



Cold Cathode Lighting System

Identification of Cold Cathode Systems on Architectural Drawings

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American Cathode



Excellence In Illumination

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Identification of Cold Cathode Systems on Architectural Drawings

The cold cathode system is a custom linear lighting product. It has many different applications:

Straight
Angled
Curved
Freeform coves
Skylights
Domes
Exposed linear
accent lighting



Magee-Women's Hospital Atrium, Pittsburgh, PA

Applications are nearly unlimited. When the determination is made that cold cathode lighting is appropriate for your location, it is then important to clearly identify the location where it will be used.

To do this in a simple way, use a solid (—) line which is reflected on the elevations, ceiling plans, architectural or electrical drawings. This is necessary for all locations where the cold cathode will be used.

To ensure a clear understanding of cold cathode, it is recommended that section elevations be used in addition to the solid line. In this manner, the position of the lamping and lamp holders is clearly indicated in relation to the configuration of cove or surface conditions where cold cathode will be installed.

Important: Cove spacing should be adequately sized to accommodate cold cathode assemblies and to ensure proper fit. (See Diagram B on page 4)

Details

It is advisable that inclusion of details of lampholders and tubing be a part of the architectural drawings. The section should contain complete cold cathode lamp holder detailing. Using a hypothetical room dimension of 12' x 24', we will illustrate the steps necessary when laying out a cold cathode system.



Example

Using a small elevator lobby, hallway, reception room, conference room or private office, follow the next few steps:

1. First, draw the complete system on the reflected ceiling plan.
 - A. Include a scaled section elevation indicating how the components will be positioned. In this application, the lampholders will be base mounted (to the floor of the cove) which is the preferred orientation for lamps in cove applications.
 - B. Avoid side-mounting of lampholder in a curved or free-form cove configuration.

Alternate installations are:

Horizontal mounting (sidewall).

Ensure that cold cathode lamps are 2" from any surface.

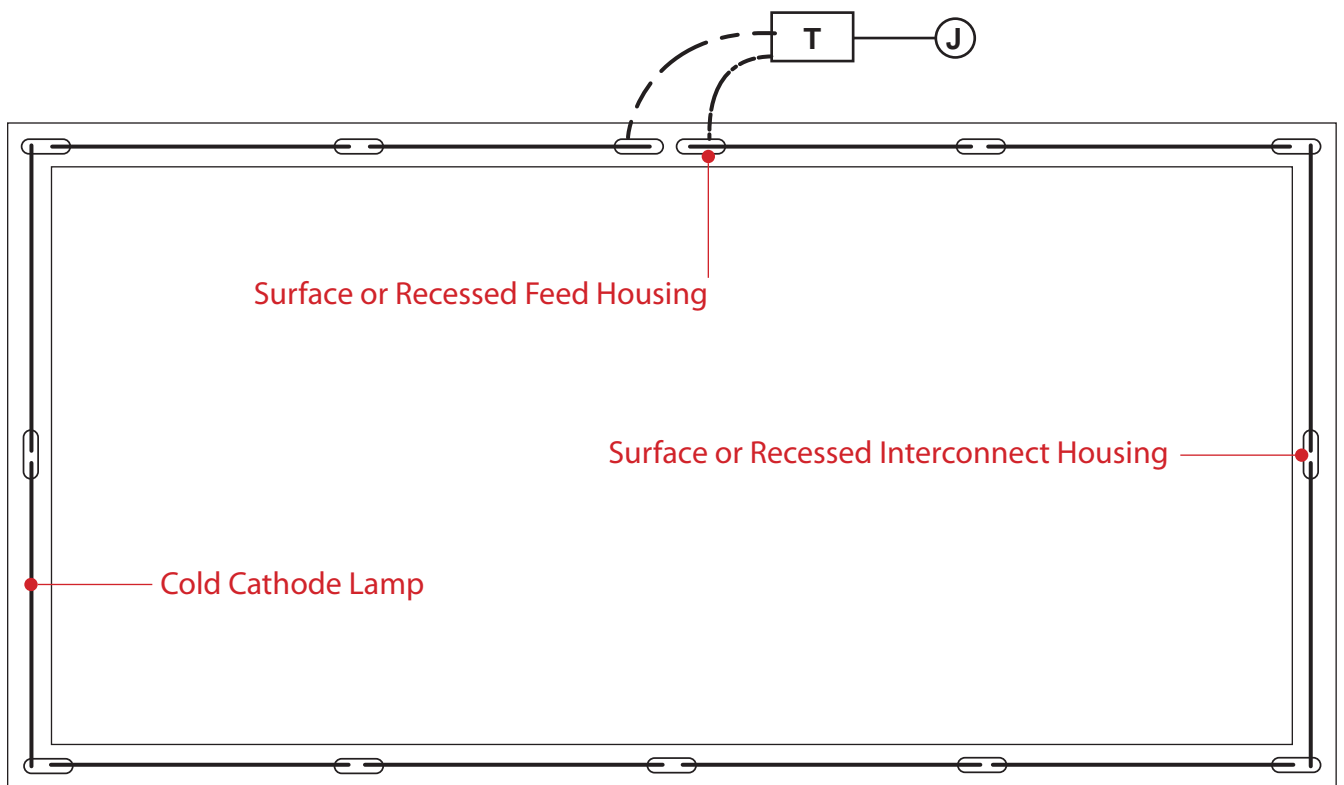
Ceiling (top-mounted).

Ensure that cold cathode lamps are 2" from any surface.

- C. Locate transformers. Attic, plenum space, cabinet, store room, electrical closet, upper or lower floors.

In our example, the ceiling in our 12' x 24' area is drywall. However, in a hallway directly adjacent to this area is a T-Bar ceiling with 24" x 24" acoustical tile. Ideally, the transformer should be located above the hallway ceiling nearest the center of the room. The distance from the transformer to the lamps is 6'. Access to the transformer is achieved by removing a ceiling tile.

System Layout for Reflective Ceilings Diagram A

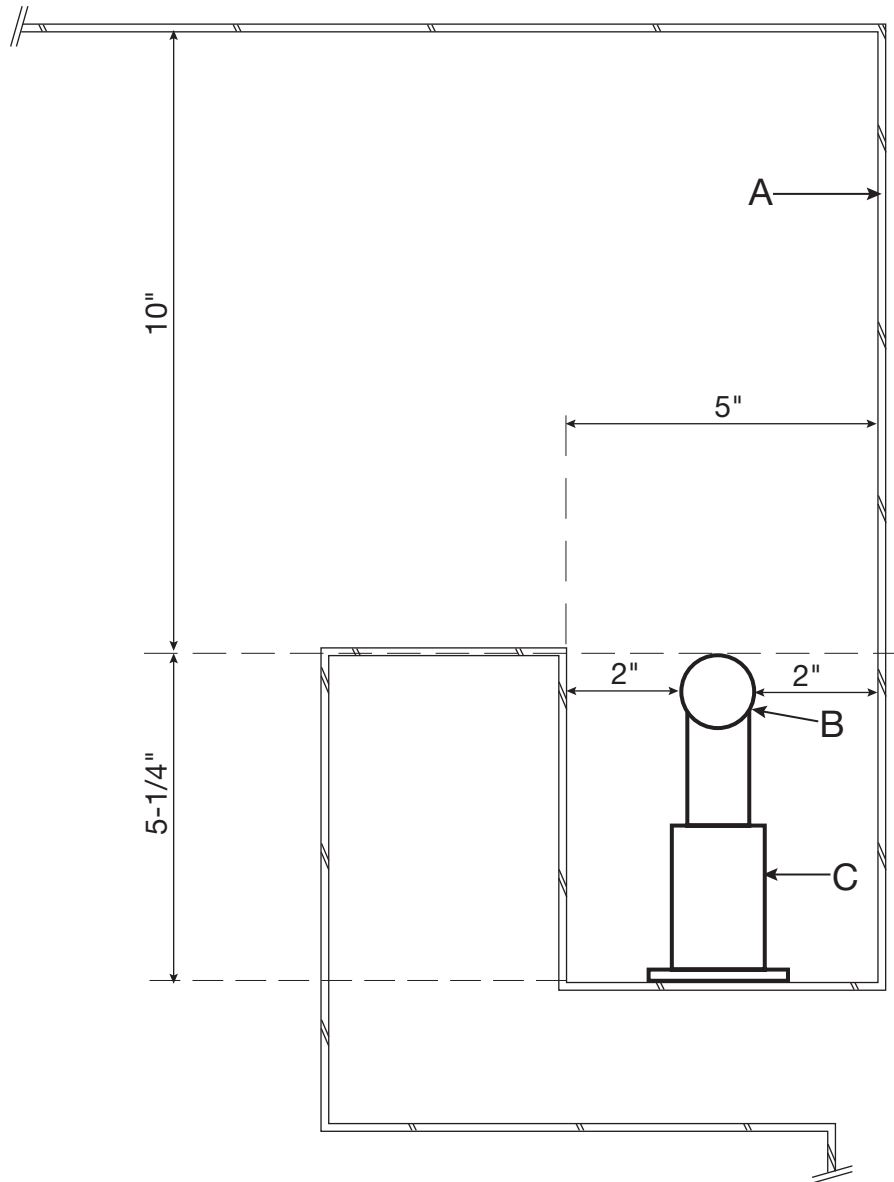


See key to symbols on page 6














System Layout for Reflective Ceilings

Diagram B



- A = Architectural Finished Surface**
- B = Cold Cathode Tube**
- C = Surface Mount Porcelain Housing**

Cold Cathode System Symbols

	Transformer
	Ballast
	Junction Box
	Secondary Feed
	Surface Feed
	Surface Intermediate
	Recessed Feed
	Recessed Intermediate
	Surface or Recessed Feed Side View
	Surface or Recessed Intermediate Side View
	Lamp

Symbol Descriptions

Transformer or Ballast:

Steps up current to a higher voltage capable of lighting lamps.

Secondary Feed: Carries power from transformer to lamps.

Surface or Recessed Feed and Surface or Recessed Intermediate Lampholders:

1. Surface or recessed feed lampholders contain wiring connections from transformers to lamps.
2. Surface or recessed intermediate lampholders are the connections (or couplers) between the lamps.

Lamps:

Cold cathode lighting systems can be used for virtually any custom shaped lamps.

(a) Straight; (b) Curved; (c) Angular; (d) Free-formed

Note:

1. American Cathode's 120MA transformer lighting systems are not UL listed for residential use.
2. "PK" housings and/or spring contact housings are unacceptable as they pose a potential fire hazard.
3. 150MA and 200MA ballast may only be used in residential applications with circuit interrupt intermediate lampholders.
4. Wet applications require transformers or ballasts to be placed in NEMA enclosures, lampholders to be mounted within a #20 gauge steel 2-1/2" x 4-1/2" housings and that lampholders, conduit connecting lampholders and lamps must be protected from rain or snow by Lexan lens. All gaps and penetrations must be sealed with silicone.