

# Low Voltage Internal Photo / Microwave Motion Sensor

## DL-EC2/LV6SA/SENSOR

## DL-EC2/LV6SA/CONTROLLER

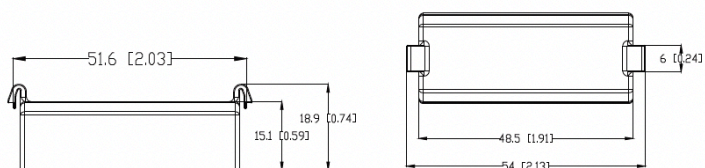


### PRODUCT OVERVIEW

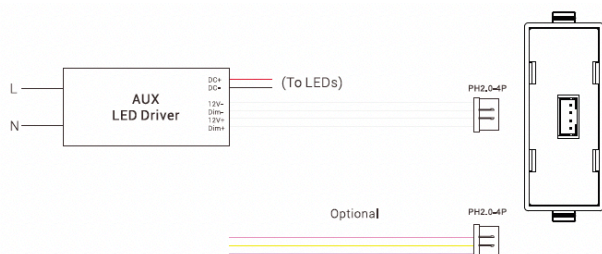
DL-EC2/LV6SA/CONTROLLER is a compact microwave sensor that combines occupancy sensing with an integrated photocell. When used with 0–10V dim-to-off LED drivers, it enables lighting manufacturers to offer sensor-equipped fixtures with minimal engineering effort. The unit operates on 12V DC, which can be supplied directly by the LED driver, helping OEMs reduce overall system cost.

Multiple operating modes can be selected to suit different applications using the RM51 IR remote controller. The integrated photocell supports dusk-to-dawn control by switching the lights on and off based on ambient light levels, ensuring lighting remains on overnight even without motion detection. In photocell mode, a lux threshold can be set so the light automatically turns on when ambient light falls below the threshold and turns off when it exceeds it. The controller supports ultra-low-profile luminaires.

### DIMENSION



### WIRING



### SPECIFICATIONS & FEATURES

Input Voltage: 12V DC

Input Current: 40mA

Standby Power: <0.8W

Warranty: 5 years warranty

Detection range: 45ft Max

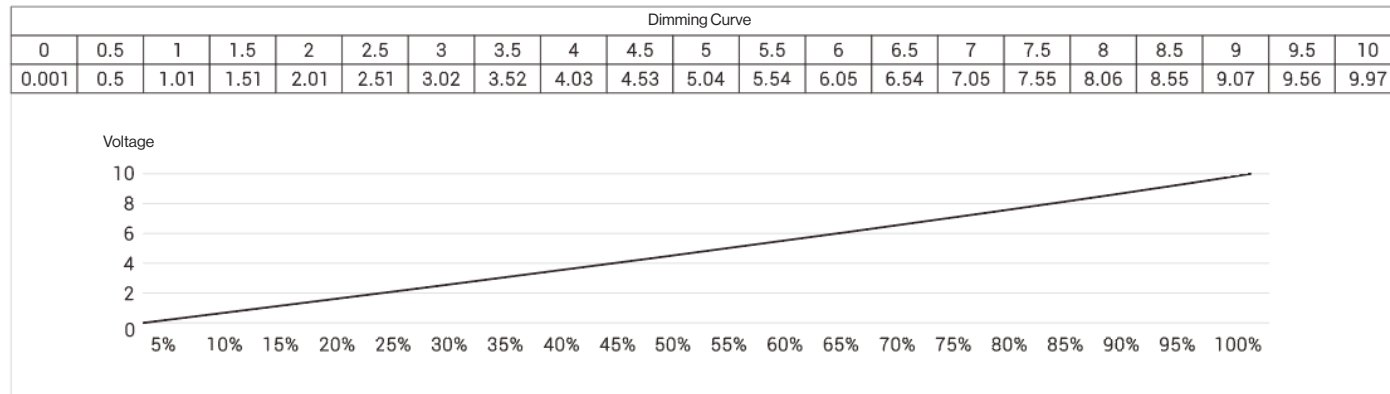
Mounting height: 20ft Max

IP rate: IP20

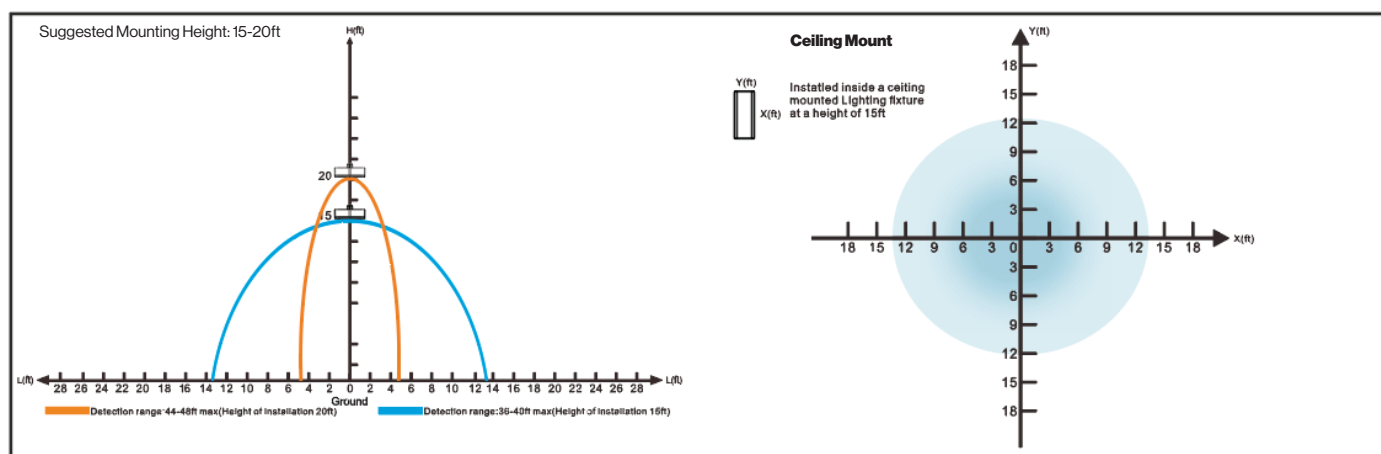
Op. temperature: 22°F - 131°F  
(-30°C - 55°C)

Sink current ~ 10mA

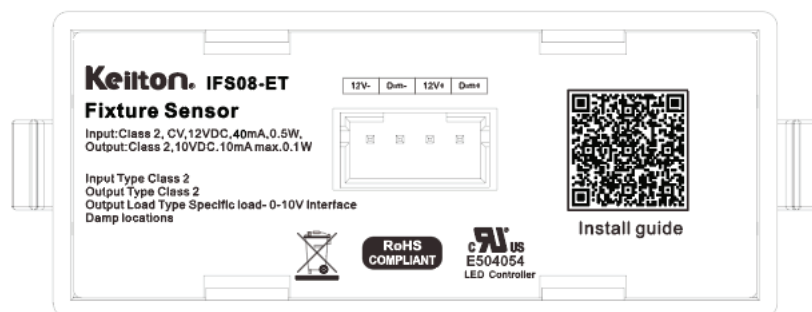
## DIMMING CURVE



## COVERAGE



## MARKING



## REMOTE INSTRUCTION

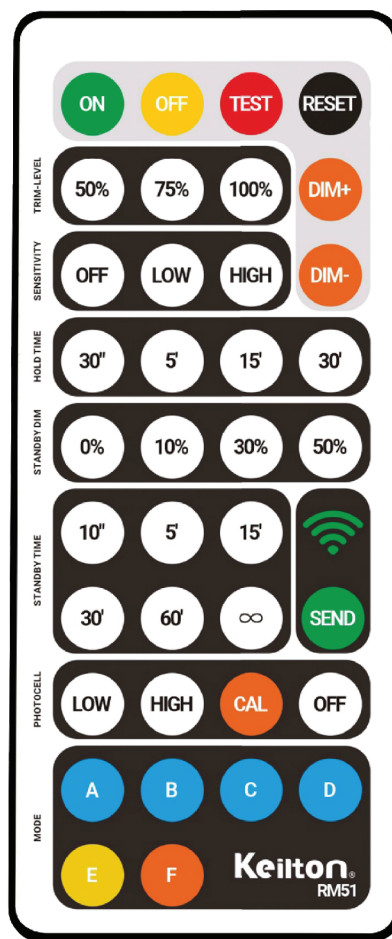
### Memory Mode (Commissioning) To begin commissioning, follow the steps below:

1. Select either A, B, C, D.
  2. Indicator lights on the remote will flash to indicate the current saved settings.
  3. Settings can be configured by pressing appropriate buttons in the highlighted gray area of the remote. (TRIM-LEVEL, SENSITIVITY, HOLD TIME, STANDBY DIM, STANDBY TIME, and PHOTOCELL). Review selected settings and make changes as necessary.
  4. Point IR remote to desired luminaire for configuration and press "SEND".
  5. If configuration is successful, luminaire will flash two times suggesting settings are saved. Any parameter change to the current saved settings on A to F will override previous settings and will be automatically saved on the remote. If configuring multiple luminaires, select the configured memory mode A to E then follow steps 4 and 5.
- \*\*\* E Mode allows visual adjustment to choose the desired dimming Level.

### Continuous Adjustment Mode or Daylight Harvesting (F Mode) Enables dimmability in response to daylight availability.

1. Point IR remote to desired luminaire
2. Press "ON" then press DIM+ or DIM- to adjust dimming level.
3. Press "F", indicator lights on the remote will indicate current saved settings. Note: only TRIM-LEVEL, SENSITIVITY, and HOLD TIME can be selected for Daylight Harvesting settings.
4. Review selected settings and make changes as necessary. Press "SEND".
5. If configuration is successful, luminaire will flash twice to confirm setting saved.  
If configuring multiple luminaires, select the configured DAYLIGHT HARVESTING settings then follow steps 4 and 5.
6. Default Settings: Motion --> 100%, No Motion >= 5min --> dim to 30%, No Motion >= 60min --> Off

ON	Turns On Luminaires
OFF	Turns OFF Luminaires
TEST	Test mode will last 5 mins then return to previous setting. Test mode: hold time 2s, standby Dim level 50%, standby time 2s.
RESET	Trim-High=100%,sensitivity=High,T1=5min,Standby Dim=30%, T2=60min,Photocell=OFF
DIM+/-	Remote will manually dim luminaire up or down by increments of 0.5volts. Must be smooth dimming if holding dimming button.
TRIM-LEVEL	Set Maximum threshold value 50/75/100%
SENSITIVITY	OFF(PIR OFF Enter PC ON/OFF function)/LOW(50%)/HIGH (100%)
HOLD TIME	(time of no occupancy after which fixture goes to stand by) 30s / 5min /15min / 30min
F MODE DAYLIGHT HARVESTING	(Enable/Disable) Measure and set feature to allow the fixture to maintain a light level. If turned ON.
STANDBY DIM	Select any standby dim level 0/10/30/50%
STANDBY TIME	Stand by time - 10s / 5min /15min / 30min / 1h / ∞. "∞" means the stand-by time is infinite and the fixture is effectively controlled by the daylight sensor)
PHOTOCELL	LOW (1fc) and HIGH (50fc) CAL Collecting The current Lux Level / OFF
MODE	Set settings to a Program profile A to F
SEND	Send settings to sensor
DEFAULT MODE A	Trim-High=100%,sensitivity=low,T1=30min,Standby Dim=50%, T2=∞,Photocell=CAL
DEFAULT MODE B	Trim-High=100%,sensitivity=low,T1=30min,Standby Dim=50%, T2=15min,Photocell=CAL
DEFAULT MODE C	Trim-High=100%,sensitivity=low,T1=30min,Standby Dim=50%, T2=15min,Photocell=OFF
DEFAULT MODE D	Trim-Low=50%,sensitivity=low,T1=30s,Standby Dim=50%, T2=30min,Photocell=CAL
DEFAULT MODE E	Manual Mode,Trim-High=100%
DEFAULT MODE F	Daylight Harvesting,Trim-Low=50%,sensitivity=low,T1=15min



## A Mode

1. Turn OFF the light while ambient light > Photocell threshold(CAL set).
2. Turn the light to full-ON(100% trim level) while ambient light < Photocell threshold AND occupancy detected.
3. Dim the light to Standby DIM level after 30 mins(hold time) elapsed, and keep the brightness level until dawn.

## B Mode

1. Turn OFF the light while ambient light > Photocell threshold(CAL set).
2. Turn the light to full-ON(100% trim level) while ambient light < Photocell threshold AND occupancy detected.
3. Dim the light to Standby DIM level after 30 mins(hold time) elapsed.
4. Turn OFF the light if no occupancy detected within another 1/2 TIME.

## C Mode

1. Ambient light sensor(photocell) is disabled.
2. Turn the light to full-ON while occupancy detected.
3. Dim the light to Standby DIM level after 30 mins(delay time) elapsed.
4. Turn OFF the light if no occupancy detected within another 1/2 TIME(standby time).

## D Mode

1. Turn OFF the light while ambient light > Photocell threshold(CAL set).
2. Turn the light to 50%(Trim level) while ambient light < Photocell threshold(CAL set) AND occupancy detected.
3. Turn OFF the light if no occupancy detected within 30 mins(standby time).