



Type(s)

Project

Date

Notes

GENERAL INFORMATION

The TAP-41 (Task Ambient Photo) sensor incorporates correlated color temperature (CCT) with light intensity monitoring. Facilities can now have a superior office experience that responds dynamically throughout the day. The TAP-41 automates white color temperature and dimming level for LED fixtures.

A lighting control system that includes a TAP-41 sensor, combined with an Echoflex ELED2 Tunable White Dimming controller, is a reliable and simple way to enhance the work environment and increase energy savings.

The sensor provides light level monitoring, up to 100,000 lux (9,290 foot candles), making it suitable for both closed and open loop daylighting applications. Its broad color temperature range, from 2,000 to 7,500 kelvin, provides feedback of the combined natural and artificial light color temperature.

Advanced solar energy harvesting and power management features eliminate battery needs. After installation, the sensor can operate with light exposure as low as 50 lux (5 fc) for 5 minutes. When fully charged, the TAP-41 sensor can operate for more than 72 hours in darkness.

The sensor incorporates diagnostic and configuration features to ensure reliable communications and solar harvesting capability. 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.

The TAP-41 sensor supports standard and generic EnOcean profiles, in-field selectable.

APPLICATIONS

- Education: Classrooms, learning assistance
- Restaurants: Dining rooms, banquet halls
- Healthcare: Exam rooms, clinical environments
- Commercial office: Conference and meeting rooms
- Retail: Showcase displays

ORDERING INFORMATION

CCT Photo Sensor

MODEL	DESCRIPTION
TAP-41U	Correlated Color Temperature Photo Sensor, 902 MHz
TAP-41Y	Correlated Color Temperature Photo Sensor, 868 MHz

FEATURES

- Solar powered wireless photo sensor for daylight harvesting applications
- Measures 0–100,000 lux and color temperature within a range of 2,000 to 7,500 kelvin
- Available in white and black finishes
- Solar harvesting light level indicated via tricolored LEDs
- 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
- Up to 72 hours operation in complete darkness
- Quick start operation at low light level with minimal charging time
- Batteries not required, assisted start option available
- Mounting options include integrated magnets for T-Bar or wire strap for ceiling tile. Provisions for screw mounting and double-sided tape (not included)
- Energy code compliance test mode

SPECIFICATIONS

HARDWARE

- Power supply: Integrated solar cell
- Range: 0–100,000 lux (0–9,290 fc), resolution 1 lux, accuracy +/- 10%
- Operational light level: 50 lux (5 fc), minimum
- Color temperature sensor: 2,000 to 7,500 K, resolution +/-1, accuracy +/- 10%
- Minimum charge time to begin operation: 5 minutes in 50 lux (5 fc)
- Maintain charge time: 3 hours per 24 hours at 480 lux (48 fc)
- Maximum charge time: 7.5 hours at 960 lux (96 fc)
- Operating life at full charge: 72 hours at 0 lux
- Battery for start assist: CR1632 (not included)
- Inputs: Teach button for assignment to receiver, tests, and settings
- Outputs: Test mode LEDs - red, green, and blue

EQUIPMENT PROFILE

- EEP D2-14-25: Light Intensity and Color Temperature Sensor
 - 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
- A5-06-02: Light Sensor
 - Light: 1–1,020 lux (0–95 fc)
 - Supply voltage: 0–5.1 V
- A5-06-04: Curtain Wall Brightness Sensor
 - Light: 0–65,535 lux (0–6,090 fc)
 - Energy storage: 0–100%

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
< 10 lux (1 fc)	128 seconds	21 minutes
< 50 lux (5 fc)	64 seconds	10 minutes
50–100 lux (5–9 fc)	32 seconds	320 seconds
> 100 lux (9 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, indoor use only

REGULATORY AND COMPLIANCE

- Complies with UL 916
- ETL Listed Component
- Conforms to UL Standards: UL 508
- Certified to CAN/CSA Std. C22.2 No. 14
- FCC Part 15.231 - Remote Control Transmitter
- Industry Canada RSS-210

Echoflex

Correlated Color Temperature Photo Sensor*

PHYSICAL

Correlated Color Temperature Photo Sensor Weight and Dimensions†

MODEL	HEIGHT		WIDTH		DEPTH		WEIGHT	
	mm	in	mm	in	mm	in	g	oz
TAP-41	98	3.9	98	3.9	21	0.9	70	2.4

†Note: Mounts with integrated magnets, wire bracket, screws (not included), double-sided tape (not included)

