

Installation Instructions

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

(Failure to follow the warnings and instructions on this sheet could result in fire, injury, failure of product, and/or voiding of warranty.)

- Do not touch luminaire while lamp is on. Turn off/unplug and allow to cool before replacing lamp.
- Lamp gets HOT quickly! Contact only switch/plug when turning on.
- Do not touch hot lens, body, cap, faceplate, or housing.
- Keep lamp away from materials that may burn.
- Do not install fixture in contact with combustible materials.
- Do not touch lamp at any time. Use a soft cloth. Oil from your skin may damage lamp.
- Do not operate with damaged or missing parts.
- Do not disassemble beyond faceplate removal to facilitate wiring and installation, or as otherwise directed in the installation instructions below.
- Remove any debris or build-up accumulated on the faceplate periodically. Failure to do so could result in reduction in performance, fixture overheating, or fire.
- Do not install within 10 feet of a pool, spa, or fountain.
- Have installed in accordance with all applicable installation codes and standards by a person familiar with the construction, operation, and hazards involved.
- Consult a qualified electrician to ensure correct branch circuit conductor.
- Use only cable properly rated for the application.
- Failure to follow these instructions can cause fire, injury, and/or void warranty.

Unpack:

- Unpack the fixture from its box.
- Check through all packaging material to make sure there aren't any items hidden in it before discarding.
- Lay the components out in a clean and dry area so that they may be inspected.

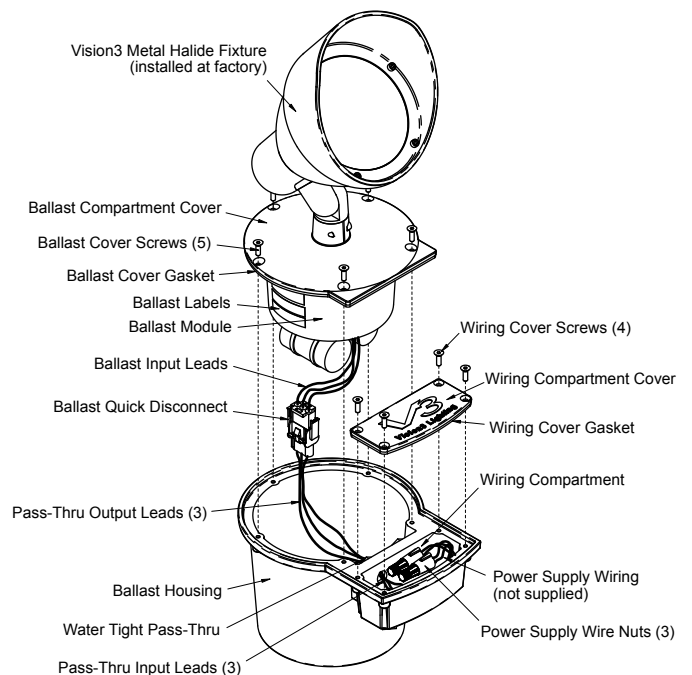
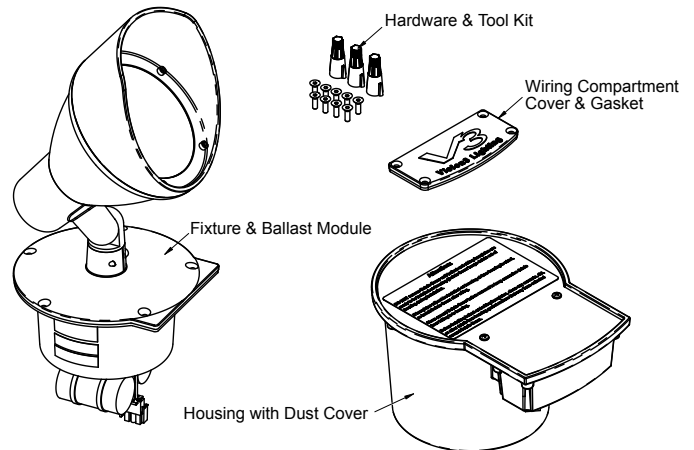
Inspection:

- Inspect all parts for shipping damage, such as: broken lenses, broken lamps, cut or nicked leads, damage that could cause leaks, damaged gaskets, etc. If any damage is found, do not install fixture. Contact Vision3 lighting so that damaged items can be repaired or replaced.
- Double check the fixture with the packing list and order to ensure that all options and accessories are accounted for. Contact Vision3 lighting immediately if any discrepancies are found.
- Cover and store all parts in a clean, dry, and safe place until it is time for installation. Note: Plastic bags are handy for keeping parts organized and clean during storage.

Housing Installation:

Landscape Installation (See 'Recommended Ground Mount Installation' sketch).

- Examine the Ballast Housing to ensure that there is no damage, visible defects, or missing parts. Contact Vision3 lighting if any issues are found.
- Dig a hole approximately 24" dia. (or 24" square) by 12" to 15" below grade and trench for conduit.
- Install edging around the hole, as shown. Make sure that the top of the edging is about 1" to 2" above grade to allow for ground covering (such as bark, rock, low growing ground cover, etc.). The edging prevents overgrowth on to the ballast and creates an edge for trimming, while the elevation helps prevent submersion in water during rain. Once the ground cover is in place or grows high enough, the fixture will appear to be flush.
- Begin filling in the hole with soil in 1" to 2" increments, compacting as you go, until the Housing with Dust Cover can be placed at the bottom of the hole with the top of the Housing 1/4" above the top of the Edging. Note: The housing should always be installed slightly above grade and in soil that will drain any standing water. Installing flush with grade or below grade will allow standing water to collect around covers, increasing the possibility of water entering the housing. The housing should always be positioned such that water will drain or flow away from the top of the housing. If the local soil conditions prevent proper drainage, such as with clay, than it is recommended that sand or a loose soil/peat gravel mixture be used to backfill the hole. It may also be required to dig a deeper hole to allow for thorough drainage around fixture.
- Place the Housing with Dust Cover in the bottom of the hole in the desired orientation and to the proper height (top of the Housing 1/4" above the top of the Edging). Pack fill soil around the base of the housing to keep it in position, if necessary.



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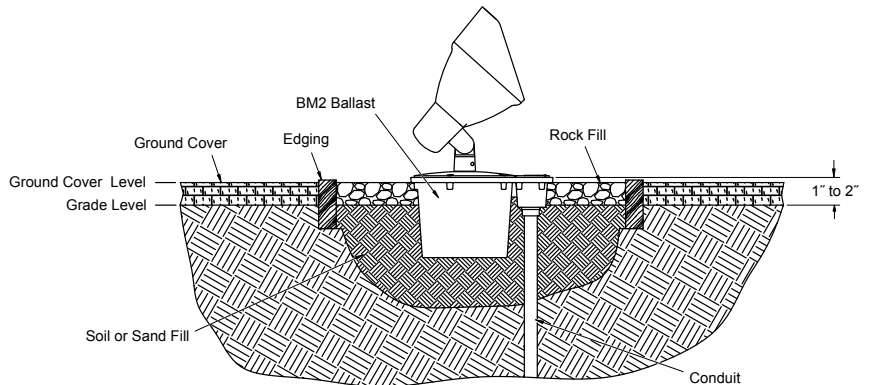
6. Run Conduit (not supplied) to the Housing with Dust Cover. Note: use conduit and conduit installation methods that adhere to all applicable standards.
7. Attach the Conduit to the Housing with Dust Cover using an appropriate connector. (The BM2 Housing has two 3/4" NPT and one 1/2" entries for this purpose.) Make sure the Conduit connection to the BM2 Housing is water-tight to keep water out of the Wiring Compartment.
8. If all conduit entries in the BM2 Housing are not used, make sure that the unused conduit entries are plugged with NPT pipe plugs. Use pipe thread sealant (not supplied) on the plugs and fully thread in to the housing to ensure that they are water tight.
9. Check the alignment and height of the BM2 Housing. Re-adjust if necessary.
10. If the dust cover was removed during conduit installation, reinstall the cover to keep dirt out of the BM2 Housing.
11. Fill in the conduit trenches.
12. Continue filling around the BM2 Housing, compacting as you go, until the bottom 2/3 of the Housing is covered.
13. Fill the remaining area in the hole with rock/gravel, up to within 1/4" of the top of the BM2 Housing. It is recommended that landscape "weed block" material be used between the Soil/Sand Fill and the Rock Fill to prevent growth of weeds and mixing of materials. Make sure the 'weed block' does not touch the BM2 Housing.
14. Install desired Ground Cover up to Edging.

Concrete Installation

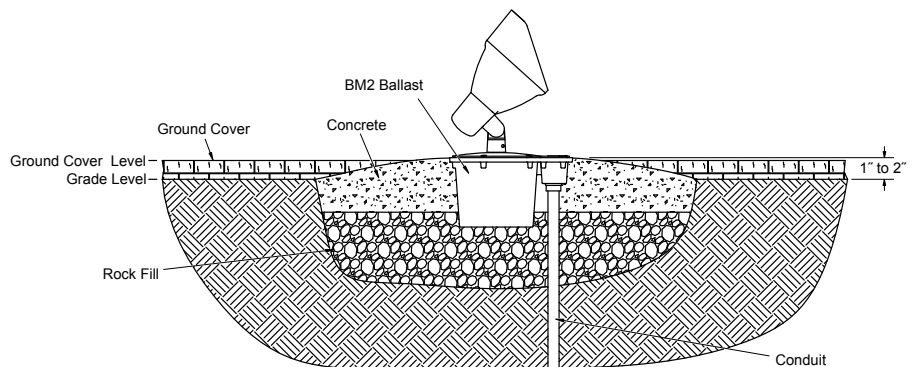
(See Recommended Ground Mount Concrete Installation sketch).

1. Examine the Ballast Housing to ensure that there is no damage, visible defects, or missing parts. Contact Vision3 lighting if any issues are found.
2. Dig a hole approximately 24" dia. (or 24" square) by 15" to 20" below grade and trench for conduit.
3. Begin filling in the hole with peat gravel until the BM2 Housing can be placed at the bottom of the hole with the top of the housing flush with the proposed Ground Cover Level, usually 1" to 2" above Grade Level. Note: The housing should always be installed so that the concrete around the housing can be 'crowned' to facilitate the drainage of water away from the housing covers. Installing the top of the housing flush with the surrounding concrete will allow standing water to collect around covers, increasing the possibility of water entering the housing. The housing should always be positioned such that water will drain or flow away from the top of the housing.
4. Place the Housing with Dust Cover in the bottom of the hole in the desired orientation, as described in the previous step.
5. Run Conduit (not supplied) to the Housing with Dust Cover. Note: use conduit and conduit installation methods that adhere to all applicable standards.
6. Attach the Conduit to the Housing with Dust Cover using an appropriate connector. (The BM2 Housing has two 3/4" NPT and one 1/2" entries for this purpose.) Make sure the Conduit connection to the BM2 Housing is water-tight to keep water out of the Wiring Compartment.
7. If all conduit entries in the BM2 Housing are not used, make sure that the unused conduit entries are plugged with NPT pipe plugs. Use pipe thread sealant (not supplied) on the plugs and fully thread in to the housing to ensure that they are water tight.
8. Check the alignment and height of the BM2 Housing. Re-adjust if necessary.

Recommended Ground Mount Installation



Recommended Ground Mount Concrete Installation



9. If the dust cover was removed during conduit installation, reinstall the cover to keep dirt out of the BM2 Housing.
10. Fill in the conduit trenches.
11. Continue filling with peat gravel around the BM2 Housing. Fill until about the bottom 1/3 of the housing is covered. Be careful to not damage the conduit or conduit entries.
12. Fill in the rest of the hole around the BM2 Housing with concrete, up to the top of the collar cast in to the housing. As previously mentioned, the housing should be positioned such that the surrounding concrete is 'crowned' to allow water to flow away from the housing covers. Do not allow any concrete to enter the BM2 Housing. Reinforcing rods must be used in the concrete to prevent cracking of the concrete from the heat of the fixture.
13. Install Ground Cover up to the edge of the concrete, making sure to not cover the Ballast Compartment Cover or Wiring Compartment Cover. Note: If fixture is being installed in concrete slab, skip this step.

Wiring to BM2 Housing:

1. Remove the Dust Cover from the installed BM2 Housing.
2. Thoroughly clean any dirt, debris, or moisture out of the Wiring Compartment.
3. Run the appropriately sized 3 conductor power cable through the Conduit to the Wiring Compartment. Note: ensure that the power cable is properly sized for the load and adheres to any standards and/or regulations. Double check the Ballast Labels to make sure that the power being supplied matches the power requirements of the ballast.
4. Strip the ends of the Power Supply Wiring. Attach the Power Supply Wiring to the Pass-thru Input Leads in the Wiring Compartment using the Power

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- Supply Wire Nuts. Note: Do not pull on the Pass-thru leads!! Excessive stress could damage them, causing the fixture to short or leak. Connect the power cable's ground wire (green or copper) to the Pass-thru green lead. Connect the power cables black and white wires to the same colored leads on the Pass-thru. If the Power Supply Wire Nuts ever need to be replaced, only use wire nuts suitable for direct burial use.
- Fold the power cable and fixture leads up as you push them in to the Wiring Compartment. Be very careful to not excessively stress the fixture leads or where they enter the Water Tight Pass-thru. Note: It is a good idea to zip-tie the power cable and fixture leads together just below the wire nuts for strain relief.
 - Make sure the gasket on the bottom of the Wiring Compartment Cover is completely clean and free of dirt, debris, nicks, or cuts. If the gasket is damaged, contact Vision3 lighting for a replacement. Also check that the holes in the Wiring Cover Gasket are aligned with the holes in the Wiring Cover. If they are misaligned, the gasket may not seal properly. The gasket is adhesively attached to the cover, but by using your thumbs to gently slide the gasket, you can correct most minor misalignments.
 - Clean the gasket sealing area on the BM2 Housing and make sure it is completely clean and free of dirt, debris, grass, moisture, etc. Any debris on the gasket surface area may prevent the gasket from sealing properly.
 - Make sure that the threaded holes in the housing for the Wiring Cover Screws are completely clean and free of water or debris. Debris in these holes may prevent the screws from being fully tightened, preventing the gasket from sealing properly. Debris and moisture in these holes may also cause the Wiring Cover Screws to be difficult, or impossible, to remove in the future. Chase the threads with a tap and/or blow out with air, if necessary. Compressed 'air in a can' comes in handy for cleaning out the threads.
 - Place the Wiring Compartment Cover over the Wiring Compartment opening and line up the holes in the cover with the holes in the housing.
 - Place a dab of anti-seize on the threads of each Wiring Cover Screw and start threading them into the housing using a 1/8" hex tool. Note: Do not use ball end hex tools or a hex tool with rounded edges as this will round out the hex in the head of the screw, making the screw difficult to remove in the future. Do not use T-handle hex tools as they flex too much and will not allow you to properly tighten the Wiring Cover Screws. Only use an L-handle hex tool or a hex bit in a ratchet/torque wrench. Make sure the hex edges are sharp and unrounded.
 - Tighten each of the Wiring Cover Screws until it just snugs up against the Wiring Compartment Cover, but not to the point where it starts compressing the Wiring Compartment Gasket.
 - Incrementally tighten the Wiring Cover Screws to 20 in-lbs (Tighten in 5 in-lb increments, in a clockwise pattern around the cover). It is best to use a torque wrench to ensure that the gasket is compressed properly, but this torque can be approximated by evenly tightening the screws in 1/2 turn increments (in a clockwise pattern around the cover) to the point where the gasket bulges out approximately 1/16" in the area around each screw hole (usually about 1 1/2 to 2 turns past the point where the screws are just snugged up to the cover). Make sure all screws are tightened to the same torque.
- Make sure that the threaded holes in the housing for the Ballast Cover Screws are completely clean and free of water or debris. Debris in these holes may prevent the screws from being fully tightened, preventing the gasket from sealing properly. Debris and moisture in these holes may also cause the Ballast Cover Screws to be difficult, or impossible, to remove in the future. Chase the threads with a tap and/or blow out with air, if necessary. Compressed 'air in a can' comes in handy for cleaning out the threads.
 - Connect the two halves of the Ballast Quick Disconnect together (one half attached to the Ballast Input Leads, other half connected to the Pass-thru Output Leads). Note: The connector halves are keyed and will only connect in one orientation. Do not pull on the Pass-thru leads!! Excessive stress could damage them, causing the fixture to short or leak.
 - Carefully slip the Ballast Module in to the Ballast Housing, being careful not to pinch or damage the wiring or connector (sometimes it is helpful to wrap the Ballast Input Leads around the ignitor and capacitor and tuck the Ballast Quick Disconnect next to the ignitor). Make sure to keep the Ballast Cover Gasket and the sealing surface debris and moisture free.
 - Align the mount holes in the Ballast Compartment Cover with the mating holes in the Ballast Housing.
 - Place a dab of anti-seize on the threads of each Ballast Cover Screw and start threading them into the housing using a 1/8" hex tool. Note: Do not use ball end hex tools or a hex tool with rounded edges as this will round out the hex in the head of the screw, making the screw difficult to remove in the future. Do not use T-handle hex tools as they flex too much and will not allow you to properly tighten the Ballast Cover Screws. Only use an L-handle hex tool or a hex bit in a ratchet/torque wrench. Make sure the hex edges are sharp and unrounded.
 - Tighten each of the Ballast Cover Screws until it just snugs up against the Ballast Compartment Cover, but not to the point where it starts compressing the Ballast Compartment Gasket.
 - Incrementally tighten the Ballast Cover Screws to 20 in-lbs (Tighten in 5 in-lb increments, in a clockwise pattern around the cover). It is best to use a torque wrench to ensure that the gasket is compressed properly, but this torque can be approximated by evenly tightening the screws in 1/2 turn increments (in a clockwise pattern around the cover) to the point where the gasket bulges out approximately 1/16" in the area around each screw hole (usually about 1 1/2 to 2 turns past the point where the screws are just snugged up to the cover). Make sure all screws are tightened to the same torque.
 - Add a lamp and accessories to the metal halide fixture, and aim per its installation instructions.

Fixture/Ballast Installation:

- Thoroughly clean any dirt, debris, or moisture out of the Ballast Housing.
- Make sure the Ballast Cover Gasket is completely clean and free of dirt, debris, nicks, or cuts. If the gasket is damaged, contact Vision3 lighting for a replacement. Also check that the holes in the Ballast Cover Gasket are aligned with the holes in the Ballast Compartment Cover. If they are misaligned, the gasket may not seal properly. The gasket is adhesively attached to the cover, but by using your thumbs to gently slide the gasket, you can correct most minor misalignments.
- Clean the gasket sealing area on the BM2 Housing and make sure it is completely clean and free of dirt, debris, grass, moisture, etc. Any debris on the gasket surface area may prevent the gasket from sealing properly.