

## **RESIDENTIAL LIGHTING STANDARDS**

The following is summary for low-rise residential building lighting requirements from *2008 Building Energy Efficiency Standards* section 150 effective on January 1, 2010 (see [www.energy.ca.gov/titile24](http://www.energy.ca.gov/titile24) for more details).

### **KITCHENS LIGHTING:**

A minimum of 50 percent of the total rated wattage kitchen lighting shall be high efficacy. Kitchen lighting includes all lighting in the kitchen but does not include lighting internal to cabinets. Lighting in areas adjacent to the kitchen such as dining and nook areas, are considered kitchen lighting if they are not separately switched from kitchen lighting.

**EXCEPTION:** Up to 50 watts for dwelling units less than or equal to 2,500 ft<sup>2</sup> or 100 watts for dwelling units larger than 2,500 ft<sup>2</sup> may be exempt from the 50 percent high efficacy requirement when the following conditions are met:

- A. All low efficacy luminaires in the kitchen are controlled by a manual-on occupant sensor, dimmer, energy management control system (EMCS), or a multi-scene programmable control system; AND
- B. All permanently installed luminaires in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficacy and are controlled by a manual-on occupant sensor.

### **CABINETS INTERNAL LIGHTING:**

Shall use no more than 20 watts per linear foot.

### **BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOM LIGHTING:**

Shall be high efficacy luminaires OR shall be controlled by a manual-on occupant sensor. Closets less than 70 square feet are exempt.

### **OTHER ROOMS OR AREAS LIGHTING:**

Shall be high efficacy luminaires OR shall be controlled by dimmer switch or by a manual-on occupant sensor. Lighting in detached storage buildings less than 1000 square feet located on a residential site are exempt.

### **OUTDOOR LIGHTING:**

Including entrances, patios, porches, balconies, except for luminaires in and around swimming pools and water features shall be high efficacy luminaires OR shall be controlled by a motion sensor not having an override or by pass switch that disable the motion sensor with one of the following devices: a photocontrol, an astronomical time clock, or an Energy Management Control System.

### **NIGHT LIGHTS:**

Permanently installed night lights and night lights integral to a permanently installed luminaires or exhaust fans shall contain only high efficacy lamps and not contain a line-voltage socket or line-voltage lamp holder; or shall be rated 5 watts maximum and shall not contain a medium screw-based socket.

### **EXHAUST FANS:**

Lighting integral to exhaust fans, in room other than kitchen, shall meet the applicable requirements of section 150(k). Exhaust fan housing is not required to be certified airtight but shall be sealed with a gasket or caulk between the exhaust fan housing and ceiling.

### **RECESSED LUMINAIRES IN INSULATED CEILING:**

Shall be listed for zero clearance insulation contact (IC), labeled as airtight with air leakage less than 2.0 CFM, sealed with a gasket or caulk between the housing and ceiling, certified ballast rated for minimum 30,000 hours and have a ballast factor of not less than 0.90 for non-dimming and 0.85 for dimming, and readily accessible ballast from below ceiling for maintenance.

### **SWITCHING DEVICES AND CONTROLS:**

- All permanently installed high efficacy luminaires shall be switched separately from low efficacy luminaires.
- All exhaust fans shall be switched separately from lighting system except for an exhaust fan with integral lighting where the lighting system can be manually turned on/off.
- A lighting circuit controlled by more than one switch where a dimmer or manual-on occupant sensor has been installed shall meet the following:
  - No controls shall by pass the dimmer or manual-on occupant sensor function.
  - The dimmer or manual-on occupant sensor shall comply with section 119.