



Type(s)

Project

Date

Notes

GENERAL INFORMATION

The FLS-41 is a light sensor that incorporates correlated color temperature (CCT) with light intensity monitoring. The wireless sensor mounts unobtrusively on an interior window mullion facing out the window to monitor outdoor light. It informs automated LED fixture controllers to adjust white color output and dimming levels, providing a comfortable and dynamically responsive lighting experience throughout the day.

The FLS-41 not only provides reliable energy savings by harvesting daylight, it can also enhance the work environment by controlling tunable white LED fixtures when linked to an Echoflex ELED2 controller.

The sensor can monitor exterior light levels up to 100,000 lux (9,290 fc) and a color temperature range of 2,000 to 7,500 kelvin with a resolution of ±1 kelvin, and an accuracy of ±100 kelvin. When outdoor light levels increase, the sensor’s update rate also increases to provide smooth transitions in light levels or color temperature values.

Advanced solar energy harvesting and power management features eliminate the need for batteries. After installation, the FLS-41 only needs a brief light exposure to begin operating - even cloudy days provide sufficient solar energy. The sensor incorporates diagnostic and configuration features to ensure reliable communications and solar harvesting capability.

APPLICATIONS

- Education: Classrooms
- Healthcare: Patient care and clinics
- Commercial Office: Conference rooms, open office areas, foyers
- Retail: Showcase displays

ORDERING INFORMATION

Open Loop CCT Sensor

MODEL	DESCRIPTION
FLS-41U_*	Open Loop CCT Sensor, 902 MHz
FLS-41Y_*	Open Loop CCT Sensor, 868 MHz

*Available in white, black or gray colors. Replace the asterisk with one of the following letters to specify:

W - white, B - black, G - gray

FEATURES

- Solar powered wireless sensor for daylight harvesting and tunable white LED applications
- Works 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 kelvin
- Integrated LEDs indicate solar harvesting light level
- Reliable radio reception range of 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line of sight
- Simple Tap configuration of daylighting settings
- Mounts horizontally, vertically or upside-down on interior window mullion with an adhesive pad
- 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

SPECIFICATIONS

HARDWARE

- Power supply: Integrated solar cell
- Range: 0–100,000 lux, resolution 1 lux, accuracy +/- 10%
- Operational light level: 50 lux (5 fc) minimum
- Color temperature sensor: 2,000 to 7,500 degrees K, resolution +/-1 K, accuracy +/-100 K
- Minimum time to begin operation: 5 minutes in 100 lux (10 fc)
- Input: Teach button for assignment to receiver
- Outputs: Test mode LEDs - red, green and blue

EQUIPMENT PROFILES

- EEP A5-07-01:
 - DB1 .. DB2: 0–65535 lux
- D2-14-25:
 - DB0 .. DB2.0 : 0–100,000 lux
 - DB2.1 .. DB3: CCT 0–32,767 kelvin
- Generic Profile Telegram
 - DB0 .. DB1: CCT 0–10,000 kelvin
 - DB2 .. DB3: 0–100,000 lux
 - DB4: Voltage 0–5.5 V

COMMUNICATIONS

- 902 MHz (U) or 868 MHz (Y) radio frequencies
- Wireless range of up to 24 m (80 ft) - commercial office spaces (typical), up to 100 m (330 ft) line-of-sight
- Integrated whip antenna
- Telegram heartbeat:

Light Level	Sample Rate	Update Rate
< 50 lux (5 fc)	128 seconds	21 minutes
< 100 lux (10 fc)	64 seconds	10 minutes
100-200 lux	32 seconds	320 seconds
> 200 lux (19 fc)	16 seconds	160 seconds

ENVIRONMENTAL

- Operating temperature: -25°C to 65°C (-13°F to 149°F) ambient
- Relative humidity: 5%–92% non-condensing

REGULATORY AND COMPLIANCE

- Complies with UL Standard 916
- ANSI / ASHRAE / IES Standard 90.1
- International Energy Conservation Code - IECC
- FCC Part 15.231 - Remote Control Transmitter
- ISED (Industry Canada) RSS-210

PHYSICAL

Open Loop CCT Sensor Weight and Dimensions

MODEL	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	in	mm	in	mm	in	g	oz
FLS-41	80	3.2	30	1.2	25	1.0	30	1.0

