



LED LAMPS AND FIXTURES



GO FOR THE LAYERED LOOK

Layers of interior lighting can work together to illuminate an area according to function and style.

- **Ambient** (*top*) – Provides overall illumination to the space.
- **Task** (*middle*) – Provides auxiliary illumination, when needed, for specific tasks. Task lighting should be free of glare and shadows but bright enough to avoid eye strain.
- **Accent** (*bottom*) – Provides a focal point of illumination that highlights products or features or adds drama to a space.
- **Vertical** – Can help balance light, aid tasks, or provide accent lighting in some applications.



The type of lamp, fixture and amount of light can vary significantly depending on whether it is supplying ambient, task, accent or vertical lighting.

FACTOR IN FIXTURES

Light fixtures can deliver their light downward (called direct lighting), upward (indirect), or a combination (direct/indirect).

Direct lighting typically uses reflectors to help direct light out of the fixture. A diffuser, lens or louver covers the face of the fixture to help guide the light and conceal the lamp from view. Today's designs for lenses and louvers are more efficient than old-technology diffusers, which caused significant light loss.

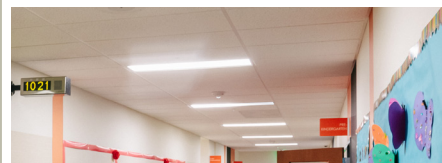
Indirect lighting can make a space feel brighter with less light because it illuminates the ceiling and tops of walls. When these surfaces are light-colored, minimal light is lost resulting in even illumination. Indirect lighting works well with a task-ambient lighting scheme. Indirect lighting or a direct/indirect combination also offers excellent glare control and visual comfort.

Direct/indirect lighting combines both approaches. Fixtures can be specified to provide a blend of direct and indirect lighting.

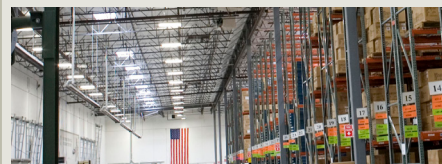


Examples of LED fixture applications

Lay-in fixtures are an excellent source of ambient light. They are easy to connect to controls. They can be direct, indirect, or a combination.



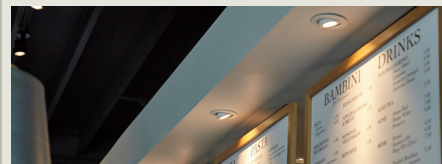
High-bay fixtures can be mounted at 15 feet or higher.



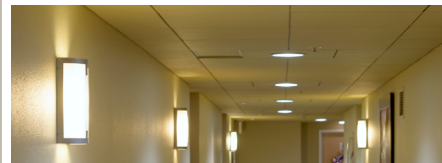
Pendant-hung fixtures are another ambient lighting strategy that can be direct, indirect or both.



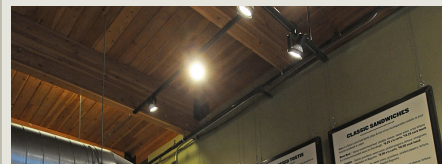
Recessed downlights are a real workhorse in commercial buildings and multifamily properties, providing ambient or accent lighting. LEDs outperform other options in these applications for energy efficiency, maintenance, durability and heat output.



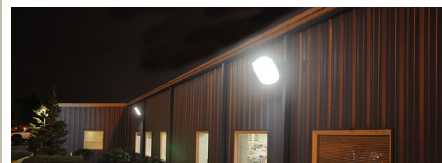
Wall sconces provide accent lighting in select areas such as hallways. Many wall sconces accept LED replacement lamps, other applications benefit from new fixtures.



Track lighting is used primarily for accent products or features.



Exterior wall-mount fixtures provide ambient light for walkways and safety on a building's exterior and offer several control options.



Outdoor lighting offers safety and security, but should also reduce light trespass (putting light where it's unnecessary or unwanted). LEDs, when combined with controls, can reduce light levels when minimal security lighting is needed and instantly switch to 100% when motion is sensed.



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