

## Overview

The FLS-41 light sensor is a light sensor that incorporates correlated color temperature (CCT) with light intensity monitoring. The FLS-41 mounts unobtrusively on an interior window mullion facing out the window to monitor outdoor light.

Facilities wishing to deliver a superior office experience through automated adjustment of an LED fixture’s white color output and dimming level now have a solution that responds dynamically throughout the day.

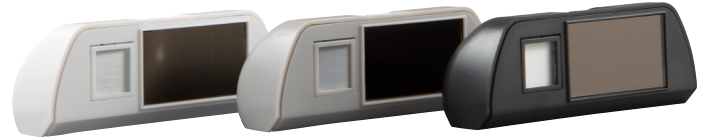
Adding the FLS-41 sensor in conjunction with an Echoflex ELED2 controller to a lighting control system is a reliable and simple method to increase energy savings by daylight harvesting while also enhancing the work environment through control of tunable white LED fixtures.

The sensor adds light level monitoring, up to 9,290 foot candles (100,000 lux) making the sensor suitable for open loop daylighting applications. The color temperature range of 2,000 to 7,500 degrees Kelvin provides feedback of the natural light color temperature range.

Batteries are not required due to the advanced solar energy harvesting and power management features of the sensor. Once mounted and exposed to daylight, the sensor will begin operation within minutes. Even cloudy days will provide sufficient solar energy for the sensors operation.

As the outdoor light level increases, the sensor update rate also increases assuring step changes in either light level or color temperture values are transmitted without delay.

The sensor incorporates diagnostic and configuration features to ensure reliable communications and solar harvesting capability. The sensor supports Range Confirmation® technology whereby simple button press and hold sequences result in visual indication of signal strength via on-board LEDs. Solar energy harvesting under existing light levels is provided on demand through LED indication. An accelerated transmission mode is available when energy code compliance inspectors need to verify system operation.



## Features

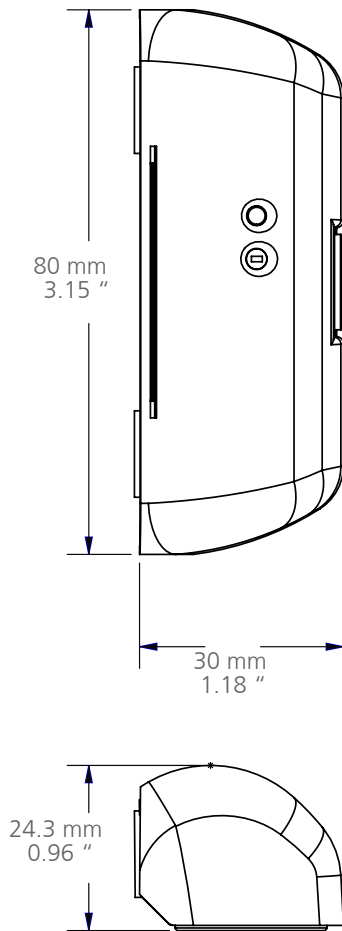
- Solar powered wireless sensor for daylight harvesting and tunable white LED applications
- Works in conjunction with Echoflex lighting controllers to comply with energy codes
- Measures 0-100,000 Lux and color temperature with a range of 2,000 to 7,500 degrees Kelvin
- Integrated Range Confirmation® via tricolored LED indication
- Integrated Solar Harvesting Light Level via tricolored LED indication
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight
- Simple Tap™ configuration of daylighting settings
- Mounts horizontally, vertically or upside-down on window mullion with double sided tape
- Energy code compliance test mode
- Quick start operation at low light level with minimal charging time
- Dynamic sample rate and heartbeat assuring fast updates
- Operates entirely on solar energy, no battery required

## Ordering Information

Description	Model	Part Number
Open Loop CCT Sensor, 902MHz, White=*W#5; Black=*B#4 or Grey=*G#3	FLS-41U*	8188A1150-#-1
Open Loop CCT Sensor, 868MHz, White=*W#5; Black=*B#4 or Grey=*G#3	FLS-41Y*	8188A1450-#-1
Open Loop CCT Sensor, 928MHz, White=*W#5; Black=*B#4 or Grey=*G#3	FLS-41J*	8188A1850-#-1

# FLS-41

## Dimensional Diagram



## Equipment Profile

<b>EEP A5-06-04</b>	Curtain wall brightness sensor
<b>EEP D2-14-25: Light Sensor and CCT</b>	DB0 .. DB2.0 : 0-100,000 lux
	DB2.1 .. DB3: CCT 0-32,767 degrees Kelvin
<b>Generic Profile Telegram</b>	DB0 .. DB1: CCT 0-10,000 degrees Kelvin
	DB2 .. DB3: 0-100,000 lux
	DB4: Voltage 0-5.5V

## Hardware Specifications

<b>Power Supply</b>	Integrated solar cell
<b>Range</b>	0-100,000 lux, resolution 1 lux, accuracy +/- 10%
<b>Operational Light Level</b>	50 lux (5 fc) minimum
<b>Color Temperature Sensor</b>	2,000 to 7,500 degrees K, resolution +/-1, accuracy +/-100 K
<b>Minimum time to begin operation</b>	5 minutes in 100 lux (10 fc)
<b>Input</b>	Teach button for assignment to receiver
<b>Outputs</b>	Test mode LEDs - red, green and amber

## Communications

<b>Radio Frequency</b>	902 MHz (U) or 868 MHz (Y) or 928MHz (J)		
<b>Antenna</b>	Integrated whip		
<b>Transmission Range</b>	24 m (80 ft) - commercial office spaces (typical), up to 100m (330 ft) line of sight		
<b>Telegram Heartbeat</b>	Light Level	Sample Rate	Update Rate
	< 50 lux (5 fc)	128 seconds	21 min.
	< 100 lux (10 fc)	64 seconds	10 min.
	100-200 lux	32 seconds	320 seconds
> 200 lux (19 fc)	16 seconds	160 seconds	

## Mechanical Specifications




<b>Operating Temperature</b>	-25°C to 65°C (-13°F to 149°F)
<b>Relative Humidity</b>	5% to 92% RH (non-condensing)
<b>Weight</b>	30g (1.0 oz)
<b>Dimensions</b>	80mm (3.15") x 30 mm (1.18") x 24.3 mm (0.96")
<b>Mounting</b>	Double sided tape

## Energy Code Compliance

California Energy Commission Title 24  
Washington State Energy Code  
ASHRAE 90.1-2019  
IECC 2018

The FLS-41 is a RoHs compliant product

## Agency Listings

<b>902 MHz models</b>	FCC Part 15.231 - Remote Control Transmitter IC RSS-210	
<b>868 MHz models</b>	CE Marking	
<b>928 MHz models</b>	Japanese Radio Law (special order item)	

Range Confirmation is an Echoflex Solutions Inc. Patented Technology | Simple Tap is a trademark of Echoflex Solutions, Inc.  
Specifications are subject to change without notification