

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.)

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

1 - Notes:

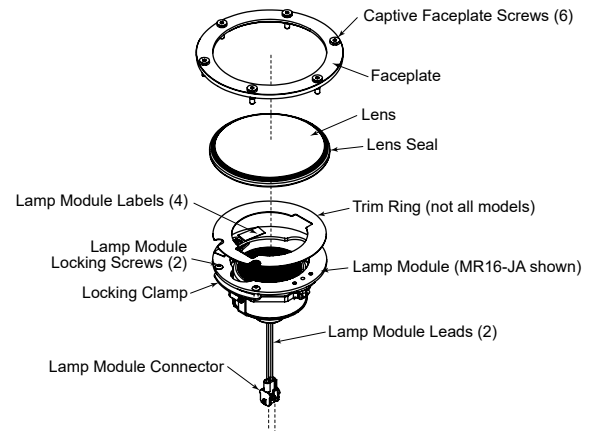
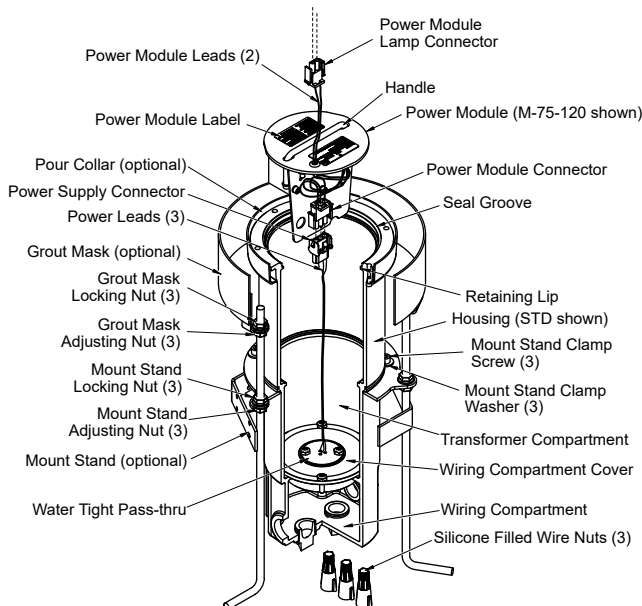
- This fixture should not be mounted in such a way that the Faceplate is buried or below grade.
- Wiring connections must not be exposed to moisture/water. All wiring and conduit must be done in an industry standard water tight manner. Failure to do so could result in a failure from water being siphoned into the Housing thru the wire strands in the Power Cable.
- LED models should only be powered and controlled by compatible transformers and control systems. Contact Vision3 Lighting for approved transformer / controls list. Using non-approved transformers / controls could cause the LED to not operate properly or fail.
- Integral LED options come with a High/Low switch. See 'LED Switching' instructions. Switch will be set to 'High' setting at the factory, unless otherwise specified when ordered.
- Use only Vision3 approved Retrofit MR16 LED options and supplied Heatsink Mount, otherwise LED may overheat and fail.
- LED ratings subject to change without notice. See website or contact V3 for most current info.
- Lens temperatures can get hot enough, with some lamps, to cause injury when touched. See Lens Temperature table and take proper precautions.
- **Caution!** Fixture will be hot if lamp is on. Remove power and allow fixture to cool before performing any adjustments or maintenance.

Lens Temperature

Lamp	T _{lens} ¹
LED	45°C to 50°C
20W & 20W IR	90°C to 110°C
35W & 37W IR	117°C to 153°C
42W	130°C to 160°C

¹ - varies with lamp and lens options.

Note Lens temperatures can get hot enough, with some lamps, to cause injury when touched. These lamps should not be used where it is possible for the lens to be touched.



Model IG5 Exploded Assembly

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2 - Unpack and Inspect:

Unpack:

1. Unpack the fixture and all fixture components from their packaging. Note: wiring components, Pass-thru, and Cover may be shipped inside of Housing.
2. Check through all packaging material to make sure there aren't any items hidden in it before discarding.

Inspection:

1. Inspect all parts for shipping damage, such as: broken lenses, broken lamps, cut or nicked leads, damage to the Pass-thru that could cause leaks, damaged

lens seal, etc. If any damage is found, do not install fixture. Contact Vision3 lighting so that damaged items can be repaired or replaced.

2. 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. Note: wiring components, Pass-thru, and Cover may be shipped inside of Housing.
3. 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.

3 - Mount Stand & Grout Mask Installation / Adjustment:

The Mount Stand and Grout Mask are optional accessories that hold the IG5 Housing, and keep it firmly in place, during installation. While the IG5 Housing can be installed without them, they do aide in the installation process.

Mount Stand & Grout Mask Installation:

1. Remove the Mount Stand Clamp Screws (3) and Mount Stand Clamp Washers (3).
2. Drop the IG5 Housing into the plate on the Mount Stand.
3. Re-install the Mount Stand Clamp Screws (3) and Mount Stand Clamp Washers (3). Make sure that the Mount Stand Clamp Washers (3) are hooked in to the groove on the outside of the housing.
4. Tighten the Mount Stand Clamp Screws (3) until the housing is locked in place.

Mount Stand Adjustment:

1. Make sure that either the Mount Stand legs are solidly mounted to the ground, or the frame is solidly tied in to the rebar grid.
2. Loosen the Grout Mask Locking Nuts (if applicable) and the Mount Stand Locking Nuts.
4. If using the Grout Mask, loosen or tighten the Grout Mask Adjusting Nuts to adjust the position of the Grout Mask. Adjusting all of the nuts the same amount raises or lowers the Grout Mask. Adjusting them independently allows the Grout Mask to be leveled. Use the following procedure to properly align the Grout Mask:
 - a. Adjust the Grout Mask Adjusting Nuts so that the Grout Mask is approximately level and at the height required.
 - b. Using a bubble level, adjust the Grout Mask Adjusting Nuts so that the top surface of the Grout Mask is level.

- c. Adjust all three Grout Mask Adjusting Nuts the same amount to raise or lower the Grout Mask to the appropriate height.
 - d. Repeat steps b & c until the Grout Mask is in the desired position and level.
 - e. Tighten the Grout Mask Locking Screws to secure the position of the Grout Mask. Make sure the Grout Mask is centered around the IG5 Housing.
5. Loosen or tighten the Mount Stand Adjusting Nuts (3) to adjust the position of the IG5 Housing within the Mount Stand. Adjusting all of the nuts the same amount raises or lowers the housing evenly. Adjusting them independently allows the housing to be leveled. Use the following procedure to properly align the IG5 Housing:
 - a. Adjust the Mount Stand Adjusting Nuts so that the IG5 Housing is approximately level and at the height required. It should be at least flush with the top of the Grout Mask, or slightly above.
 - b. Using a bubble level, adjust the Mount Stand Adjusting Nuts so that the top surface of the IG5 Housing is Level.
 - c. Adjust all three Mount Stand Adjusting Nuts the same amount to raise or lower the IG5 Housing to the appropriate height.
 - d. Repeat steps b & c until the IG5 Housing is in the desired position and level.
 - e. Tighten the Mount Stand Locking Screws to secure the position of the IG5 Housing. Make sure that the IG5 Housing is centered inside of the Grout Mask.
 6. Double check the positions of the IG5 Housing and Grout Mask (if applicable). If not in the desired position, repeat steps 4 and 5.

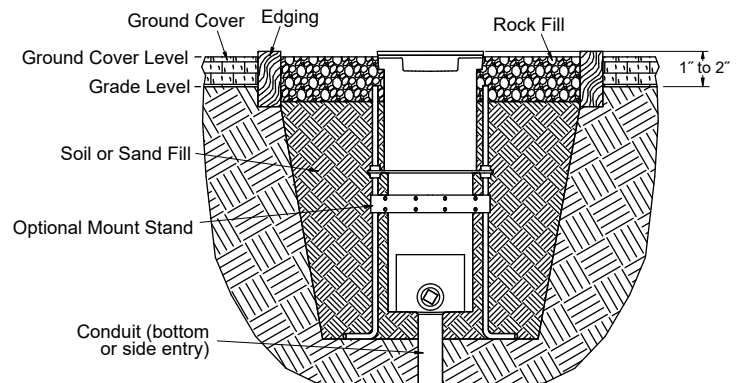
4 - Housing Installation:

Housing installation procedure depends on housing option and application. See housing installation instructions below that are applicable to your housing and application.

Landscape Installation:

1. Examine Housing to ensure that there is no damage, defects, or missing parts. Contact Vision3 lighting if any issues are found. Note: use the dust cover shipped on the Housing to keep dirt out of the Housing during installation.
2. Dig a hole approximately 12" dia. by 15" to 18" below grade and trench for conduit.
3. Install edging around the hole, as shown in drawing. 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 lens overgrowth 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.
4. Begin filling in the hole with soil in 1" to 2" increments, compacting as you go, until the IG5 Housing can be placed at the bottom of the hole

Recommended Landscape Installation



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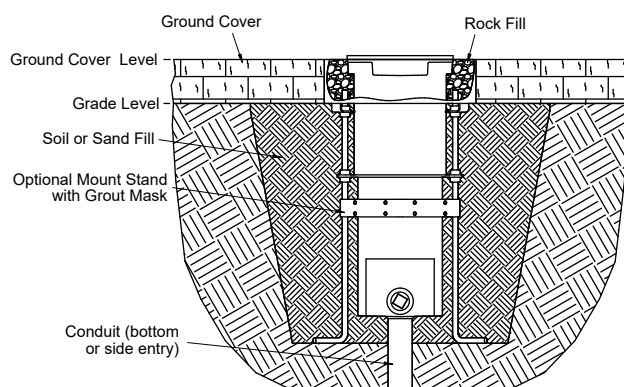
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with the top of the Housing 1/4" above the top of the Edging. Note: If the local soil conditions prevent proper drainage, such as with clay, then it is recommended that sand or a loose soil/peat gravel mixture be used to backfill the hole. It may also be required to dig a deeper hole to allow for thorough drainage around fixture.

- Place the IG5 Housing 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). If you are using the Optional Mount Stand, adjust it per the instructions above. You may also pack fill soil around the base to keep it in the desired position.
- Run Conduit (not supplied) to the IG5 Housing. Note: use conduit and conduit installation methods that adhere to all applicable standards.
- Attach the Conduit to the IG5 Housing using an appropriate connector. Make sure the Conduit connection to the IG5 Housing is water-tight to keep water out of the Wiring Compartment. Note: The IG5 Housing has four 3/4" NPT entries for this purpose, two side entry and two bottom entry.
- Make sure that all unused conduit entries are plugged with the 3/4" NPT pipe plugs supplied. Use pipe dope (not supplied) on the plug and fully thread in to Housing to ensure that it is water tight.
- Check the alignment and height of the IG5 Housing. Re-adjust if necessary.
- Fill in the conduit trenches.
- Continue filling around the IG5 Housing, compacting as you go, until the bottom 2/3 of the Housing is covered.
- Fill the remaining area in the hole with rock/gravel, up to within 1/4" of the top of the IG5 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 IG5 Housing.
- Install desired Ground Cover up to Edging.

Alternate Landscape Installation (using Optional Grout Mask)



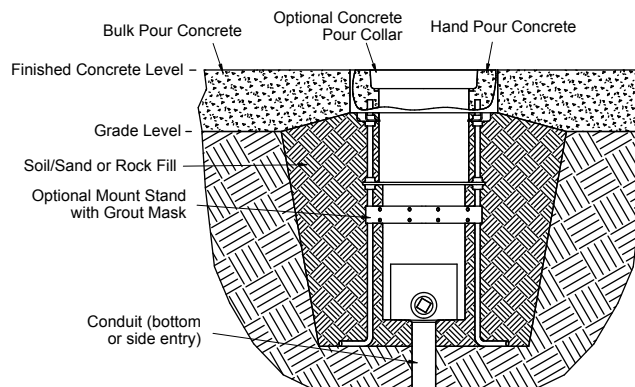
Alternate Landscape Installation Using Optional Grout Mask:

Landscape installation using the Optional Grout Mask in place of the Edging. Make the following alterations to the landscape installation described above:

- Install the IG5 Housing as explained above, adjusting the Mount Stand (see section 3 instructions above) so that the top of the IG5 Housing is at the proper level.
- Adjust the Grout Mask (see section 3 instructions above) so that it is even with, or slightly above the Ground Cover Level and slightly below the top surface of the IG5 Housing (without Faceplate).
- When backfilling hole, fill hole completely with the Soil or Sand Fill.

- Fill area around the IG5 Housing and inside of the Grout Mask with rock/gravel.

Recommended Concrete Installation



Ground Mounted Concrete:

Note: The installation described in this section requires the use of the optional Mount Stand with Grout Mask. If you do not want to use these items, see the description of the alternative concrete installation. Contact Vision3 lighting if you would like to order these mount accessories.

- Examine Housing to ensure that there is no damage, visible defects, or missing parts. Contact Vision3 lighting if any issues are found. Note: Only IG5 Housings with the Pour Collar option should be installed in concrete (except for the flanged faceplate housing). If your Housing does not have the Pour Collar option, please contact Vision3 lighting. Note: Use the dust cover shipped on the Housing to keep dirt and concrete out of the Housing during installation.
- Dig a hole approximately 12" dia. by 15" to 18" below grade and trench for conduit.
- Begin filling in the hole with soil in 1" to 2" increments, compacting as you go, until the IG5 Housing can be placed at the bottom of the hole with enough adjustment in the Mount Stand to make the top of the Pour Collar approximately flush with the proposed Finished Concrete Level. Note: If the local soil conditions prevent proper drainage, such as with clay, then 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 IG5 Housing in the bottom of the hole in the desired orientation. Note: The Optional Mount Stand can also be tied to a rebar grid with tie wire using the holes drilled around the perimeter of the stand.
- Adjust the Grout Mask and Mount Stand (see section 3 instructions above) so that the top of the Concrete Pour Collar is slightly above (approximately 1/16") the proposed Finished Concrete Level, and the top of the Grout Mask is flush with the top of the Finished Concrete Level. Note: The IG5 Housing should never be positioned such that it is at a low point where water will collect around it. Placing the fixture slightly above the concrete level, as explained, will create a slight concrete crown, facilitating better water run off.
- Run Conduit (not supplied) to the IG5 Housing. Note: use conduit and conduit installation methods that adhere to all applicable standards.
- Attach the Conduit to the IG5 Housing using an appropriate connector. Make sure the Conduit connection to the IG5 Housing is water-tight to keep water out of the Wiring Compartment. Note: The IG5 Housing has four 3/4" NPT entries for this purpose, two side entry and two bottom entry.

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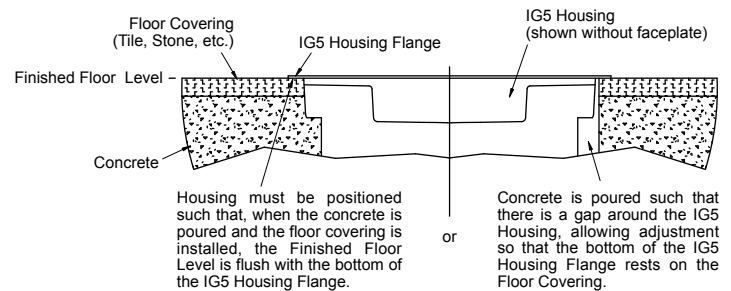
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- Make sure that all unused conduit entries are plugged with the 3/4" NPT pipe plugs supplied. Use pipe dope (not supplied) on the plug and fully thread in to Housing to ensure that it is water tight.
- Check the alignment and height of the IG5 Housing and Grout Mask. Re-adjust if necessary.
- Fill in the conduit trenches.
- Back fill hole with peat gravel around the IG5 Housing.
- Bulk pour concrete around the Grout Mask up to the top surface of the IG5 Housing. Reinforcing rods must be used in the concrete around the fixture to prevent cracking of the concrete from the heat of the fixture.
- After the bulk pour concrete has set, hand pour concrete in the area between the Grout Mask and the IG5 Housing. With the Housing slightly higher than the Grout Mask, slope the concrete away from the fixture to aid in water run off.

positioned such that it is at a low point where water will collect around it. If possible, mount the housing slightly higher and 'crown' the concrete around it to facilitate better water run off.

- It is recommended that the Optional Mount Stand be used because it allows stable and more accurate positioning of the housing. If your fixtures were ordered without the Mount Stand and you wish to use it, contact Vision3 lighting to order.

Flanged Housing Installations

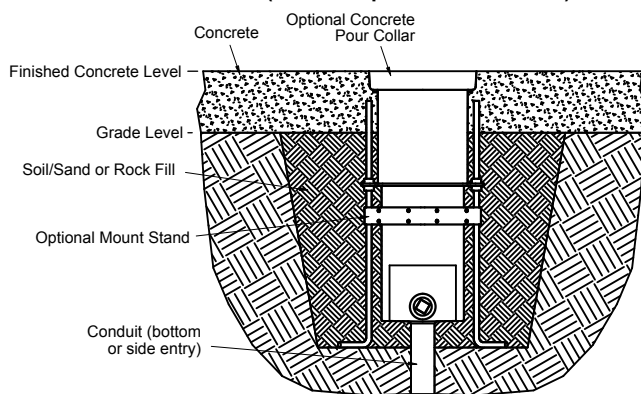


Flanged Housing Installation Notes:

When installing the flanged IG5 housing (for use with the flanged faceplate option), the housing must be installed so that the bottom of the IG5 Housing Flange is resting on top of the Finished Floor Level. If the housing is installed too high, the faceplate will have a gap underneath it. If the housing is installed too low, the faceplate may not seal properly, causing a leak. Two suggestions for properly installing the flanged IG5 housing are:

- After determining where your desired Finished Floor Level is, mount the housing (using the optional mount stand) so that the bottom of the IG5 Housing Flange is at this level. Pour your concrete to the exact proper level (allowing for thickness of Floor Covering, if any), and then install floor covering up to the bottom of the IG5 Housing Flange. This requires that you know the desired Finished Floor Level, and are able to control your concrete and flooring installation accurately.
- When pouring the concrete, leave a gap around the IG5 Housing (similar to a core drill application) so that the housing can be adjusted to sit at the Finished Floor Level after the Floor Covering is installed. This requires some sort of appropriately sized tube (not supplied) be used to create a gap around the housing, and that flexible conduit be used to allow for adjustment.

Alternate Concrete Installation (without Optional Grout Mask)



Alternate Concrete Installation Without Optional Grout Mask:

Concrete installation without the Optional Grout Mask is basically the same as the concrete installation explained above, except the concrete is poured in one step, directly up to the Concrete Pour Collar during the bulk pour. This gives a much cleaner look, but is much more difficult if the concrete covers a large area. Make the following alterations to the concrete installation described above:

- Install the IG5 Housing so that the Pour Collar is flush with the intended Finished Concrete Level. Note: The IG5 Housing should never be

5 - Wiring to IG5 Housing:

- Remove the dust cover.
- If not already done, remove the package with the wiring, Pass-thru, and Cover components from the Housing.
- Thoroughly clean any dirt, debris, or moisture out of the Wiring Compartment.
- Run the appropriately sized 3 conductor power cable through the Conduit to the Wiring Compartment. Leave enough of the power cable so that it just extends past the top opening of the IG5 Housing by 2". Note: ensure that the power cable is properly sized for the load and adheres to any standards and/or regulations.
- Strip the ends of the power cable.
- The Water Tight Pass-thru should come from the factory loosely attached to the Wiring Compartment Cover. If it is not, mount it using the supplied nuts. Do not fully tighten at this time. Note: The gasket on the Water Tight Pass-thru should be lightly greased from the factory. If it is not, lightly coat with Krytox lubricate. This allows for easier dis-assembly, if ever required.
- Attach the three Water Tight Pass-thru leads to the power cable using the supplied Silicone Filled Wire Nuts. Connect the power cable's ground wire (green or copper) to the fixture's green lead. Connect the power cables black and white wires to the same colored leads on the fixture. Note: Do not pull on the Pass-thru leads!! Excessive stress could damage them, causing the fixture to short or leak. The supplied Silicone Filled Wire Nuts must be used to prevent water intrusion. Failure to do so will void warranty.
- Fold the power cable and fixture leads up as you push them into the Wiring Compartment. Try to coil the wiring around the bottom of the Wiring Compartment as you fold. Be very careful to not excessively stress the fixture leads where they enter the Water Tight Pass-thru. Note: It is a good idea to zip-tie the power cable and fixture leads together for strain relief and to keep the wiring from pulling out of the wire nuts.
- Make sure the gasket on the bottom of the Wiring Compartment Cover is free of dirt, debris, nicks, or cuts. If the gasket is damaged, contact Vision3 lighting for a replacement. Note: The gasket on the Wiring Compartment

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Cover should be lightly greased from the factory. If it is not, lightly coat with Krytox lubricate. This allows for easier dis-assembly, if ever required.

10. Clean the gasket sealing area around the Wiring Compartment and make sure it is completely clean and free of dirt, debris, or moisture.
11. Separate the Water Tight Pass-thru from the Wiring Compartment Cover.
12. Slide the Wiring Compartment Cover down the pass-thru leads, line up with the studs at the bottom of the housing, and place over the Wiring Compartment opening. Push onto studs, being careful to not pinch any wires or damage the gasket.
13. Install the supplied nuts (4) on to each of the studs.
14. Tighten the Wiring Compartment Cover nuts (4) by turning clockwise with a 3/8" socket and torque wrench with 12" extension. Torque the screws in

5 in-lb increments, in a criss-cross fashion, to 25 in-lb. Note: When tightened properly, the gasket should bulge out approximately 1/16", evenly around the Wiring Compartment Cover.

15. Feed the Water Tight Pass-thru leads thru the hole in the Wiring Compartment Cover, line up with the studs in the cover, and push into place on studs, being careful to not pinch any wires or damage the gasket.
16. Install the supplied nuts (2) on to each of the studs.
17. Tighten the Water Tight Pass-thru nuts (2) by turning clockwise with a 3/8" socket and torque wrench with 12" extension. Torque the screws in 5 in-lb increments, in a criss-cross fashion, to 25 in-lb.
18. If you don't plan on installing the internal modules and faceplate at this time, re-install the dust cover to keep dirt and debris out of the housing.

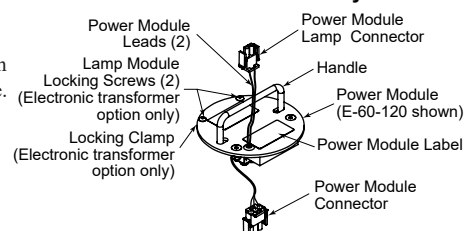
6 - Power Module Installation:

1. Clean all moisture, dirt, and debris out of the Transformer Compartment in the IG5 Housing.
2. Inspect the Housing for any damage, especially to the wires coming out of the Water Tight Pass-thru. If these wires are damaged, contact Vision3 lighting for a replacement Pass-thru.
3. Inspect the Power Module for any damage to the brackets, wires, transformer, or connectors.
4. Look at the Power Module Label and verify that the power being supplied to the fixture matches the ratings of the Power Module.
5. (For electronic transformer option) Loosen the Power Module Locking Screws (2) on the Driver Module using a 3/32" hex tool until the gap between the Power Module Locking Clamp and its Top Plate is approximately 1/4" to 3/8". Make sure you don't loosen the Power Module Locking Screws (2) completely out of the Locking Clamp.
6. Connect the Power Module Connector to the Power Supply Connector. Note: Do not pull excessively on the Power Supply Connector leads!! Pulling on them will not give you extra slack in the wires, it will damage them or pull them out of the Water Tight Pass-thru.
7. (For magnetic transformer option) Drop the Power Module into the Transformer Compartment until the top plate seats on the machined lip. Note: Make sure you are not pinching any wires between the Power Module and

Housing. Turning the module slightly as you install will help keep wires contained.

8. (For electronic transformer option) Grab the Power Module retractable Handle, and install the Power Module by slipping the Locking Clamp under the Lower Retaining Lip in the Housing, and dropping the module in such that the Driver Module Top Plate rests on the Lower Retaining Lip. Note: Do not allow the wires to be pinched between the Top Plate and the Lower Retaining Lip.
9. (For electronic transformer option) Tighten both Power Module Locking Screws by turning clockwise with a 3/32" hex tool. Tighten until the Locking Clamp compresses against the Lower Retaining Lip enough to prevent rotation of the Power Module.
10. Push the retractable Handle back down in to the Power module.

Power Module Assembly



7 - Lamp Module Installation:

1. Clean all moisture, dirt, and debris out of IG5 Housing.
2. Inspect the Lamp Module for any damage to the brackets, Socket Leads, Lamp Socket, or Lamp Module Connector. Make sure the brackets allow for the proper range of motion.
3. Loosen the Lamp Module Locking Screws (2) on the Lamp Module using a 3/32" hex tool until the gap between the Locking Clamp and the Lamp Module top plate is approximately 1/4" to 3/8". Make sure you don't loosen the Lamp Module Locking Screws (2) completely out of the Locking Clamp.
4. Connect the Lamp Module Connector to the Power Module Lamp Connector. Note: Do not pull on the Socket Leads or the Power Module Leads as this may damage them.
5. Install the Lamp Module by slipping the Locking Clamp under the Retaining Lip in the Housing, and dropping the module in such that the Lamp

Module top plate rests on the Retaining Lip. Note: Make sure the Socket Leads and Power Leads are not sticking above, or touching, the shroud that the Lamp Socket is mounted to by pushing the wiring as deep into the housing as you can.

6. Tighten both Lamp Module Locking Screws by turning clockwise with a 3/32" hex tool. Tighten until the Locking Clamp compresses against the Retaining Lip enough to prevent rotation of the Lamp Module.
7. If necessary, install the Lamp and Accessories as explained in the Lamp and/or Accessory Maintenance section.
8. Aim the Lamp as described in the Aiming section.
9. Place the Trim Ring over the Lamp Module, making sure that the cutouts in the Trim Ring line up with the Locking Screws so that it sits flush on the Top Plate. Note: Trim Ring may not be furnished with all models.

8 - Faceplate Installation:

Standard Faceplate:

1. Clean the Seal Groove and exposed top surface of the Housing so that it is free from moisture, dirt, and debris.
2. Inspect the Seal Groove and exposed top surface of the Housing for nicks, scratches, or dents in the material that may affect seating or sealing of the Lens Seal and Faceplate.
3. Clean and inspect the Lens and Lens Seal. The Lens should be free of

dirt, deposits, nicks, or cracks. The Lens Seal should be free of dirt, deposits, nicks or tears. If the Lens and/or Lens Seal can not be completely cleaned, or are damaged, contact Vision3 lighting for replacement parts.

4. Install the Lens Seal by gently stretching around the Lens. See the 'Faceplate and Lens Orientation' sketch for proper orientation.
5. Set the Lens with attached Lens Seal in to the Seal Groove in the Housing, as shown.

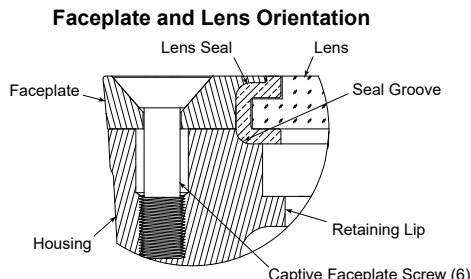
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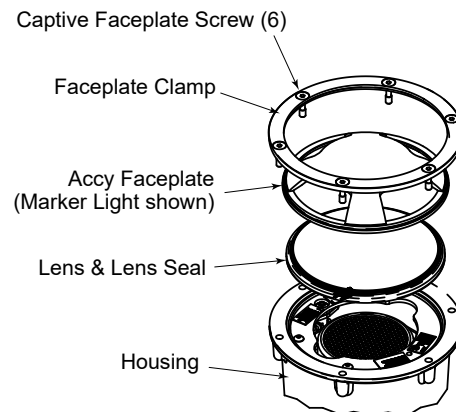
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- Clean and inspect the Faceplate and Captive Faceplate Screws (6). The Captive Faceplate Screws (6) are shipped from the factory with an anti-seize compound on the threads. If the anti-seize has been accidentally wiped off, or has become contaminated with dirt, thoroughly clean the threads and coat with an anti-seize compound. Failure to do this may cause the screws to seize in the housing and prevent their removal without damaging the fixture.
- Set the Faceplate over the top of the Housing such that the Lens/Lens Seal fits into the groove on the bottom of the Faceplate. Orient so that the Captive Faceplate Screws (6) drop into the mating clearance holes in the Housing.
- Tighten the Captive Faceplate Screws (6) by turning clockwise with a 1/8" hex tool. The Captive Faceplate Screws (6) should be tightened by hand only! Using a cordless drill will cause the Faceplate to be tightened unevenly or possibly strip the threads in the Housing. Torque the screws incrementally, and evenly, to 20 in-lbs, in a criss-cross pattern. **Note:** It is best to use a torque wrench, but you can also use the following procedure to approximate the proper torque: as you tighten you will feel the Faceplate compress the Lens Seal until the Faceplate seats against the top of the Housing. At this point, there will be a dramatic increase in the amount of effort required to tighten each screw. Do not turn the screws more than 1/8 to 1/4 turn past this point. Do not overtighten as you may strip the threads out of the Housing. Once the Lens Seal has been compressed such that the Faceplate touches the top of the Housing, the fixture is sealed. Tightening the screws further offers no advantage.



- Set the Lens with attached Lens Seal in to the Seal Groove in the Housing, as shown.
- Clean and inspect the Accy Faceplate, Faceplate Clamp, and Captive Faceplate Screws (6). The Captive Faceplate Screws (6) are shipped from the factory with an anti-seize compound on the threads. If the anti-seize has been accidentally wiped off, or has become contaminated with dirt, thoroughly clean the threads and coat with an anti-seize compound. Failure to do this may cause the screws to seize in the housing and prevent their removal without damaging the fixture.
- Set the Accy Faceplate over the top of the Housing such that the Lens/Lens Seal fits into the groove on the bottom of the Accy Faceplate. Make sure that the faceplate is rotated to the desired orientation.
- Place the Faceplate Clamp over the Accy Faceplate and orient so that the Captive Faceplate Screws (6) drop into the mating clearance holes in the Housing.
- Tighten the Captive Faceplate Screws (6) by turning clockwise with a 1/8" hex tool. The Captive Faceplate Screws (6) should be tightened by hand only! Using a cordless drill will cause the Faceplate to be tightened unevenly or possibly strip the threads in the Housing. Torque the screws incrementally, and evenly, to 20 in-lbs, in a criss-cross pattern. **Note:** It is best to use a torque wrench, but you can also use the following procedure to approximate the proper torque: as you tighten you will feel the Faceplate compress the Lens Seal until the Faceplate seats against the top of the Housing. At this point, there will be a dramatic increase in the amount of effort required to tighten each screw. Do not turn the screws more than 1/8 to 1/4 turn past this point. Do not overtighten as you may strip the threads out of the Housing. Once the Lens Seal has been compressed such that the Faceplate Clamp touches the top of the Housing, the fixture is sealed. Tightening the screws further offers no advantage.

Accy Faceplate Installation



Accessory Faceplate

(Rock Guard, Half Dome, Glare Shield, Marker Light, etc.):

- Clean the Seal Groove and exposed top surface of the Housing so that it is free from moisture, dirt, and debris.
- Inspect the Seal Groove and exposed top surface of the Housing for nicks, scratches, or dents in the material that may affect seating or sealing of the Lens Seal and Faceplate.
- Clean and inspect the Lens and Lens Seal. The Lens should be free of dirt, deposits, nicks, or cracks. The Lens Seal should be free of dirt, deposits, nicks or tears. If the Lens and/or Lens Seal can not be completely cleaned, or are damaged, contact Vision3 lighting for replacement parts.
- Install the Lens Seal by gently stretching around the Lens. See the 'Faceplate and Lens Orientation' sketch for proper orientation.

9 - Lamp Module, Power Module, and Accessory Maintenance:

The lamp / LED and accessory maintenance procedures depends on the type of lamp option being used. See Lamp/LED Module and Accessory Maintenance instructions below that are applicable to your particular fixture.

Faceplate Removal:

- Remove power from the fixture and let cool before touching.
- Remove any moisture, dirt, or debris from around the IG5 Fixture and on the Faceplate. To remove dirt or debris that has been compacted into the heads of the Captive Faceplate Screws (6), use a small screw driver or stiff piece of wire to scrape and loosen the debris. Compressed 'air in a can' (such as used for cleaning computers) is very handy for blowing debris off of the Faceplate, out of the screw heads, and out of the Housing.

- Loosen the Captive Faceplate Screws (6) by turning counter-clockwise with a 1/8" hex wrench. **Note:** These screws are captive and should not be removed from the Faceplate. If each screw is loosened a turn or two at a time, in a criss-cross pattern, this will help prevent the screw from threading into the Faceplate. If the screws have become seized and cannot be loosened, use a handheld impact driver to help break them loose; otherwise, you risk stripping out the heads.
- Remove the Faceplate (or Faceplate Clamp and Accy Faceplate if an Accy Faceplate is installed) and set aside.
- Remove the Lens and Lens Seal and set aside.

Installation Instructions

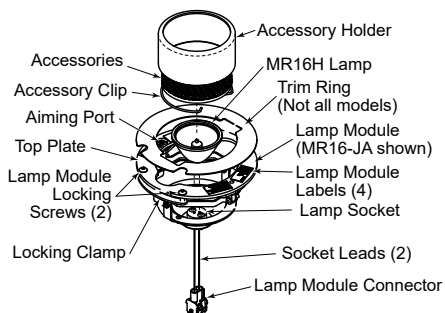
INSTRUCTIONS PERTAINING TO A RISK OF FIRE, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

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MR16 Halogen Lamps:

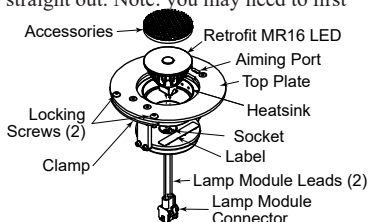
1. Remove the Faceplate and Lens as described in Faceplate Removal.
2. Remove the Accessory Holder and Accessories, if any, by lifting straight out of the Lamp Module and set aside.
3. For MR16 halogen lamp replacement:
 - a. Pull the MR16H Lamp straight out. **Caution!** The Lamp may still be hot! Be sure the Lamp has cooled before touching.
 - b. Inspect the Lamp Socket for any damage.
 - c. Push the new MR16H Lamp straight in, being careful to align the lamp pins with the holes in the Lamp Socket. **Note:** Make sure a proper wattage MR16H Lamp is being used. See fixture Labels or specification sheet for fixture ratings.
4. For Accessory maintenance:
 - a. Remove the Accessory Clip from the Accessory Holder. **Caution! The Accessories may still be hot! Be sure the Accessory Holder has cooled before touching.**
 - b. Carefully remove the Accessories from the Accessory Holder, if any.
 - c. Clean the Accessory Holder, Accessory Clip with a clean, damp cotton cloth.
 - d. Clean the new and/or re-used Accessories with a clean, damp cotton cloth.
 - e. Carefully install Accessories into the Accessory Holder.
 - f. Compress the Accessory Clip and push it into the Accessory Holder until it tightly retains the Accessories.
5. Set the Accessory Holder in the Lamp Module so that it covers the lamp.
6. Install the Faceplate as described above in Faceplate Installation.



MR16H Lamp Module
(Joystick aiming option shown)

Retrofit MR16 LED Lamp Module Maintenance:

1. Remove the Faceplate and Lens as described in Faceplate Removal.
2. For Accessory maintenance:
 - a. Remove the Accessories from Lamp Module. **Note:** LED Lamp Modules do not have a separate holder. Accessories rest on top of the LED and are contained by the Lamp Module itself.
 - b. Clean the new and/or re-used Accessories with a clean, damp cotton cloth.
 - c. Carefully set the Accessories into the Lamp Module on top of the Retrofit MR16 LED.
3. For Retrofit MR16 LED replacement:
 - a. Remove Accessories.
 - b. Pull the Retrofit MR16 LED straight out. **Note:** you may need to first push LED out from gap in lower brackets. **Caution!** LED may still be hot! Be sure LED has cooled before touching.
 - c. Inspect the Lamp Socket for any damage.
 - d. Push new Retrofit MR16 LED straight in, being careful to align pins. Make



Retrofit MR16 LED Lamp Module

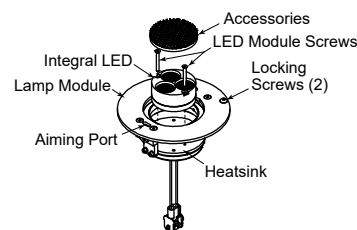
sure Retrofit MR16 LED fully contacts the Heatsink, otherwise LED may overheat and fail prematurely. **Note:** Replacement LED must not exceed ratings on Label. Only use Vision3 approved Retrofit MR16 LED and supplied Heatsink Mount, otherwise LED may overheat and fail.

- e. Set the Accessories on top of the Retrofit MR16 LED.

4. Install the Faceplate and Lens as described in Faceplate Installation.

Integral LED Lamp Module Maintenance:

1. Remove the Faceplate and Lens as described in Faceplate Removal.
2. For Accessory maintenance:
 - a. Remove the Accessories from Lamp Module. **Note:** LED Lamp Modules do not have a separate holder. Accessories rest on top of the Integral LED Module and are contained by the Lamp Module itself.
 - b. Clean the new and/or re-used Accessories with a clean, damp cotton cloth.
 - c. Carefully set the Accessories into the Lamp Module on top of the Integral LED Module.
3. For Integral LED Module replacement:
 - a. Remove Accessories.
 - b. Loosen and remove the LED Module Screws.
 - c. Pull Integral LED Module straight out. Do not twist or the pins will break off in the socket. **Caution!** LED may still be hot! Be sure LED has cooled before touching.
 - d. Clean the heat grease off of the Heatsink top surface using a rag dipped in alcohol.
 - e. Inspect the socket for any damage.
 - f. If the replacement Integral LED Module does not come with a thermal transfer pad on the base, apply a thin layer of thermal grease (not supplied) to the surface of the Heatsink that will contact the bottom of the Integral LED Module.
 - g. Align the pins on the Integral LED Module with the socket and push straight in. Do not twist or push in at an angle or the pins may be damaged.
 - h. Install and tighten the LED Module Screws. **Caution!** Over tightening of screws could crack the Integral LED Module case.
 - i. Set the Accessories on top of the Integral LED Module.



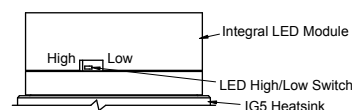
Integral LED Lamp Module

4. For Integral LED Output Switching:

Integral LED Module options come with a High/Low switch. Follow these steps to switch between the two. **Note:** Switch will be set to 'High' setting at the factory, unless otherwise specified when ordered.

- a. Remove the Integral LED Lamp Module assembly by loosening the Locking Screws (2) and lifting out of the Housing.
- b. Inspect for damage. Replace any damaged parts, if necessary.
- c. Clean all parts and inside of fixture with a clean, damp cotton cloth.
- d. Find LED High/Low Switch on side of Integral LED Module.
- e. Using a pin, small nail, etc, flip the switch in the desired direction. See the LED Module Switch sketch for which direction corresponds to which setting.

LED Module Switch



- f. Re-install the Integral LED Lamp Module assembly as explained in Lamp Module Installation.

5. Install the Faceplate and Lens as described in Faceplate Installation.

Installation Instructions

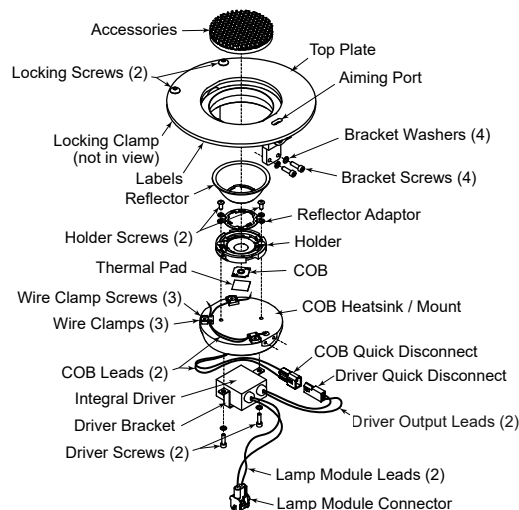
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COB LED Lamp Module Maintenance:

1. Remove the Faceplate and Lens as described in Faceplate Removal.
2. For Accessory maintenance:
 - a. Remove the Accessories from Lamp Module. Note: COB LED Lamp Module does not have a separate accessory holder. Accessories rest on top of the COB LED Reflector and are contained by the Lamp Module itself.
 - b. Clean the new and/or re-used Accessories with a clean, damp cotton cloth.
 - c. Carefully set the Accessories into the Lamp Module on top of the Reflector.
3. For Changing COB LED Optics:
 - a. Loosen the Locking Screws (2) on the COB LED Lamp Module using a 3/32" hex tool.
 - b. Lift out the COB LED Lamp Module and disconnect the Lamp Module Connector from the Power Module Lamp Connector.
 - c. Remove the Bracket Screws (4), the Bracket Washers (4), and remove the COB Heatsink / Mount assembly from the Top Plate assembly. Set the Top Plate assembly aside.
 - d. Twist Reflector counter-clockwise to unlock and remove. Note: if the COB LED Chip needs maintenance, now is a good time to do that as well.
 - e. Insert the new Reflector and twist clockwise to lock.
 - f. Reinstall the COB Heatsink / Mount assembly into the Top Plate assembly using the same hardware.
 - g. Install the COB LED Lamp Module as described in Lamp Module Installation.
 - h. Install the Faceplate and Lens as described in Faceplate Installation.
4. For Changing COB LED Chip:
 - a. Loosen the Locking Screws (2) on the COB LED Lamp Module using a 3/32" hex tool.
 - b. Lift out the COB LED Lamp Module and disconnect the Lamp Module Connector from the Power Module Lamp Connector.
 - c. Remove the Bracket Screws (4), the Bracket Washers (4), and remove the COB Heatsink / Mount assembly from the Top Plate assembly. Set aside the Top Plate assembly.
 - d. Twist Reflector counter-clockwise to unlock and remove.
 - e. Loosen and remove the Wire Clamp Screws (3) and remove the Wire Clamps (3).
 - f. Loosen and remove the two Holder Screws, the Optics Adapter, and the Holder. Note: Twist Holder to ease removal.
 - g. Noting the orientation of the COB in the Holder, compress the Holder clip and carefully remove the COB chip.
 - h. Thoroughly clean the mounting surface of COB Heatsink / Mount with a lint free towel. Use alcohol if there is any grease or residue.
 - i. Place the new COB up against the Holder clip in the same orientation as the removed COB. Ensure the polarity marks on the Holder match the marks on the COB. Slowly press on the opposite side of COB to compress the Holder clip until the COB drops into the recess. Note: Only touch the edges of the COB as oils and dirt from your skin can damage the diodes.
 - j. Remove clear plastic film from one side of the supplied Thermal Pad. Using light pressure, apply to the back of the new COB chip. Make sure pad is square and fully covers the back of the COB. Remove secondary clear plastic film from the exposed side of the Thermal Pad.
 - k. Place the Holder and Optics Adapter on the COB Heatsink / Mount in the same orientation it was removed.
 - l. Install and tighten the Holder Screws (2). Do not overtighten.
 - m. Reinstall the Wire Clamp (3) and the Wire Clamp Screws (3). Note: Route the COB Leads the same as when clamps were removed.



COB LED Lamp Module

- n. Insert the Reflector and twist clockwise to lock. Note: If any Reflector maintenance is required, now is a good time to do it.
- o. Reinstall the COB Heatsink / Mount assembly into the Top Plate assembly using the same hardware.
- p. Install the COB LED Lamp Module as described in Lamp Module Installation.
- q. Install the Faceplate and Lens as described in Faceplate Installation.
5. For Replacing Driver:
 - a. Loosen the Locking Screws (2) on the COB LED Lamp Module using a 3/32" hex tool.
 - b. Lift out the COB LED Lamp Module and disconnect the Lamp Module Connector from the Power Module Lamp Connector.
 - c. Disconnect the COB Quick Disconnect from the Driver Quick Disconnect.
 - d. Loosen and remove the Driver Screws (2), Driver Bracket, and Integral Driver.
 - e. Install new Integral Driver, Driver Bracket, and Driver Screws (2) in same position as removed old Integral Driver. Note: Make sure ratings on new Integral Driver are within ratings of fixture. See IG5 Specification Sheet. Use only Vision3 Lighting approved parts.
 - f. Connect the Driver Quick Disconnect to the COB Quick Disconnect. Route connected wires similarly to removed Driver.
 - g. Install the COB LED Lamp Module as described in Lamp Module Installation.
 - h. Install the Faceplate and Lens as described in Faceplate Installation.

Power Module Maintenance:

1. Remove the Faceplate and Lens as described in Faceplate Removal.
2. Loosen the Locking Screws (2) on the Lamp Module using a 3/32" hex tool.
3. Lift out the Lamp Module and disconnect the Lamp Module Connector from the Power Module Lamp Connector.
4. Remove Lamp Module and set aside.
5. Loosen the Locking Screws (2) on the Power Module using a 3/32" hex tool.
6. Lift out the Power Module and disconnect the Power Module Connector from the Power Supply Connector.
7. Remove Power Module.
8. Install new Power Module as described in Power Module Installation.
9. Install Lamp Module as described in Lamp Module Installation.
10. Install the Faceplate and Lens as described in Faceplate Installation.

Installation Instructions

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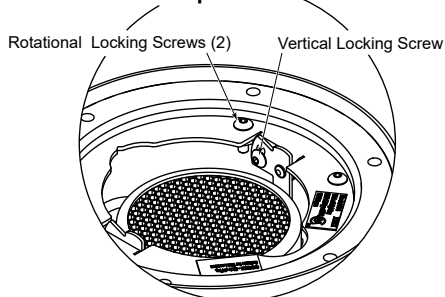
10 - Aiming:

The aiming procedure depend on the type of Lamp Module and Lamp option being used. See aiming instructions below that are applicable to your particular fixture.

MR16H Standard Aiming Module:

1. Remove Faceplate as described in Lamp Module, Power Module, and Accessory Maintenance section.
2. Clean any dirt or debris off of the Lamp Module Top Plate. Use compressed 'air in a can' to blow off any particles.
3. Turn power on to the fixture. **Caution! The fixture will become hot very quickly.** While the power is on, avoid touching the lamp or lens accessories, as doing so may cause injury.
4. Unlock the aiming brackets by loosening the Vertical Locking Screw and Rotational Locking Screws (2) with a 3/32" Hex Tool.
5. Rotate the Lamp Module Top Plate and swing the lamp brackets until the lamp is aiming in the desired direction. Caution! These parts will be very hot from the lamp. Use heat resistant gloves if necessary.
6. Once the Lamp is aimed in the proper direction, lock the aiming brackets by tightening the Vertical Locking Screw and Rotational Locking Screws (2) with a 3/32" Hex Tool.
7. Install the Faceplate as described above in Faceplate Installation.

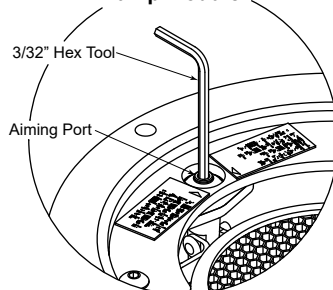
MR16H Standard Aiming Lamp Module



MR16H Joystick Aiming Module

1. Remove Faceplate as described in Lamp Module, Power Module, and Accessory Maintenance section.
2. Remove the Trim Ring (if used) and clean any dirt or debris off of the Lamp Module Top Plate and around the Aiming Port. Use compressed 'air in a can' to blow out any particles in the recess around the Aiming Port. If this recess is not completely clean, it may make aiming more difficult.
3. Turn power on to the fixture. **Caution! The fixture will become hot very quickly.** While the power is on, avoid touching any part of the fixture, as doing so may cause injury.
4. Stick a 3/32" Hex Tool in to the Aiming Port hole. Move it around slightly until you can feel it drop in and engage the locking mechanism. **Caution! Avoid touching any part of the fixture except for the 3/32" Hex Tool.**
5. Unlock the aiming brackets by turning the 3/32" Hex Tool about 1/2 to 1 turn counter-clockwise.
6. Once the aiming brackets are unlocked, you can move the 3/32" Hex Tool around, like a joystick,

MR16H Joystick Aiming Lamp Module



and the aiming brackets will track this motion, aiming the Lamp where you point it. You can fine tune the tension on the locking mechanism by turning the 3/32" Hex Tool clockwise (increase tension) or counter-clockwise (decrease tension) to a point that satisfactorily allows you to aim the Lamp, yet holds position when you let go of the 3/32" Hex Tool. This allows you to concentrate more on aiming and less on holding the Lamp in position.

7. Once the Lamp is aimed in the proper direction, Rotate the 3/32" Hex Tool clockwise until the aiming brackets lock and hold position. It does not take much to lock the aiming brackets, so be careful to not over-tighten.
8. Remove the 3/32" Hex Tool from the Aiming Port.
9. Re-install the Trim Ring (if used).
10. Install the Faceplate as described above in Faceplate Installation.

LED Joystick Aiming Module

1. Remove Faceplate as described in Lamp Module, Power Module, and Accessory Maintenance section.
2. Clean any dirt or debris off of the Lamp Module Top Plate and around the Aiming Port. Use compressed 'air in a can' to blow out any particles in the recess around the Aiming Port. If this recess is not completely clean, it may make aiming more difficult.
3. Turn power on to the fixture. **Caution! The fixture will become hot very quickly.** While the power is on, avoid touching any part of the fixture, as doing so may cause injury.
4. Unlock the Lamp Module Top Plate by loosening the Rotational Locking Screws (2) with a 3/32" Hex Tool. This allows the Lamp Module to rotate, adjusting rotational aiming.
5. Stick a 3/32" Hex Tool in to the Aiming Port hole. Move it around slightly until you can feel it drop in and engage the locking mechanism. **Caution! Avoid touching any part of the fixture except for the 3/32" Hex Tool.**
6. Unlock by turning the 3/32" Hex Tool about 1/2 to 1 turn counter-clockwise. This allows the brackets to swing, adjusting vertical aiming.
7. Use the 3/32" Hex Tool to rotate the Lamp Module Top Plate and swing the lamp brackets until the lamp is aiming in the desired direction. This can usually be done using just the hex tool, but if you need to touch any part of the fixture, exercise caution, these parts will be very hot from the lamp. Use heat resistant gloves if necessary.
8. Once the Lamp is aimed in the proper direction, rotate the 3/32" Hex Tool clockwise until the aiming brackets lock and hold position. It does not take much to lock the aiming brackets, so be careful to not overtighten.
9. Lock the Lamp Module Top Plate by tightening the Rotational Locking Screws (2) with a 3/32" Hex Tool.
10. Install the Faceplate as described above in Faceplate Installation.

LED / COB Joystick Aiming Lamp Module

