

DHT/ZF, DHT/ZFS & DHT/ZO

RECESSED DOWNLIGHT HOUSINGS

INSTALLATION

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A. CAUTION

Before beginning any downlight installation, disconnect electrical power at a main switch or circuit breaker. Lucifer recessed downlights are low voltage fixtures which operate on a 12-volt power supply. Downlight installations where housings are not specified is not advised or approved. Installing Lucifer downlights without Lucifer supplied housings and transformers voids the UL/CUL Listing and Lucifer warranty.

B. IMPORTANT SAFETY INSTRUCTIONS

When installing or using these recessed downlights, basic safety precautions must be followed, including the following:

1. Read all instructions before attempting any part of the installation. If you do not understand the instructions, do not attempt to install these light fixtures. Save these instructions.
2. Recessed downlights may be installed in dry and damp locations only. The fixtures are not Listed for use in wet locations.
3. Install and mount recessed downlights on a structurally sound surface.
4. Do not install any fixture assembly closer than 6" from any curtains, exotic veneers or similar combustible materials.
5. To reduce the risk of fire, electric shock and potential damage to the fixtures, do not attempt to connect motors, power tools, extension cords, appliances, and the like on the branch circuit serving the recessed downlights.
6. Disconnect electrical power circuit before adding to or changing the configuration of the recessed downlights.

C. GENERAL INSTALLATION & WIRING INSTRUCTIONS

1. Lucifer 12-volt recessed downlights should be installed by a competent registered electrician in accordance with these instructions.
2. The installation shall comply with the national electric code (NEC) and local codes and ordinances having jurisdiction.
3. The installer is responsible for furnishing proper electrical equipment and materials for the installation of these downlight fixtures as intended by these installation instructions.
4. Install housings in a manner to permit access to components and splice connections which may require service.
5. Set recessed housing plumb, square and level with the ceilings and walls, in alignment with adjacent structural members. Secure in accordance with these installation instructions for the specified housing.
6. Recessed housings installed in accessible and non-accessible ceilings shall be supported from the structural members of the building. Do not support housings by lay-in ceiling support T-bars only.
7. Metal conduit shall be used if required by applicable codes. Conductor insulation must be rated for the appropriate temperature rating as specified for each Lucifer housing.
8. The ground wire at the service junction box shall be secured to a ground screw. No part of the secondary 12-volt circuit shall be grounded.
9. Switching or dimming should be controlled on the primary 120-volt side of the transformer. The switch must be rated to resist the effect of the switch-on surge (usually 1.25 to 1.50 times the running current). Use only dimmers specially designed and manufactured for dimming the primary side of transformers. Verify with the dimmer manufacturer that the dimmer is suitable for dimming the primary side of low voltage electronic transformers and can accommodate transformer load.
10. The recessed downlights are thermally protected as required by underwriters laboratories (UL). A blinking lamp may indicate that the installation of the housing is improper and the surrounding space above the ceiling is causing overheating or a higher wattage lamp is being used other than the wattage for which the housing is approved. Check if insulation is too close to the housing or if the lamp's wattage is too high contrary to housing label and specific installation instructions.

D. POWER SOURCE

The secondary power source is a 120-volt primary, 12-volt secondary integral electronic transformer.

E. UL/C-UL LISTING AND CLEARANCE REQUIREMENTS

The DHT/ZO, DHT/ZF, and DHT/ZFS are listed for accessible and non-accessible, non-insulated ceilings. The housing must have a 3" minimum clearance on all sides for heat dissipation. In ceilings where insulation is present, all insulation must be at least 3" away from each side of the housing.

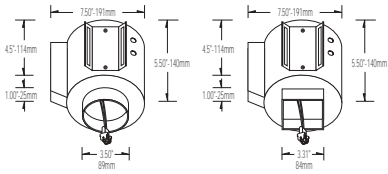
F. HOUSING / TRIM REFERENCE

1. **Housing:** DHT/ZF
For use with trims: DL1Z-2, DL2RZ-2, DL11Z-2, DL15Z-2, DL21Z-2, DL21ZS-2, DL23Z
2. **Housing:** DHT/ZFS
For use with trims: DL12, DL16
3. **Housing:** DHT/ZO
For use with trims: DL1Z-1, DL2RZ-1, DL11Z-1, DL15Z-1

G. HOUSING INSTALLATION

1. MOUNTING HOUSINGS

a. DHT/ZF & DHT/ZFS Housings



STEP 1

DHT/ZF CEILING CUTOUT: 3 1/2" DIAMETER

DHT/ZFS CEILING CUTOUT: 3.31" SQUARE

NOTE: Lucifer Lighting recommends using a Hole Saw for a more accurate ceiling cut for the DHT/ZF due to trims have minimal goof allowance.

(See Fig. 1)

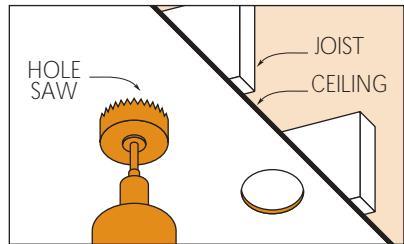


Fig. 1

STEP 2

Place the housing where the trim model is specified to be located. Slide the hanger bars into the housing support brackets and adjust as required to contact the building support structure (joist). Orient the housing to provide adequate clearance for the excess flexible conduit or armored cable that will be installed in the junction box knockouts. Nail the hanger bar's end brackets into the crossbeam supports.

(See Fig. 2)

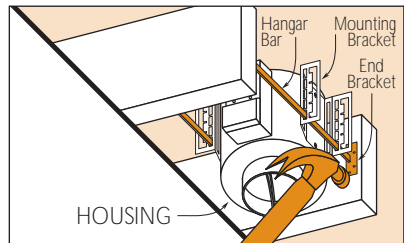


Fig. 2

STEP 3

In dry-wall ceilings, it is required that the cutout is sized properly for the housing. The neck of the housing should fit snugly into the circular cutout and be level with the finished ceiling plane. The housing can be adjusted up or down by moving the hanger bar mounting brackets. Thumb screws are located within the housing to make this adjustment. Inspect to ensure the housing is securely mounted and will not move when the ceiling and / or trim is installed. (See Fig. 3)

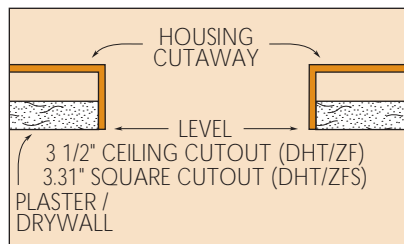
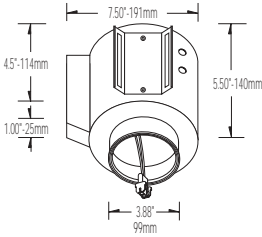


Fig. 3

G. HOUSING INSTALLATION

1. MOUNTING HOUSINGS Cont'd

b. DHT/ZO Housing



STEP 1

CEILING CUTOUT: 4 1/8" DIAMETER

NOTE: Lucifer Lighting recommends using a Hole Saw for a more accurate ceiling cut.

(See Fig. 1)

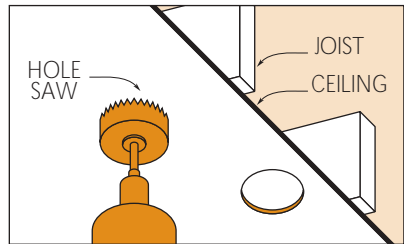


Fig. 1

STEP 2

Place the housing where the trim model is specified to be located. Slide the hangar bars into the housing support brackets and adjust as required to contact the building support structure (joist). Orient the housing to provide adequate clearance for the excess flexible conduit or armored cable that will be installed in the junction box knockouts. Nail the hangar bar's end brackets into the crossbeam supports. (See Fig. 2)

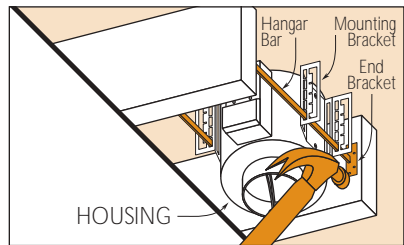


Fig. 2

STEP 3

In dry-wall ceilings, it is required that the cutout is sized properly for the housing. The neck of the housing should be level with the finished ceiling line. Remember to allow for plaster float. The housing can be adjusted up or down by moving the hangar bar mounting brackets. Thumb screws are located within the housing to make this adjustment. Inspect to ensure the housing is securely mounted and will not move when the ceiling and / or trim is installed. (See Fig. 3)

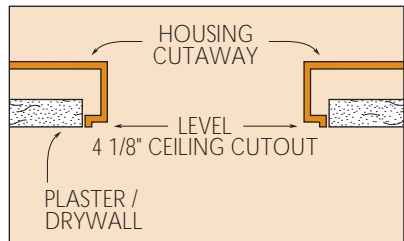


Fig. 3

STEP 4

Clean any dust from the ceiling surface immediately surrounding the housing. Remove the adhesive liner from one sheet of the fiberglass mesh. From the room side, center the mesh panel over the trim opening of the housing and firmly apply the adhesive side to the ceiling. Remove the adhesive liner from the second sheet of fiberglass mesh and repeat. (See Fig. 4)

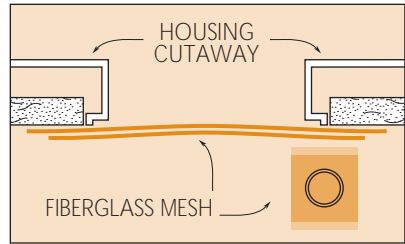


Fig. 4

STEP 5

With both sheets of fiberglass mesh securely attached to the ceiling surface, take a sharp utility knife and carefully cut through the mesh along the inside edge of the housing's trim opening. Discard the circular piece of mesh. (See Fig. 5)

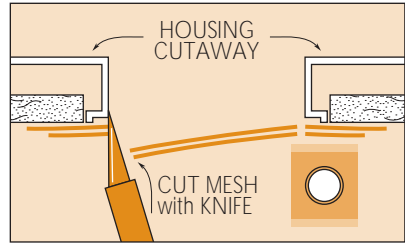


Fig. 5

STEP 6

Using a suitable narrow, rounded tool such as a tongue depressor, gently push the fiberglass mesh overlapping the housing flange into the 1/8" gap between the housing flange and the drywall. When properly positioned, the mesh should cover the edge of the drywall and lay against the back of the housing flange. (See Fig. 6)

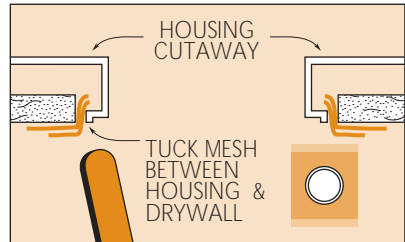


Fig. 6

STEP 7

Reinstall the protective paint cap furnished to avoid filling the housing flange with joint compound. Drywall joint compound may now be forced into the gap between the housing flange and the drywall. When the 1/8" gap is completely filled, the ceiling may be finished in normal fashion. (See Fig. 7)

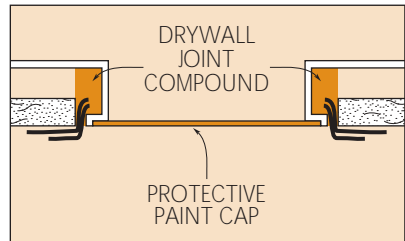


Fig. 7

G. HOUSING INSTALLATION

2. WIRE CONNECTIONS

STEP 1

- From the room side, reach into the plaster Flange opening and rotate the junction box Retainer Latches up. The Junction Box is now free to move.
- Use your index finger to pull the junction box Assistance Tab toward the Flange opening. Guide the bottom surface of the Junction Box into the Flange opening and remove it from the housing. (See Fig. 1)

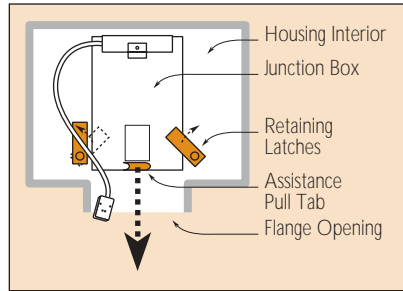


Fig. 1

STEP 2

After the Junction Box has been removed from the housing, it is ready to accept the supply wiring. Begin by pulling the flexible conduit with conductors or armored cable through the Junction Box opening in the housing and down through the Flange opening. A length of 2 to 3" cable extending past the housing's Flange opening is usually sufficient. (See Fig. 2)

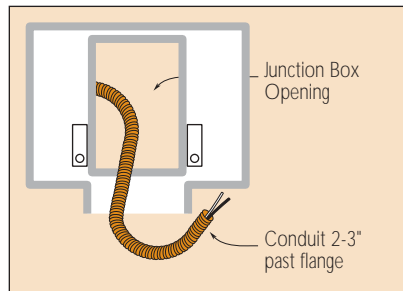


Fig. 2

STEP 3

Remove the Cover Plate, on the front of the Junction Box, by gently lifting the foil faced insulation above the Assistance Tab and removing the single Phillips head screw. The Cover Plate will now slide down and out of the Junction Box. (See Fig. 3)

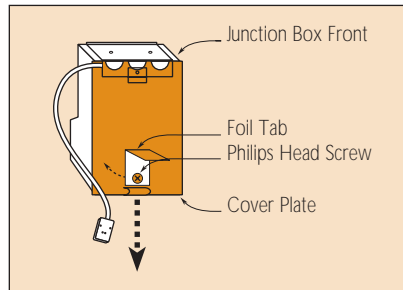
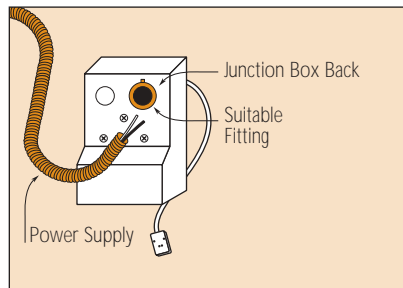


Fig. 3

STEP 4

Install a suitable flexible conduit (3/8") or armored cable fitting into the 7/8" diameter opening in the back of the Junction Box; **37 watts or less require 90°C rated supply wire minimum and 50 watts require 105°C rated supply wire minimum.** Connect the primary lead from the integral electronic transformer to the 120-volt power supply using appropriate wire connectors required by NEC or your local code authority. Locate all wiring connections within the transformer compartment. (See Fig. 4)



6 Fig. 4

G. HOUSING INSTALLATION

2. WIRE CONNECTIONS Cont'd

STEP 5

Reinstall the junction box Cover Plate by sliding the end with the wire cutouts under the upper flange of the Junction Box's opening. (See Fig. 5)

CAUTION: Care must be taken to ensure that none of the wires are pinched during installation of the Cover Plate.

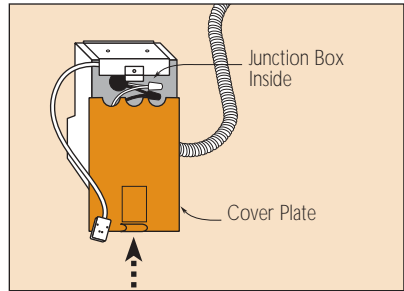


Fig. 5

STEP 6

Once the Cover Plate is in position, reinstall the Phillips head screw above the Assistance Tab and return the foil-faced insulation to its original position. (See Fig. 6)

(See Fig. 6)

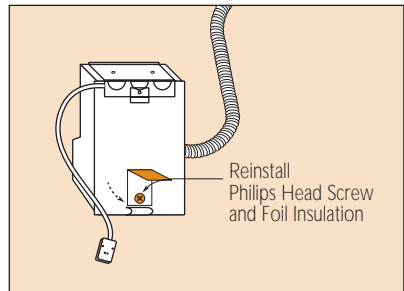


Fig. 6

STEP 7

- The Junction Box is now ready to be reinstalled in the housing. Guide the flexible conduit or armored cable through the flange opening and toward the housing's Junction Box opening.
- The Junction Box will need to be tilted slightly to allow the cable fitting to pass through the Flange opening.
- Once the Junction Box is inside the housing and the top is contacting the inner wall of the housing's Junction Box opening, push the lower portion straight back into the opening until it engages the housing wall.
- When the Junction Box is firmly against the housing wall, use your index finger to rotate the junction box Retainer Latches snugly into position. The Junction Box installation is now complete.

(See Fig. 7)

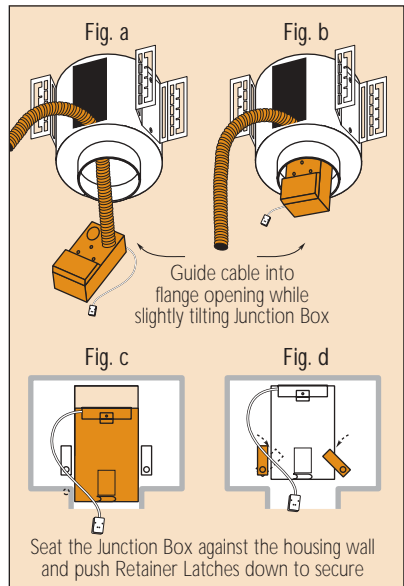


Fig. 7

H. LAMP WATTAGE

The DHT/ZF, DHT/ZFS, and DHT/ZO are low voltage recessed downlights supplied with an integral 120-volt primary, 12-volt secondary, electronic transformer. Both housings utilize up to a 50-watt MR-16 lamp maximum.

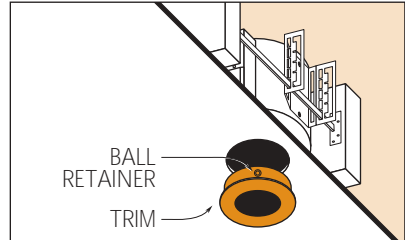
I. LENS AND LAMP INSTALLATION

When the housing has been properly and securely installed, and all electrical connections have been made, install the specified MR-16 lamp into the socket hanging from the housing's flange opening. When a glass barrier (lens) is not being used, install a sealed (lensed) MR-16 lamp only.

When using lenses, the proper installation order is to place the spread lens closest to the lamp, prism side away, then diffusion lens, color lens, and louver, respectively.

J. TRIM INSTALLATION

After lamping and installing lenses, if used, insert the downlight trim into the housing by directing the trim collar into the housing's flange opening. Slide the trim straight up into the housing until the ball retainers seat into position.



LIMITED WARRANTY

LUCIFER LIGHTING COMPANY (Seller) warrants that for a period of one (1) year from date of sale to the first non-retail purchaser, Seller will repair or replace, at the Seller's sole option, free of charge, any defective products purchased from Seller provided that prior authorization is obtained from the Seller and the products are sent prepaid to the Seller's manufacturing facility. Lamps are not warranted or guaranteed in any manner for any length of time. In no event shall Seller's obligations under this warranty extend beyond the initial cost of the products and accordingly, consequential damages arising out of any claimed product defect are expressly excluded. This Warranty does not cover the costs, if any, in re-installation of products serviced under this Warranty. This Warranty does not cover damage or failure caused by acts of God, abuse, misuse, abnormal usage, faulty installation, or any repairs or modifications other than

those made by Seller. This Warranty does not cover damage or failure caused by light fixtures used with transformers or other products not supplied by Seller, nor shall it apply to defects for which written notice thereof is not received by Seller within one (1) year from date of purchase. Except as to Seller's Warranty of repair or replacement set forth above, there are no understandings, agreements, representations, or warranties, express or implied (including any regarding the merchantability or fitness for a particular purpose), respecting Lucifer products. This Warranty is the purchaser's sole and exclusive remedy against the Seller for the repair or replacement at Seller's option of defective Lucifer products. Under no circumstances shall Seller be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, the products sold hereunder.

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