RECESSED LIGHTING GUIDE
5 Simple Steps for Selecting the Best Product for Any Application

WWW.PROGRESSLIGHTING.COM
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Step 1: Determine Your Lighting Application

**General Lighting**
Uniform light patterns that are bright and comfortable, ideal for living and family rooms.

**Accent, Task & Wall Wash**
Used to accent bookcases and artwork, or to accomplish specific tasks on kitchen islands or counter areas. Emphasize vertical surfaces. Draw attention to fireplaces and warm hangings.

**Wet Locations**
Shower trims allow for use in wet locations as well as exterior uses such as porches.

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Step 2: Determine Trim Type & Size to Achieve the Desired Lighting Effect

### General Lighting

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<thead>
<tr>
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<th>6&quot;</th>
<th>5&quot;</th>
<th>4&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baffle</td>
<td>P8066-28</td>
<td>P8175-28</td>
<td>P8044-28</td>
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<tr>
<td>Reflector</td>
<td>P8068-21A</td>
<td>P8172-21A</td>
<td>P8043-21</td>
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<tr>
<td>Open</td>
<td>P8074-28</td>
<td>P8168-28</td>
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### Accent, Task & Wall Wash

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<td>P8176-28</td>
<td>P8046-28</td>
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<td>Wall Wash</td>
<td>P8052-28*</td>
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<td>P8047-31</td>
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<tr>
<td>Pinhole</td>
<td>P8065-28*</td>
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### Wet Locations

<table>
<thead>
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<th></th>
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<td>P8041WL-28</td>
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<tr>
<td>Lens</td>
<td>P8009-60</td>
<td>P8109-28</td>
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<tr>
<td>LED</td>
<td>P8071 Series</td>
<td>P8061 Series</td>
<td>P8080 Series</td>
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<td></td>
<td>P8022 Series</td>
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<td>P8027 Series</td>
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<tr>
<td></td>
<td>P8240 Series</td>
<td>P8241 Series</td>
<td>P8247 Series</td>
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- **Baffle**
  Most commonly used, minimizes glare.
- **Open**
  Streamlined, finished look.
- **Reflector**
  Maximizes light output, used in residential and commercial applications.
- **Eyeball**
  Adjustable, directional lighting.
- **Lens**
  Diffuses light and shields lamp. Used in closets, porches, and shower lights.

*non-ic only

Multiple Finish Options Available
Step 3: Determine Housing Type

**New Construction**
For use when access above and below the ceiling is still available.

**Remodel**
Easily installed in existing ceilings with little or no access above or below.

**IC Rated**
Required in most residential applications, can be covered in insulation to maintain an unbroken barrier.

**Non-IC**
Insulation must be kept at least 3” away from all sides of the housing.

**Air Tight**
Use these housings to minimize airflow between conditioned spaces in a house or unconditioned attic areas. These housings may be covered in insulation and may be required to meet building energy codes.

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Step 4: Determine Housing Size

<table>
<thead>
<tr>
<th>6”</th>
<th>5”</th>
<th>4”</th>
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</thead>
<tbody>
<tr>
<td><strong>New Construction - IC Rated / Air Tight</strong></td>
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<td></td>
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<tr>
<td>P87-AT</td>
<td>P85-AT</td>
<td>P831-AT</td>
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<tr>
<td>Wall Wash</td>
<td></td>
<td></td>
</tr>
<tr>
<td>P87-TG</td>
<td>P85-TG</td>
<td>P832-TG</td>
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- **2” – Smallest aperture.** Used mainly for accent, task and wall wash applications.

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Step 5: Choose the Right Color Temperature

Color rendering and appearance are critical considerations in light source selections. Correlated Color Temperature (CCT) relates to the color of light produced by a light source, and uses the Kelvin temperature measurement scale.

Color temperatures over 5000K are called cool colors (bluish white), while lower color temperatures (2700–3000K) are called warm colors (yellowish white through red).

**Warm White**
(2600K – 3200K) is the warmest option that most closely approximates a standard incandescent bulb. It is most often used in areas like living rooms.

**Bright White**
(3200K – 4500K) is a whiter light than soft white and is most often selected for kitchens and bathrooms or work spaces.

**Daylight**
(4500K – 6500K) is recommended for reading areas or for use in craft rooms and is a more bluish white that most closely approximates an outdoor overcast sky.

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Color rendering index (CRI) is a measure of how accurately an artificial light source displays colors. The higher the CRI (80 and above), the better the artificial light source is at rendering colors accurately.
Why Choose LEDs?

Energy Efficient
Reduced Maintenance Costs
Environmentally Friendly
Little to no UV Radiation
Incandescent Look and Feel
Energy Star and New CA Title 24 Compliant Options

Estimated Lifetime for Common Light Sources

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incandescent</td>
<td>750 – 2,000</td>
</tr>
<tr>
<td>Compact Fluorescent (CFL)</td>
<td>7,500 – 20,000</td>
</tr>
<tr>
<td>LED</td>
<td>35,000 – 50,000</td>
</tr>
</tbody>
</table>

Did You Know?

Reduced Electricity Demand
The Department of Energy estimates that rapid adoption of LED lighting in the U.S. over the next 20 years can reduce lighting electricity demand by 33% by 2027.

Insects aren’t attracted to LEDs
Most insects are primarily attracted to Ultra-violet rays to help them forage, navigate and select mates. Because LEDs do not have UV content they don’t attract as many insects compared to conventional light sources.

How to Determine Savings

Example:
- P8071: 13W
- Usage: 5 hours a day,
  5 days a week
  (Total: 1300 per year)
- kW/H: $0.12
- Fixture Quantity: 100

65W BR30 Lamp
((65 x 1300)/1000) x $0.12 = $10.14

13W LED Retrofit
((13 x 1300)/1000) x $0.12 = $2.03

Total Savings: $811 per year

Difference = $8.11

Our LED Flush Mount Series uses an intuitive snap-in system that makes installation easier than ever.

Simply install the adapter into the junction box, then snap into place using the flush mount clip.

Learn more at www.progresslighting.com
What is recessed lighting?
Recessed lighting refers to fixtures that are set into ceilings or walls. Commonly called cans because of their shape, they include the housing (the internal part in the ceiling that you don’t see) and the trim, which is visible. With little or no profile, recessed lighting provides effective ambient and accent illumination for both residential and commercial use.

Which type of housing should I use: Remodel or New Construction?
There are two types of housings, New Construction and Remodel. Determining which type to use will depend on your application. If the ceiling has not been installed or if a T-bar ceiling is used, you will want to use a New Construction housing. If you do not have access, you will want to use a Remodel housing.

What is the difference between IC vs. Non-IC rated housings?
IC rated housings allow insulation (either laid in or blown in) to be installed on or around the housing. Non-IC housings require that insulation be kept at least 3” away from the housing at all times.

How many lights am I going to need?
This question has no easy answer, as opinions on this subject vary greatly. However, a good rule of thumb is to take the height of the ceiling and divide it in half. This is the distance that each light should be from one another. For example, a room with an 8’ ceiling, should have lights approximately 4’ from one another (8’ ceiling / 2 = 4’ apart). The total number of lights will also be affected by the type and wattage of bulb being used. Spot lights with narrow beams will produce pockets or pools of light, while flood type bulbs will produce broader amounts of light.

Can I use a dimmer?
Yes, a dimmer can be used on most recessed lighting. Line Voltage recessed lighting can be dimmed with a standard incandescent dimmer. While Low Voltage recessed lighting will be dimmed with either a Low Voltage Electronic or Magnetic dimmer. The type of transformer (Electronic or Magnetic) used in the housing will determine which type of dimmer you need. Triac and ELV dimmers can be used in many LED applications. Make sure to check with the lighting manufacturer for dimmer compatibility.

What is meant by Air-Tight down light and why would I want to use one?
Any air-tight rated down light has demonstrated in an independent testing laboratory environment that it will prevent air flow through the fixture. This is important because it saves money in heating and cooling costs. Just as important, some state regulations are now requiring that new home construction use this type of down light.

Can recessed lights be installed in a bathroom?
Yes, recessed lighting trims and housings are suitable for damp locations (porch or bathroom) using any trim. Wet locations, above a shower or outdoors, require the use of specific wet location trims.
Does the integrated bulb (light engine) make the fixture disposable? If the LED light engine goes out does that mean you have to replace the whole fixture?
Not in all cases, we have products that have replaceable light engines; therefore, if the light engine were to fail it could easily be replaced. These products carry a 5-year warranty and we would replace the light engine at no cost.

Are all LED recessed retrofits adaptable to other recessed manufacturers?
Our recessed retrofits are adaptable to most residential recessed housing in the market today.

What tips can you give for transferring a homeowner from regular recessed lighting to LED? What would the homeowner need to purchase?
When converting to LED, focus on the energy savings and virtually no maintenance. What they need to purchase will depend on the products they choose for their home.

Do you make a recessed fixture that fits a four inch junction box?
Not currently, but stay tuned.

If it’s an incandescent fixture and it’s replaced with an LED bulb, will it still be dimmable?
It may be, just make sure the LED bulb states it is dimmable.

Are the replacement LEDs inside your fixtures universal or are they multiple SKU options?
At this moment there are two options, 17W and 9W versions. All we need to know is which version is required for replacement.

Are all of your LEDs wet rated?
The type of fixture not the LEDs determines wet rating. Always check the rating on the fixture to ensure proper usage.

Are LEDs bad for your eyes?
Like any light source, if you stare too long it will cause some discomfort and/or imaging. However, if LED products are used the same way traditional lighting is used, they will not damage your eyes.

What is the benefit to purchasing a fixture with an integrated LED panel instead of a fixture that can accommodate either incandescent or LED bulbs?
Fixtures with an integrated LED source were intentionally designed to provide proper heat dissipation, ensuring a long lifespan and consistency of delivered lumens over time.
The Energy Independence and Security Act (EISA) of 2007 is designed to implement sweeping changes to energy policies in the United States. The A-style or Edison-style bulbs that many use in their homes or office will no longer be produced—starting with the 100 watt incandescent in January 2012 and ending with the phase-out of the 40 watt and 60 watt incandescents in 2014 as they do not meet the new efficiency standards.

## Planning Your Lighting Layout

### Quick Tips:

- Take the general dimension of the room. Account for the location of items such as countertops and cabinets. In some rooms, furniture placement should be accounted for, as well.

- Determine where the illumination is needed and the type of lighting required (general, wall wash, accent). For general lighting, baffle, open or reflectors are recommended.

- The housing will be determined by the ceiling and/or building codes. In most residential applications an IC rated/ Airtight housing will be required. If the ceiling is not yet installed, then new constructions housing should be used. If the ceiling already exists then a retrofit should be used. If there are any questions or concerns, always check with the local electrical and/or building codes to ensure proper selections.

### Installation Guidelines

#### General Downlighting

For proper spacing of fixtures, use the following rule of thumb for 6” housings: for multiple units, space fixtures 4’ to 5’ apart in 8’ to 10’ ceiling heights to achieve relative uniform lighting. For example, a 12’ x 16’ room using the P8071 LED Trim would require a minimum of six fixtures to be uniformly lit.

#### Wall Washing

For uniform wall washing, distance from walls (X) is equal to the distance between fixtures (Y).

Recessed lighting provides a variety of fixtures to meet different lighting requirements. Downlight fixtures – open, baffle – are intended for overall room illumination, while others – adjustable eyeballs – can help you create interesting accents by high-lighting walls, above cabinets, fireplaces, plants, bookcases and paintings. Various aperture sizes such as 6”, 5”, 4” and 2” are available.

### Shopping for light bulbs?

**What to look for...**

You used to look for **Watts**

Now you look for **Lumens**

**You used to look for Watts**

<table>
<thead>
<tr>
<th>Watts</th>
<th>Lumens</th>
<th>Phase In</th>
<th>Phase Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 w</td>
<td>1450 - 2600 lm</td>
<td>72 w (1/1/12)</td>
<td>100 w</td>
</tr>
<tr>
<td>75 w</td>
<td>1050 - 1489 lm</td>
<td>53 w (1/1/12)</td>
<td>75 w</td>
</tr>
<tr>
<td>60 w</td>
<td>750 - 1049 lm</td>
<td>43 w (1/1/14)</td>
<td>60 w</td>
</tr>
<tr>
<td>40 w</td>
<td>310 - 749 lm</td>
<td>29 w (1/1/14)</td>
<td>40 w</td>
</tr>
</tbody>
</table>

* Estimates based on typical incandescent bulbs

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**Watts measure the amount of electricity a bulb needs to operate.**

**Energy Star certified bulbs provide the same brightness (lumens) with less energy (watts).**
One of our most innovative LED designs!

Introducing the P8022 Series.

The first of its kind, the P8022 is designed for both surface mounted and recessed applications, while also eliminating the need for a traditional LED driver. The P8022 unites performance, cost and safety benefits for an LED solution unlike any other on the market.

KEY FEATURES

- Designed for recessed and commercial settings
- Classified for wet locations and fire-rated application
- Slim profile to coordinate with any design scheme
- 120V alternating current, without a traditional LED driver
- 17 watt input power with 1035 lumen output
- Easy installation into junction boxes and multi-sized recessed housing

Redefining the LED Landscape
Why Choose Progress Lighting?

With over 100 years in the lighting industry, Progress Lighting is committed to manufacturing award-winning energy efficient products while educating individuals on new options available in solid-state lighting. Progress Lighting also responds to the ever-changing needs of the lighting industry with extensive research and development programs that ensure high standards of quality and innovation for the home.