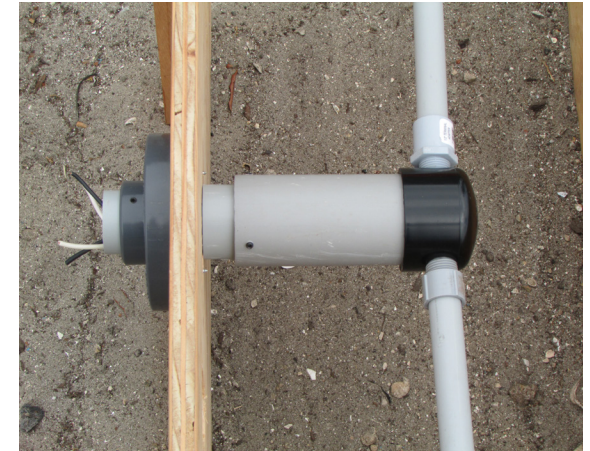
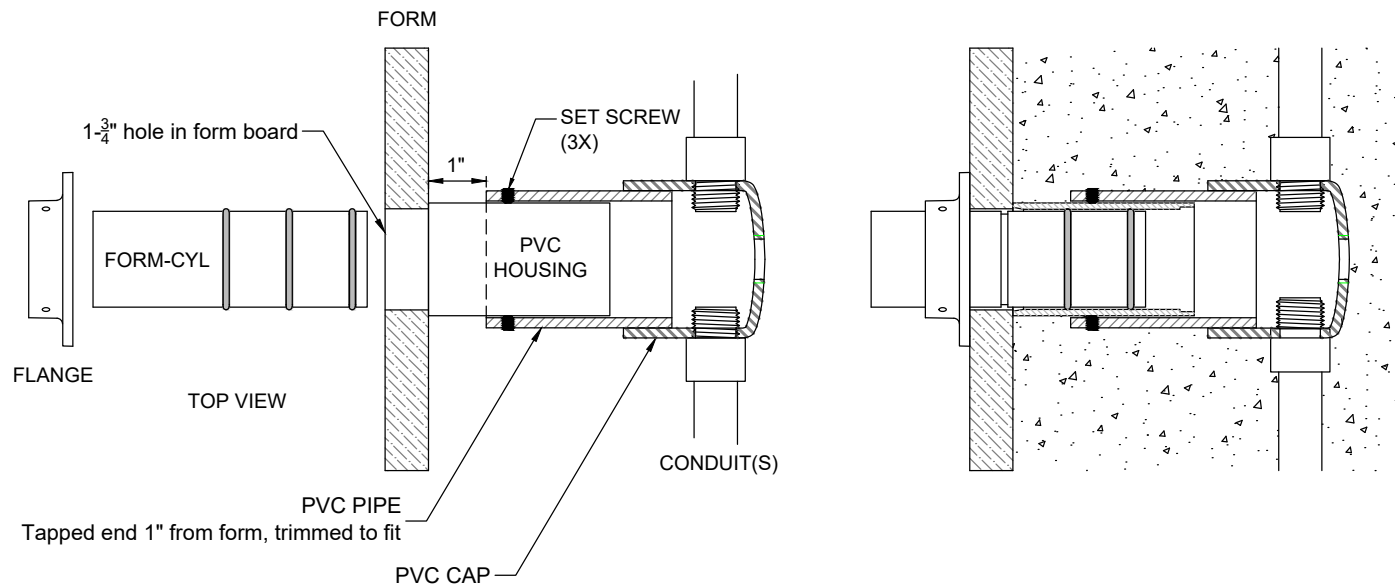
1. Follow instructions 1-3 in OPTION A above, but with a 2" hole.
2. Insert the Form-Cyl into the end of the PVC Housing with the inside taper until all three o-rings are fully inside the Housing.
3. Feed the exposed end of the Form-Cyl through the form from the inside until the Housing is inserted into the form board to a distance that matches the thickness of the finish material to be applied to the concrete (e.g. stucco, tile), but not past the outside of the form. [NOTE: Using this method, the Housing will stick out past the concrete. **End of PVC Housing should be flush with finished surface.** The Housing must not be recessed more than ½" from finished surface (back surface of faceplate) or the fixture

will not secure properly.]

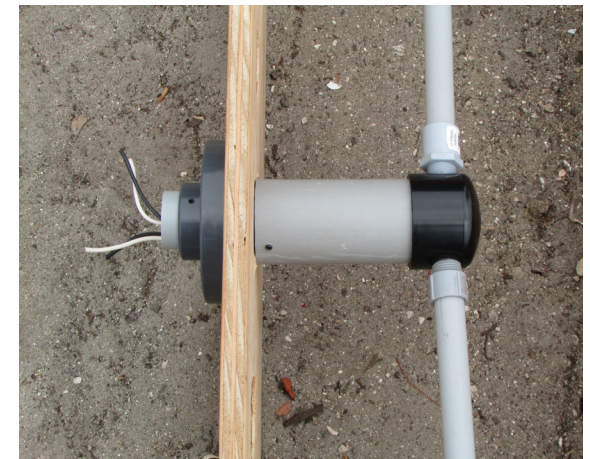
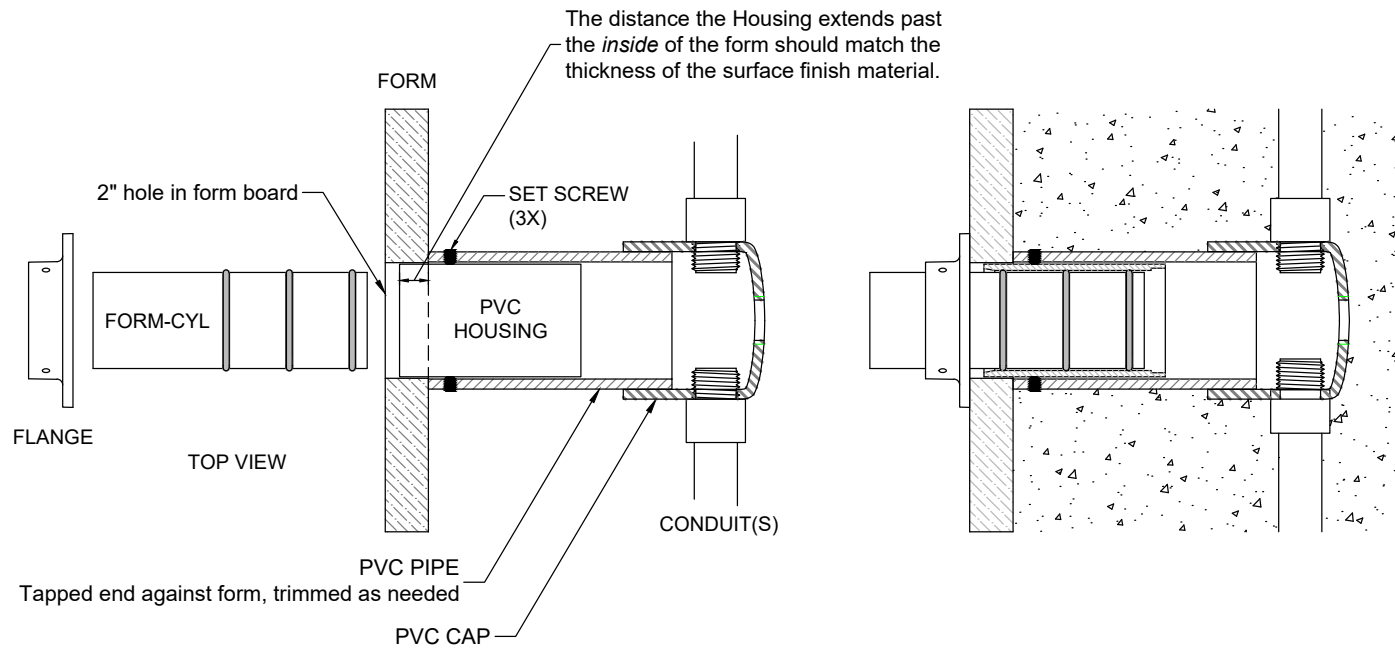
4. Slide the Flange over the Form-Cyl. Secure it to the outside of the form with the two included ¾" sheet metal screws, then evenly tighten the three #8 machine screws through the flange and against the Form-Cyl.
5. Test fit the PVC Pipe and Cap. The Pipe should be tight against the inside of the form and there must be a minimum 1" gap between the back of the Cap and the rear form member (Figure 2c). If the Pipe is too long to leave at least 1" gap between the back of the Cap and the opposite form board, then the Pipe must be cut to fit. Only remove material from the end WITHOUT the taps.
6. Apply construction adhesive or silicone around the outside end of the Housing. Slide the end of the Pipe with the three tapped holes over the Housing up to the form. Lock it in place by snugging the three included #10-24 set screws against the Housing. Do not tighten too much or the Housing may distort.
7. Pull supply wires from inside the Cap and feed them into the Pipe, Housing, and Form-Cyl. Glue the Cap onto the end of the Pipe with PVC cement.
8. After concrete has cured, remove Flange and Form-Cyl and discard. Form must be removed carefully to prevent damage to the end of the Housing. After the forms are removed, trim fixture wires to 7" and use included silicone-filled wire nuts to join them to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
9. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

### OPTION C: For when the surface finish material is between 1" and 2-½" (e.g. brick or stone facing). See Figure 2c.

1. Follow instructions 1-3 in OPTION A above, but with a 2-¾" hole.
2. Test fit the PVC Pipe and Cap. The Pipe should be inserted so it is flush with the outside of the form and there must be a minimum 1" gap between the back of the Cap and the back form member (Figure 2c). If the Pipe is too long to leave at least 1" gap between the back of the Cap and the rear form member, then the Pipe must be cut to fit. Only remove material from the end WITHOUT the taps.
3. With the Pipe flush with the outside of the form, install the three included #10-24 set screws from inside the Pipe and tighten them into the form.
4. Pull supply wires from inside the Cap and feed them through the Pipe. Glue the Cap onto the end of the Pipe with PVC cement.
5. After concrete has cured, remove the set screws from inside the Pipe. Form must be removed carefully to prevent damage to the end of the Pipe.
6. Apply construction adhesive or silicone around outside of PVC Housing on the end WITHOUT the inside taper and slide it into the end of the Pipe. The distance from concrete to front of Housing should match the thickness of the finish material to be applied to the concrete (brick, stone), up to 2-½". [NOTE: **End of PVC Housing should be flush with finished surface.** The Housing must NOT be recessed more than ½" from finished surface or the fixture will not secure properly.]
7. Feed supply wires through the Housing and secure it in position by reinserting from the outside the three set screws removed in Step 6 and evenly snugging them against the Housing. Do not tighten too much or the Housing may distort.
8. Trim fixture wires to 7" and use included silicone-filled wire nuts to join them to power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
9. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

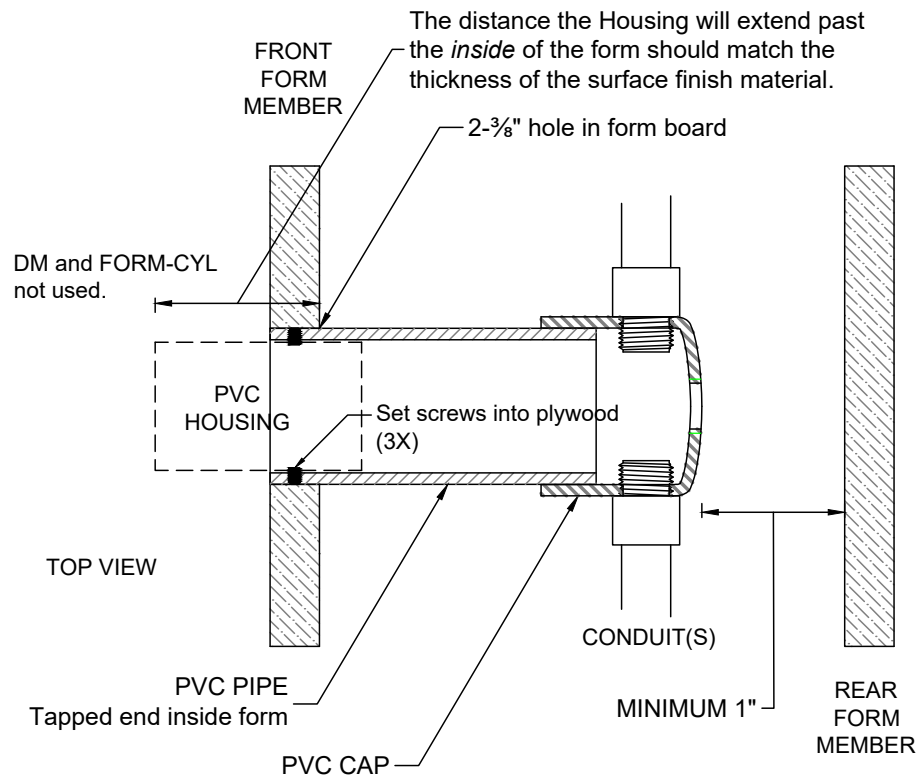


**Figure 2a: SURFACE FINISH MATERIAL  $< \frac{1}{4}$ " THICK OR NONE**



**Figure 2b: SURFACE FINISH MATERIAL BETWEEN  $\frac{1}{4}$ " AND 1" THICK**





Set screws are removed to take off form then reinserted from the outside to secure PVC housing.

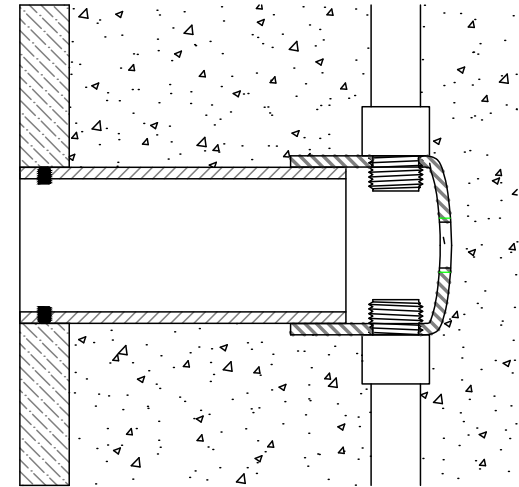


Figure 2c: SURFACE FINISH MATERIAL BETWEEN 1" AND 2-1/2" THICK

## VERTICAL INSTALLATION – Concrete Form

NOTE: This method applies to forms deeper than 8". For shallower pours, the Base (an electrical box cover with a 1/2" NPT tapped hole in the center, supplied by others) and support Conduit & Fittings or Nipple, also by others, can be eliminated with the Cap resting directly on the ground. For even greater clearance, the Pipe can be cut shorter (only remove material from the end WITHOUT the taps). For minimum depth, the E3-series fixtures are available with a flat-bottomed brass wiring compartment that screws directly into the Housing.

1. Install conduit fitting(s) into sides of PVC Cap for wiring and also into the bottom of the Cap and the tapped box cover for support. Plug any unused holes.
2. Determine fixture locations and attach the conduit(s) necessary for supply wire access. The center of the conduits should be about 6-1/2" below the surface of the poured concrete. Run supply wires to each Cap.
3. Test fit the Cap and PVC Pipe (tapped end up). Once installed in the Cap, the Pipe should sit at least 3/4" below the top of the form, to a maximum of 1-3/4" below. [NOTE: If the Pipe is flush with the Housing at the top of the form, the faceplate will not cover the end of the Pipe—it will be visible! Also, if the concrete will not be the finished surface (e.g. pavers or tile will be laid), the Pipe must be raised to account for the extra thickness, staying at least 3/4" below the **finished surface**.]
4. Clear a smooth area below the fixture and place the tapped box cover there. Hold the Pipe/Cap at the desired height and measure the length of conduit needed between the fittings.
5. Cut a piece of 1/2" conduit to the appropriate length.
6. Pull the supply wires from the Cap into the Pipe, cement Pipe into Cap, and cement the conduit into the fittings in the Cap and tapped box cover. [NOTE: a 1/2" pipe nipple can be used in place of the conduit and fittings. This may be desirable if a large number of fixtures are being installed at the same depth. The range of adjustability of the Housing within the Pipe allows the assembly to be raised or lowered to help fit stock pipe nipple lengths as short as 1-1/4".]
7. Make sure the fixture assembly is resting on the base and is plumb.
8. Apply construction adhesive or silicone around the outside of the end of the Housing WITHOUT the inside taper. Slide the Housing into the Pipe until the tapered end is flush with the top of the form/finished surface. Secure it in position by evenly tightening the three included #10-24 set screws against the Housing. [NOTE: **End of PVC Housing should be flush with finished surface**. The Housing must not be recessed more than 1/2" from finished surface (back surface of faceplate) or the fixture will not secure properly.]
9. Cover the Housing with tape to prevent concrete from getting inside.
10. After the concrete has cured, remove tape from end of Housing and pull out the supply wires.
11. Trim fixture wires to 7" and use included silicone-filled wire nuts to join fixture wires to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
12. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

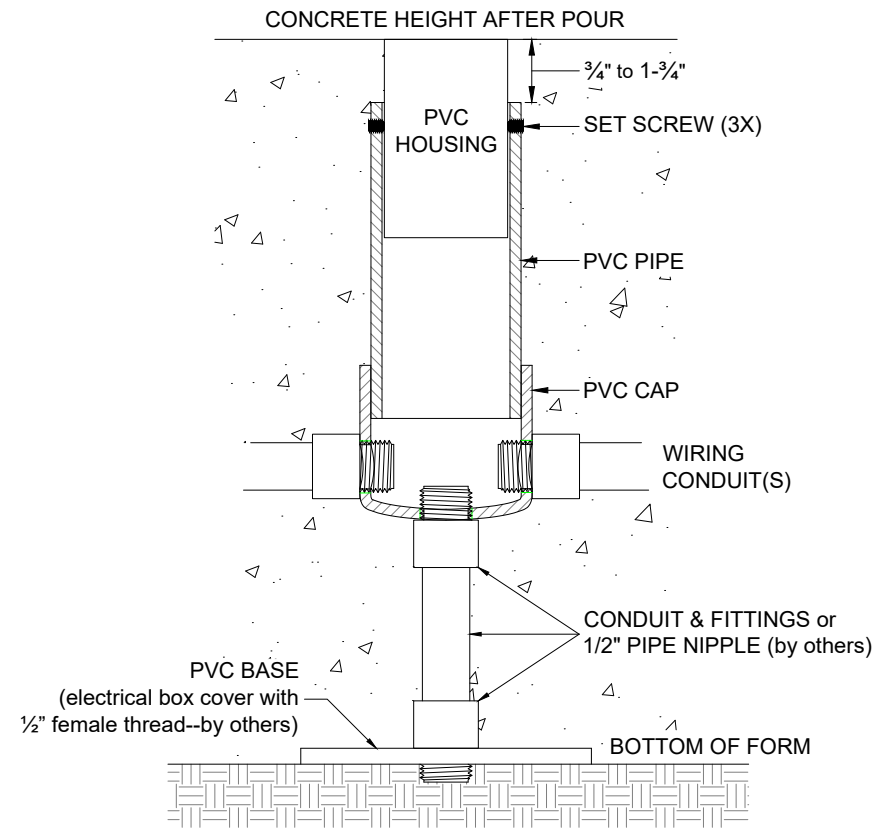


Figure 3





## INSTALLATION – Limited Depth

For limited depth installations (shallow slabs, thin walls) or when a remote splice with wire protection is desired, the Conduit Fitting (CF) accessory is used in place of the Concrete Form Kit for minimum fixture length while still providing for conduit attachment.

Due to limited volume, use only 16g or 18g supply wire with minimal jacketing and/or butt splice fixture wires to a remote connection.

1. Install conduit fitting(s) into sides of brass Conduit Fitting accessory (CF) for wiring. Plug any unused holes.
2. Determine fixture locations and attach the conduit(s) necessary for supply wire access. Run supply wires to each CF and leave long enough to pull out of the top of the PVC Housing.
3. Thread the PVC fixture Housing onto the CF.
4. Rest flat bottom of CF on ground at bottom of form. Dirt can be dug out or built up as necessary to achieve desired height. [NOTE: **End of PVC Housing should be flush with finished surface.**] (Figure 4)
5. Cover the Housing with tape to prevent concrete from getting inside.
6. After the concrete has cured, remove tape from end of Housing and pull out the supply wires.
7. Trim fixture wires to 7" and use included silicone-filled wire nuts to join fixture wires to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
8. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect. (Figure 1c)

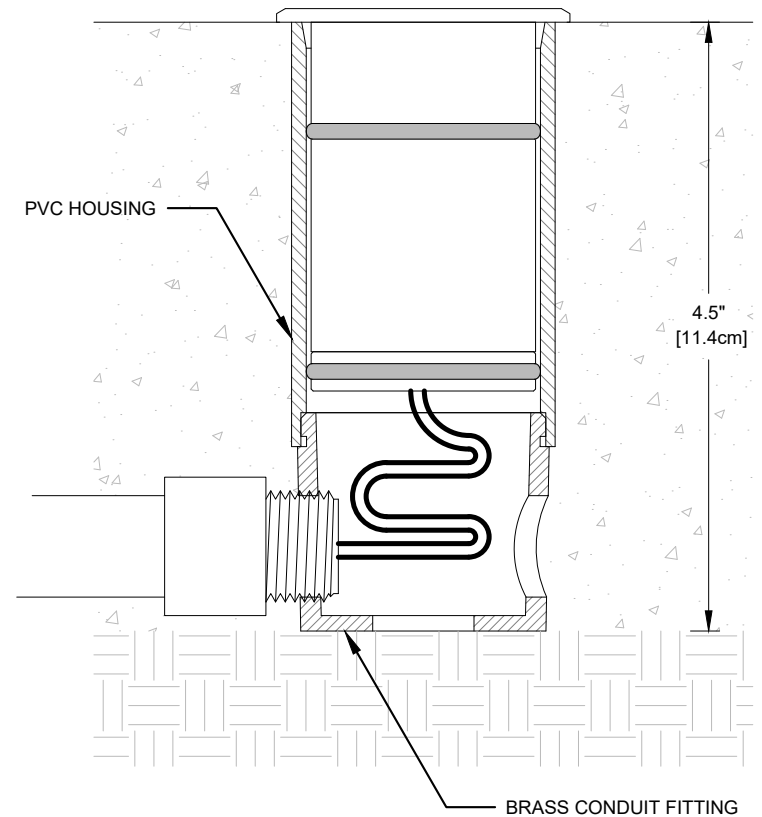


Figure 4



## INSTALLATION – Non-Masonry (Wood Wall or Deck)

NOTE: For this application where the rear of the Housing will be accessible, the Wiring Compartment is optional. The brass back box can be removed from the PVC Housing.

1. Use a 2" hole saw to create a hole for the PVC Housing in the desired location.
2. Using the Housing as a guide, locate and secure the Deck Mount (DM) to the back side of the mounting surface with the two included screws. Evenly tighten the three set screws with a 5/64" hex wrench against the Housing until secure. (Figure 5) Construction adhesive may be used between the mounting surface and Housing for additional stability and water-tightness.
3. **End of PVC Housing should be flush with finished surface.** Housing cannot be recessed more than 1/2" from finished surface (back surface of faceplate) or the fixture will not secure properly.
4. If installation is in an open stud wall to be finished with drywall, stucco, or similarly thin surface, drill a 2" hole through a 2x4 or 2x6 block, cut to fit between the studs. Mount the DM to the back side of the block using the Housing to align the DM with the hole in the block. Fasten the block between studs in the desired location and insert the Housing into the DM so that it sticks out past the face of the block a distance that matches the depth of the finish material. Evenly tighten the three set screws with a 5/64" hex wrench against the Housing until secure.
5. Use included silicone-filled wire nuts to join fixture wires to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1b)
6. Feed wires into Housing and slide the Faceplate/Cylinder assembly in until the Faceplate bottoms out on the mounting surface, being sure to orient the Faceplate to produce the desired effect (Figure 5).

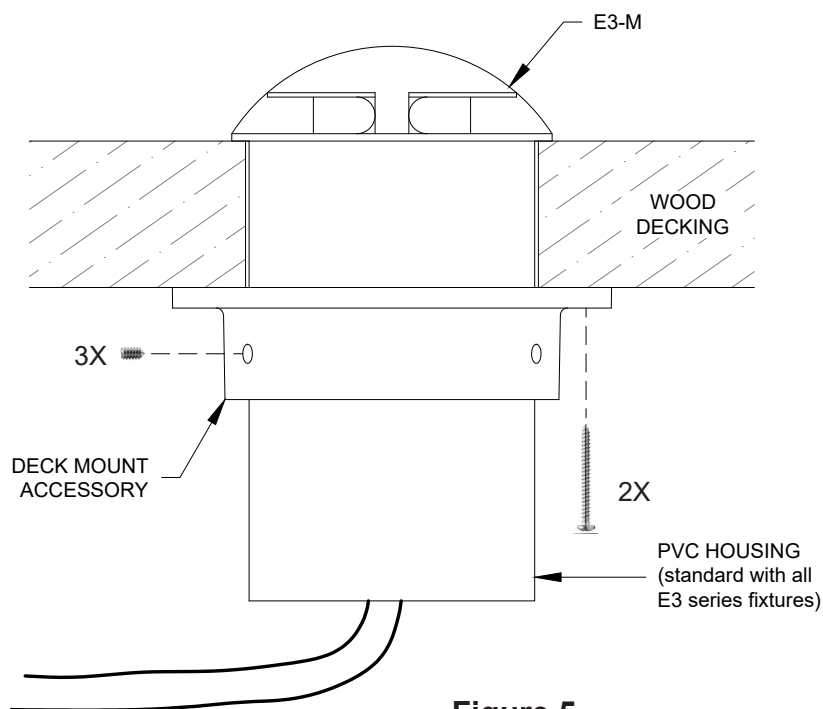


Figure 5

## LAMPING – MR11

1. Make sure the power is off to the fixture.
2. To access the lamp compartment, first note the orientation of the Faceplate, then remove the fixture from the Housing by grasping the edges of the Faceplate and pulling straight out.
3. Once removed, unscrew the Cylinder from the brass Plug. The Plug is the fitting at rear where lead wires exit the fixture. Do not attempt to separate the Faceplate from the Cylinder.
4. Holding the lamp at its base, pull straight up to remove from socket.
5. Holding the new lamp at its base, align its pins with the holes in the socket and push straight in.
6. Screw the Faceplate/Cylinder assembly back onto the Plug.
7. Feed wires into Housing and slide the fixture in until the Faceplate bottoms out on the mounting surface, making sure to orient the Faceplate into the original position.

## LAMPING – Integrated Module

This fixture has a long-life LED Module that should not need replacement for years. However, if a Module fails or technology improves and a new one is desired, replacements are available from Beachside Lighting (808-263-5717). Module and brass Plug are replaced together as a unit. Once the new assembly is received:

1. Make sure the power is off to the fixture.
2. To access the lamp compartment, first note the orientation of the Faceplate, then remove the fixture from the Housing by grasping the edges of the Faceplate and pulling straight out.
3. Once removed, unscrew the Cylinder from the brass Plug. The Plug is the fitting at rear where lead wires exit the fixture. Do not attempt to separate the Faceplate from the Cylinder.
4. Disconnect the fixture wires from the supply wires.
5. Use silicone-filled wire nuts to join wires from the new Module/Plug assembly to the power source wires. Bind all the wires together near the wire nuts with a cable tie. (Figure 1)
6. Screw the Faceplate/Cylinder assembly onto the Plug.
7. Feed wires into Housing and slide the fixture in until the Faceplate bottoms out on the mounting surface, making sure to orient the Faceplate into the original position.

## CHANGING OPTICS

1. With the fixture removed (Steps 1-3 in "Lamping - MR11" above), unscrew the small, round cap that surrounds the optic on the end of the Module.
2. Remove the old optic and carefully replace with new optic. Be sure that the small silicone gasket recessed in the channel at top of module remains in place.
3. Screw the cap back on the Module.
4. Screw the Faceplate/Cylinder assembly back onto the Plug.
5. Feed wires into Housing and slide the fixture in until the Faceplate bottoms out on the mounting surface, making sure to rotate the Faceplate into the original position.