

2 SERIES INTERNATIONAL FITTINGS

RECESSED DOWNLIGHTS

INSTALLATION

Before beginning any DOWNLIGHT installation, disconnect electrical power at main switch or circuit breaker.

A. CAUTION

To reduce the risk of fire, electric shock, and potential damage to recessed downlight assembly when electrical power is re-connected, DO NOT ATTEMPT TO CONNECT the following on branch circuit serving recessed downlight assembly:

- Motors
- Power tools
- Extension cords
- Appliances or similar electronics

Downlight fittings to be mounted in ceiling/plenum conditions *where ambient temperatures do not exceed 40°C*

Lucifer Lighting downlights must be used with Lucifer Lighting mounting components.

Ensure AC input voltage is protected against surges & load shifts prior to power supply input.

B. SAFETY INSTRUCTIONS

1. Read installation instructions completely before attempting installation.
2. Failure to follow instructions may result in improper installation and void warranty.
3. Contact Lucifer Lighting Company with any questions or concerns before beginning any installation.
4. Ensure qualified electrician will perform all electrical procedures.
5. Disconnect electrical power circuit before attempting to install recessed downlight fitting, or if adding to or changing configuration of downlight assembly.
6. Install/mount recessed downlight fitting assembly on structurally sound surface.
7. Recessed downlight fittings may be installed in dry or damp locations only.

8. Do not install recessed downlight assembly closer than 152mm (6") from curtains, exotic veneers, or similar combustible or heat sensitive materials.

9. [Spacing Requirements \(diagram on next page\):](#)

Minimum 168mm (6.63") radius setback of combustible materials from fitting centerline and **13mm (0.50")** clearance from top of trim.

Minimum 76mm (3") clearance from combustible materials and surfaces of power supply if not situated within above noted radius from fitting centerline.

Minimum 76mm (3") clearance from polycell foam insulation materials (any type) and top of trim.

Minimum 229mm (9") setback from insulation material having max R-Value of 30 from sides of downlight fitting assembly.

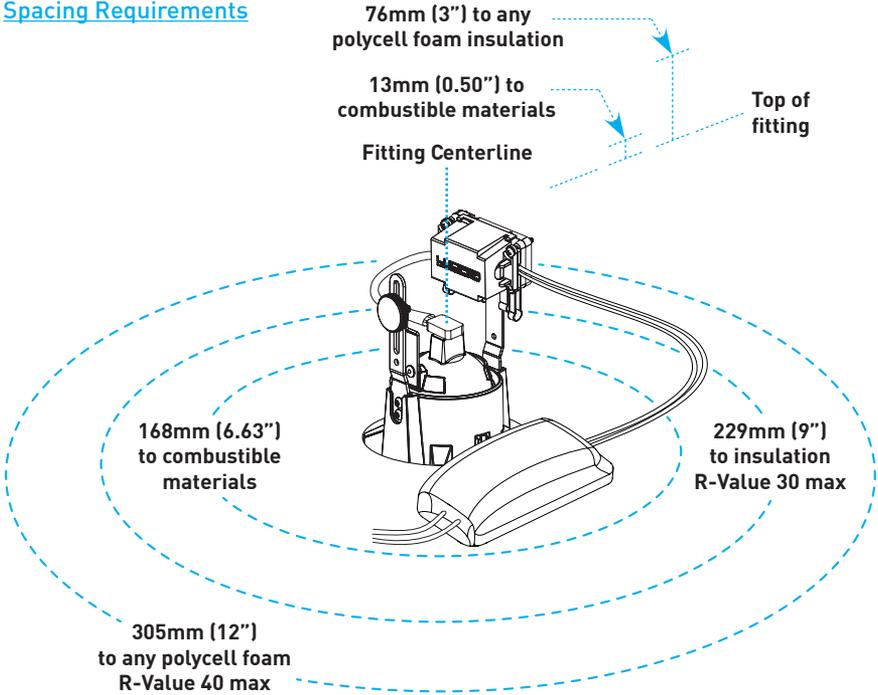
Minimum 305mm (12") setback from polycell foam insulation materials (any type) having max R-Value of 40 and sides of downlight fitting assembly.

Consult factory for spacing requirements for any installations exceeding R-Value of 40.

10. Do not attempt this installation if you do not understand these instructions.

LUCIFER[®]
LIGHTING COMPANY

Spacing Requirements



C. FITTING INSTALLATION

1. WIRING

Note: Consult Safety Instructions on page 1 prior to commencing wiring or servicing.

General Wiring Notes:

- The downlight assembly should be installed by a registered electrician and shall comply with national and local codes and ordinances .
- The installer of the downlight assembly is responsible for furnishing proper electrical equipment and materials for the installations of the downlights as intended by these installation instructions.
- Install downlight in a manner to permit access to components and splice connections which may require future service. Customer supplied feed wires to power supply should be provided in minimum lengths of 203mm (8") to accommodate future servicing.
- Metal conduit shall be used if required by applicable codes. The conductor insulation must feature the appropriate temperature rating as specified on the label for each Lucifer Lighting Company downlight assembly.
- The ground wire at the driver wiring terminal shall be secured to a ground screw. No part of the secondary circuit shall be grounded.
- For systems that will be dimmed, consult controls manufacturer to verify control compatibility and for proper installation procedures and parameters.

Downlight fitting assembly provides integral wiring terminal (fig.1) and typically accepts 2 or 3 wires for connecting to the transformer: black, white and green (if present) (fig.2). Wiring terminal type may differ from depictions.

Use appropriate raceway, connectors, wire and strain reliefs as required.

Join mains voltage structured building wires to corresponding transformer inputs with suitable customer supplied wire connecting device if necessary (fig.2).

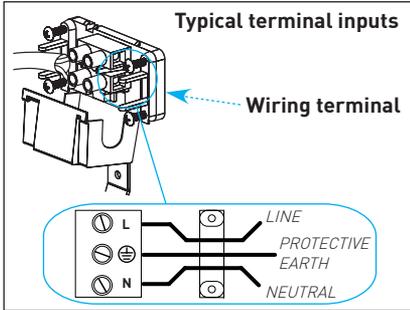


Fig.1

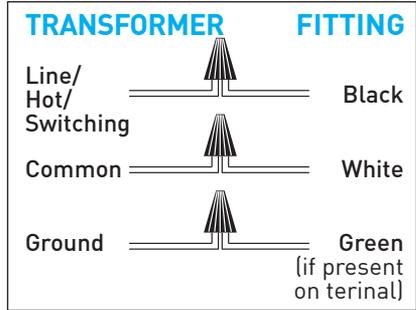


Fig.2

2. MOUNTING

General Mounting Notes:

- Recessed downlight assemblies installed in accessible and non-accessible ceilings shall be supported from the structural members of the building. Do not support by lay-in ceiling tile, unless deemed suitable by national or local code authority.
- To avoid unsafe thermal conditions, ensure adequate plenum space surrounds fitting and verify insulation spacing complies with required setbacks (see pages 1-2) and lamp's wattage conforms with fitting and transformer allowed capacity.
- Determine specified fitting location, ensuring sufficient space exists to accommodate assembly components while maintaining factory established setbacks from construction materials and insulation (see pages 1-2).

Note: See page 4 for additional instructions regarding installing ceiling tiles.

3. CEILING SUBSTRATE AND FINISH OUT

Factory recommends use of properly sized hole saw for cut-outs. Correct size and quality of hole is critical. Many trims have minimal ceiling overlay of trim flange.

Make proper hole cut-out referencing measurements from adjacent walls to aperture centerline.

CEILING CUT-OUT: 92mm (3.625") diameter for all applications

3.1. GYPSUM BOARD

Install drywall in typical fashion. Oversized hole cut-outs must be filled in with mud or plaster utilizing appropriate tape in accordance with industry standards. *Zero-sightline installs now refer to page 9.*

Important: If zero-sightline, appliqué must be installed prior to mudding or finishing of ceiling. Failure to follow these instructions will lead to failed expectations and added expense.

Sand, prime and apply finish coat to ceiling.

3.2. WOOD CEILING

Install wood in accordance with local and national building codes, employing suitable fire barriers as required. Hole cut-outs should be clean and precise. Sand, stain and apply finish seal coat prior to installing trim ceiling adaptor and trim.

Important: Zero-Sightline installations are not compatible with wood ceiling applications.

3.3. T-GRID LAY-IN TILE CEILING

Install tiles in accordance with manufacturer's recommendations.

Important: Zero-Sightline installations are not compatible with lay-In tile ceiling applications.

D. TRIM CEILING ADAPTOR INSTALLATION

Note: All Lucifer Lighting 2-Series trims supplied with ceiling adaptor (1 per fitting) designed to receive retention plunger balls of trim and are equipped with safety lanyard. Adaptor mates with trim in only one orientation by aligning **blue indicator lines found on both trim and adaptor**. Blue indicator line also defines direction trim will aim, defining mid-axial rotation point as well. Additionally, adaptor is used to line up adjacent square faced trims in flange overlay applications.

Important: Adaptor to be installed after final finish and paint have been applied to ceiling (*except for zero-sightline). Adaptor must be removed prior to any refinishing or repainting of ceiling. Presence of paint, ceiling mud or other construction materials on or in adaptor represents unsafe condition and must be replaced or cleaned to original condition and specifications to maintain factory warranty.

***Note:** Trim adaptor and appliqué are to be installed prior to final finish and paint in Zero-Sightline applications. However, cautions regarding paint or mud being applied to adaptor remain.

Determine wall plane or direction in which trim is to aim, positioning side of adaptor with blue line closest to or pointing in that direction (**fig.3**).

Important: For wallwasher application, aim squarely/ directly at adjacent (target) wall (**fig.3**).

Ensure trim adaptor arms are pointed inward (**fig.4**),

Insert adaptor up through ceiling cut-out (**fig.5**).

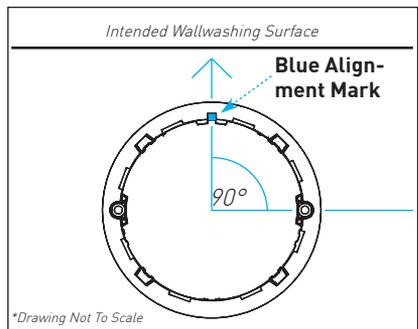


Fig.3

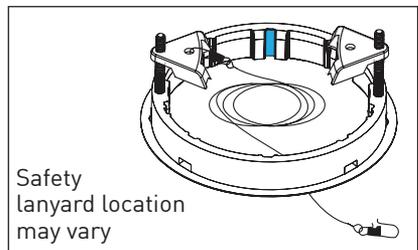


Fig.4

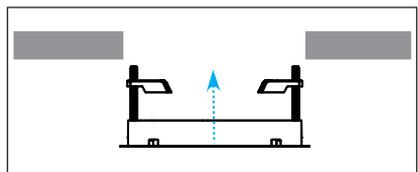


Fig.5

Begin tightening adaptor arm screws, ensuring arms swing out, then down to engage top of ceiling substrate (fig.7).

Utilize string line or laser level to obtain uniform or desired alignment between multiple fittings, or square fittings in relation to parallel planes referencing markings on trim adaptor face perimeter (fig.8).

Hand-tighten adaptor arm screws, not exceeding 0.565 Nm [5 in.-lbs.], ensuring adaptor lip seats uniformly flush with finished ceiling plane.

Note: Do not overtighten.

If not already in place, install wired transformer assembly up through trim adaptor to rest atop ceiling panel in compliance with spacing requirements stated on pages 1-2.

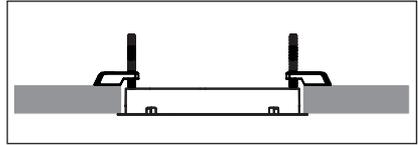


Fig.7

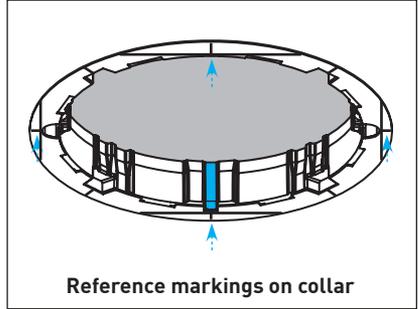


Fig.8

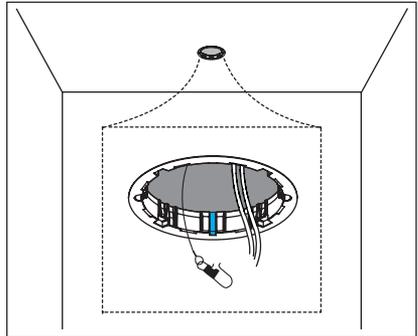
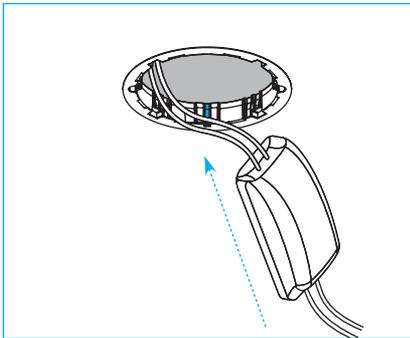


Fig.9

Guide low-voltage wiring and safety lanyard through adaptor to hang below ceiling to facilitate trim installation (fig.9).

E. TRIM INSTALLATION

Attach safety lanyard from mounting adaptor to designated hole in support arm of downlight fitting using supplied clasp. (fig.10).

Wiring terminal type varies and may look different than graphic.

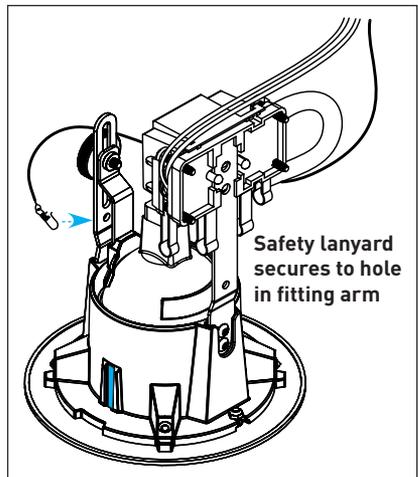


Fig.10

Attach low-voltage wiring from transformer to fitting [see pages 2-3, **fig.1-2**].

Downlight fittings typically accept multiple effects devices.

To install or change lamp or effects devices, loosen thumb screw of fitting, then slide lampholder up and swing out for access (**fig.11**).

Position required special effects device(s) in lens recess of downlight in preferred order and correct orientation.

Return lampholder to locking position and secure by tightening thumb screws.

Important: Before final downlight installation in ceiling, ensure lampholder assembly is secure and safety lanyard is properly affixed to downlight and mounting adaptor.

Downlight trim mates with ceiling collar via positive engagement, high performance ball-plungers.

To install downlight, ensure blue line of trim is aligned with blue line of trim ceiling adaptor, guide safety lanyard and power supply wires up through opening so that they do not become entangled or pinched and insert trim into neck of adaptor.

Apply even pressure to underside of trim faceplate (mechanism, if adjustable trim) until the unit “pops” up into final resting position in adaptor (**fig. 12**).

Verify trim faceplate seats fully and uniformly to ceiling plane (**fig. 13**).

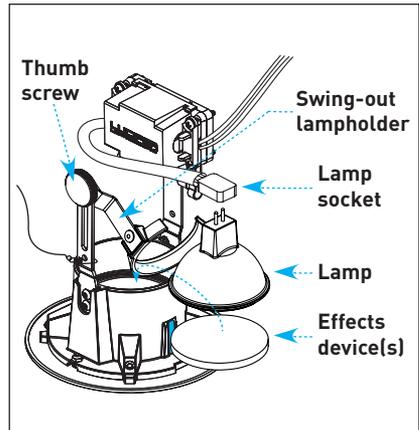


Fig.11

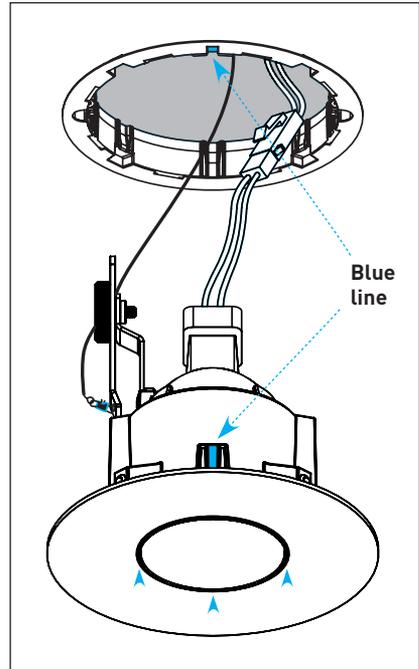


Fig.12

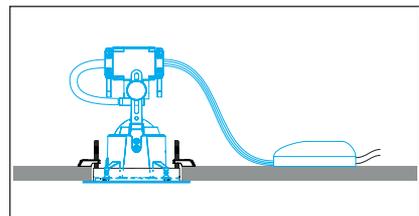
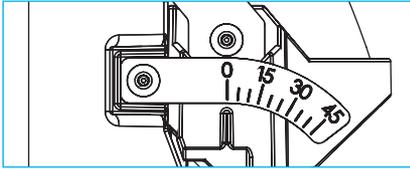


Fig.13

F. ADJUSTABLE FITTINGS

Hot-aimable tilt and rotation adjustment is accessed by removing fitting's faceplate held in place by rare earth magnets, revealing adjustment mechanisms (fig.14).

Initial adjustment to fitting tilt may be made prior to installing downlight by using marked indicator.



Spring loaded tilt allows fitting to pass through ceiling opening in vertical position and return to pre-set angle once installed.

Adjustments made with supplied, standard 1.3mm (.050") Allen tool.

With faceplate removed, locate tilt adjustment screw and rotation lock screw.

Rotation: To adjust rotation, use supplied hex tool engaged with lock screw and loosen, then set desired position by hand with gentle outward force of fingers in trim aperture, turning to desired orientation. Tighten lock screw to secure (fig.15).

DO NOT OVER TIGHTEN.

Tilt: To adjust tilt, use Allen tool engaged with countersunk jack screw and rotate counter-clockwise to increase tilt angle (up to 45° max), or clockwise to decrease tilt angle (fig.16).

DO NOT TURN SCREW PAST LIMITS OF ADJUSTMENT. Damage to mechanism may arise.

Complete installation by bringing faceplate close to mechanism, aligning magnets, and allow faceplate to seat to trim and ceiling plane.

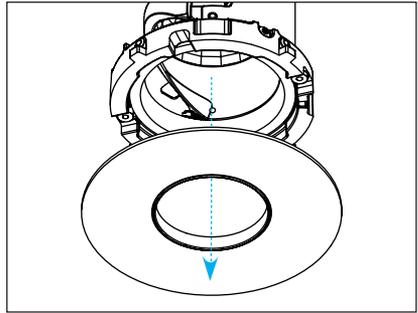


Fig.14

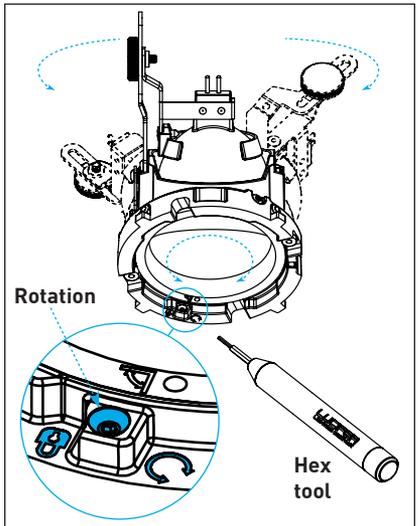


Fig.15

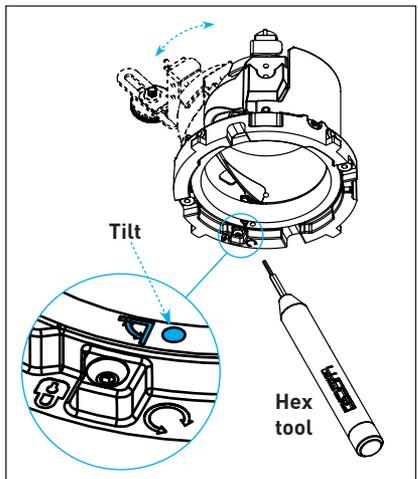


Fig.16

G. SERVICING FITTING

Important: Before servicing or maintaining trim, disconnect electrical power at main switch or circuit breaker. Additionally, review notes in Sections A & B and refer to figures in main installation instructions where necessary.

REPLACING LAMP:

Remove trim from ceiling using following techniques for the respective trim type.

- Downlight Trims – Using round-shafted flat blade screw driver, carefully position blade of screw driver on top of baffle with shaft gently resting on opposing trim aperture. Pry slightly to dislodge trim from trim adaptor.
- Wallwash Trims – Grasp baffle using soft gloves or with clean soft cloth, pulling away from mounting plane.
- Adjustable Trims:
 1. Dry/Damp – Insert fingers in trim aperture, grabbing and pulling downward on removable faceplate.
 2. Wet – Carefully grasp perimeter of trim pulling downward on removable faceplate.
 3. With respective faceplate removed, grasp trim mechanism with fingers and pull downward.
- Detach lamp by loosening knurled knob thumb screw, allowing lampholder to swing up and out releasing lamp.
- Carefully disengage lamp from socket.
- Replace with new lamp sourced through or approved by Lucifer Lighting, reversing order of preceding steps.
- Reinsert trim.

EXCHANGING EFFECTS DEVICES:

See page 6.

FIELD PAINTING OF TRIM:

Though we strongly recommend custom paint be applied by factory during manufacturing, trims may be field painted without impacting factory mechanical warranty using following guidelines.

- Select paint suitable for application and location of trim, recognizing Lucifer Lighting Company fittings are tested not to exceed temperatures of 90° Celsius, where typical operating temperature of faceplate is 66° Celsius nominal.
- Trim plate surface must be properly prepped in accordance with paint manufacturer's instructions. Paint supplied and furnished by customer.

Important: Paint to be applied to trim faceplate only. Do not apply paint to magnets of adjustable series trim. Any disassembly or modification to trim or mechanism voids factory warranty and may represent an unsafe operating condition.

H. ZERO-SIGHTLINE

An appliqué is required for zero-sightline installation. The following instructions assume proper ceiling cut-out has been made ready to accept appliqué and/or trim adaptor.

Important: For square fitting installations, appliqué must be properly aligned. Utilize string line or laser level to obtain uniform or desired alignment between multiple fittings, or in relation to parallel planes (fig.17).

Center appliqué in cut-out and install trim adaptor (with arms pointed inward) up through appliqué. To secure, tighten adaptor screws so arms swing out then down, until appliqué is fully seated against ceiling surface (fig.18), ensuring desired alignment if square appliqué is used.

Trim adaptor should rest completely and uniformly in appliqué recess.

Important: After plaster mudding/floating has been performed, subsequent appliqué adjustment is not possible. Ensure proper, fully seated fit and desired alignment if square.

After appliqué is secured (by screws or trim adaptor), install plaster plug (fig.19).

Do not remove plug until all plaster and paint work is complete.

Use floating knife to apply first pass of drywall compound and float area up to slightly below edge of flange/plaster stop. Float out as far as necessary to hide perforated appliqué and allow first pass of joint compound to dry (fig.20).

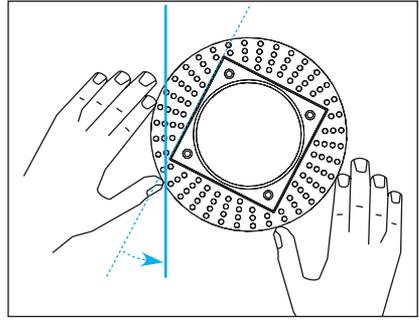


Fig.17

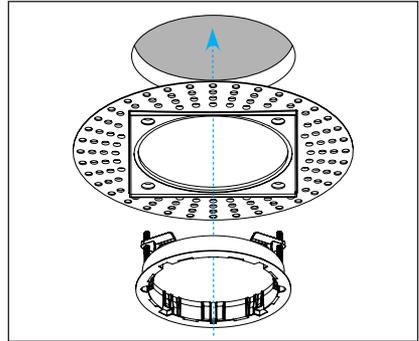


Fig.18

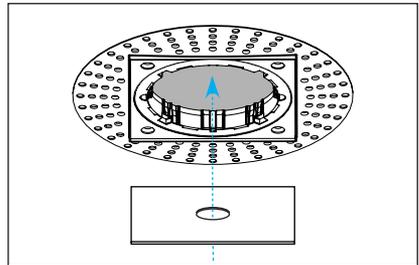


Fig.19

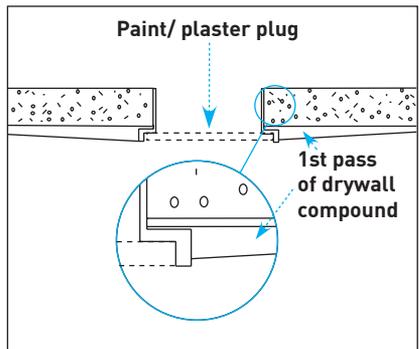


Fig.20

After first pass is dry, apply second coat of drywall compound. Make surface as smooth as possible. Ensure coat of compound falls below flange/ plaster stop (fig.21).

On this pass, feather compound as you move away from flange to give appearance of a perfectly flat ceiling (fig.22). Allow drywall compound to dry fully and cure.

Gently use block sanding screen and sand surface (fig.23) until drywall compound is even with bottom of flange/ plaster stop (fig.24). Ensure surface is smooth.

Once drywall compound is fully cured, ceiling may be painted (fig.25). After paint is dry, remove plaster plug making sure adhesive tape is removed as well.

Check for any drywall compound or paint that may have seeped beneath plug and carefully scrape if necessary.

Important: Any foreign material left in or on recessed appliqué surface or trim adaptor may prevent proper fitting installation and satisfactory zero-sightline trim installation.

Resume downlight installation procedure detailed on page 3 of these instructions to perform final alignment and securing of trim adaptor.

Note: The size of some transformers or power supplies may require removal of trim adaptor to facilitate insertion through cut-out.

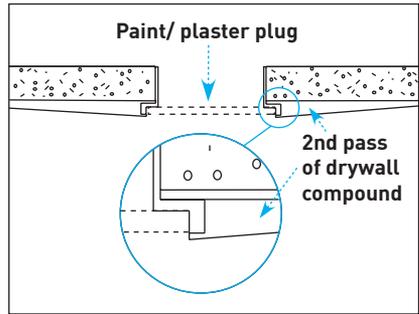


Fig.21

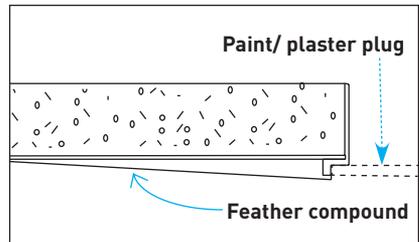


Fig.22

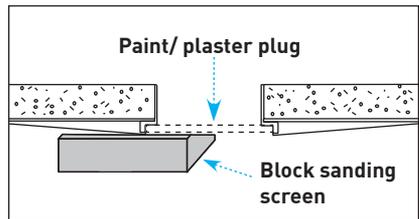


Fig.23

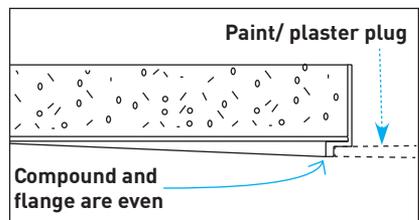


Fig.24

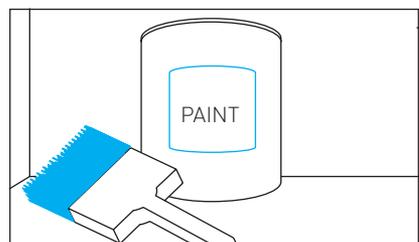


Fig.25

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, except LED lamp modules and power supplies used in Seller's recessed, surface mount and exterior lighting fixtures, are warranted to operate with 70% lumen maintenance from the date of sale by Seller for five (5) years. LED MR-16 style lamps supplied by Seller are only warranted as provided by their original maker. Please refer to the following limiting conditions.

1. The Citizen, Bridgelux, Xicato, Sharp and Lumenetix LED lamp modules provided by Seller are only suitable for use in ceiling or plenum conditions where the maximum operating temperature of the module does not exceed 90°C (194°F) and/or the ambient temperature does not exceed 40°C (104°F) or lower threshold as featured on Seller's product specification literature.
2. These terms only cover the power supply (if purchased from Seller) and Citizen, Bridgelux, Xicato, Sharp, and Lumenetix LED modules.
3. If installed outdoors, the power supply must always be shielded from direct sunlight. The power supply cannot be installed in areas where liquids may pool.
4. The end user must ensure that the AC input voltage has measures in place to prevent lightning strike surges and that large load shift surges are reduced or eliminated prior to the input of the power supply. Power supplies returned with this type of damage are not covered under Seller's Limited Warranty.
5. Seller reserves the right to physically evaluate the LED module and driver supplied by Seller for compliance with these conditions. An end user's refusal to return such fixture articles shall void Seller's Limited Warranty.
6. The LED module will be considered in working condition and therefore not warrantable if it meets or exceeds 70% of its original flux and remains within a range of 3 div.
7. The color temperature of the Citizen, Bridgelux, Xicato, Sharp and Lumenetix LED module is guaranteed to remain within a range of 3 div for a period of five (5) years from date of sale by Seller.
8. Any tampering or disassembly of the LED module or LED heat-sink assembly without Seller's prior written consent will immediately void the warranty.

Where Seller's fixtures are used in conjunction with drivers/power supplies sourced by others and/or where POE (power over ethernet) systems are present, Seller's warranty will only apply to the Seller supplied lighting fixtures. In all instances where drivers/power supplies and/or POE are by others, the responsibility to confirm the selected power supply(s) conforms to operating parameters of Seller's fixtures shall be the responsibility of others. Approved parameters (involving voltage, current, and power quality for the selected fixtures and outputs) will be provided by Seller upon request, however the parameters should not be considered exhaustive for the purpose of the warranty and represents a good faith effort by Seller to support its customers. All warranty claims are subject to Seller's review and if Seller determines the root cause of the issue involves supplied power supply(s) by others, Seller's warranty shall not be applicable. Further, in such events of supplied power supply(s) by others, Seller makes no guarantee as to fixture operating performance (startup time, flicker, shimmer, pop-on/pop-off, dimming, etc.). 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, or use in violation of any applicable standard, code or instructions for use in installations including those contained in the latest National Electrical Code (NEC), the standards for safety of Underwriters Laboratory, Inc. (UL), standards for the American National Standards Institute (ANSI) or, in Canada, the Canadian Standards Association (CSA), or, in the European Union, the Conformité Européenne (CE Marking), faulty installation, or any repairs or modifications other than those made by the Seller. This Warranty does not cover damage or failure caused by abnormal spikes in power, dirty power, and light fixtures used with power supplies or other products not supplied by Seller, nor shall it apply to defects for which written notice thereof is not received by Seller.

In the event that any of the terms of this Warranty are in conflict with any rule of law or statutory provision or otherwise unenforceable under the laws or regulations of any government or subdivision thereof, such terms shall be deemed stricken from this Warranty, but such invalidity or unenforceability shall not invalidate any of the other terms of this Warranty and this Warranty shall continue in force.

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, AND NON-INFRINGEMENT, AND ANY WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE), RESPECTING LUCIFER LIGHTING COMPANY 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 LIGHTING 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.

For service under this warranty, please provide the original date of sale and nature of difficulty being experienced. All service matters should be directed to:

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LUCIFER
LIGHTING COMPANY

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