

TEMT600



TEMT600 Ambient Light Sensor

Professional electronic component

v1.0

2025-09-25

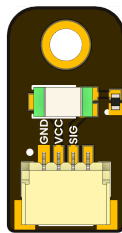
Rev. A

PRODUCT OVERVIEW

The TEMT600 Ambient Light Sensor Development Board is a compact module built around the Vishay TEMT600 phototransistor. It provides a linear analog voltage proportional to ambient light intensity, making it ideal for display back-light control, energy-saving systems, photographic exposure adjustment, and environmental monitoring applications.

PRODUCT VIEWS

TOP VIEW



Component placement and connectors

BOTTOM VIEW



Underside components and connections

KEY TECHNICAL SPECIFICATIONS

CONNECTIVITY

| | |
|-------------|---------------------|
| Interfaces: | I2C, SPI, UART, ADC |
| Connector: | QWIIC + Pin Headers |

KEY FEATURES

| | |
|---|--|
| Compact Footprint: 20 × 12 mm PCB with 3 mm mounting hole | Standard JST-PH Connector: 3-pin plug-and-play |
|---|--|

 **Key Applications**

Automatic display brightness adjustment, Photographic light metering, Smart home & IoT light sensing and more

ADDITIONAL TECHNICAL INFORMATION

OVERVIEW

| FEATURE | DESCRIPTION |
|-------------|--------------------------------|
| Sensor Type | Ambient Light Sensor (TEMT600) |

TECHNICAL SPECIFICATIONS

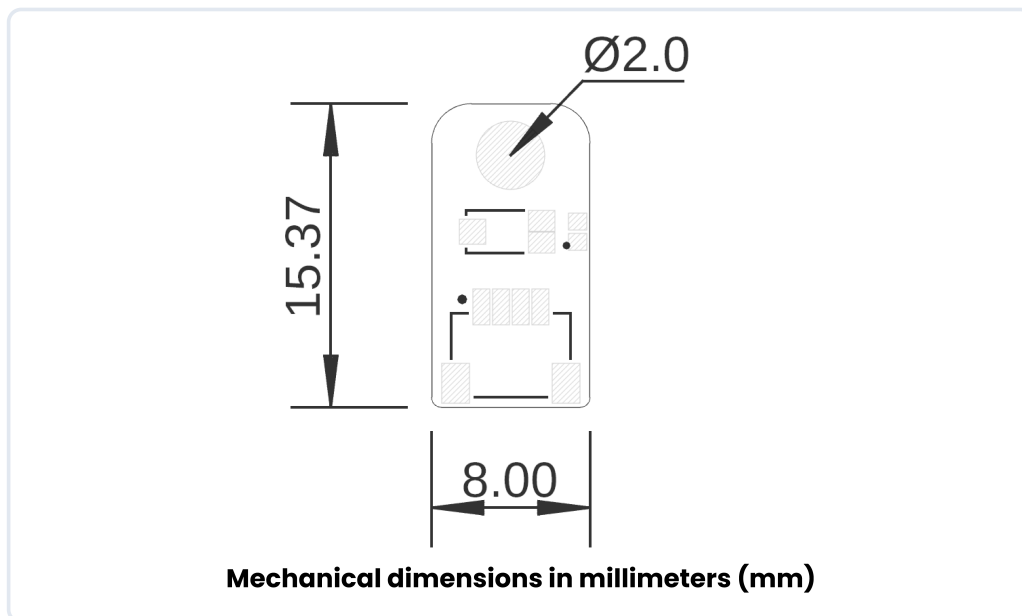
| PIN | SYMBOL | TYPE | DESCRIPTION |
|-----|--------|--------|--|
| 1 | GND | Power | Ground reference (connect to MCU GND) |
| 2 | VCC | Power | +3.3 V to +5 V supply voltage |
| 3 | D0 | Analog | voltage ∝ ambient light; connect to an ADC input of your MCU |

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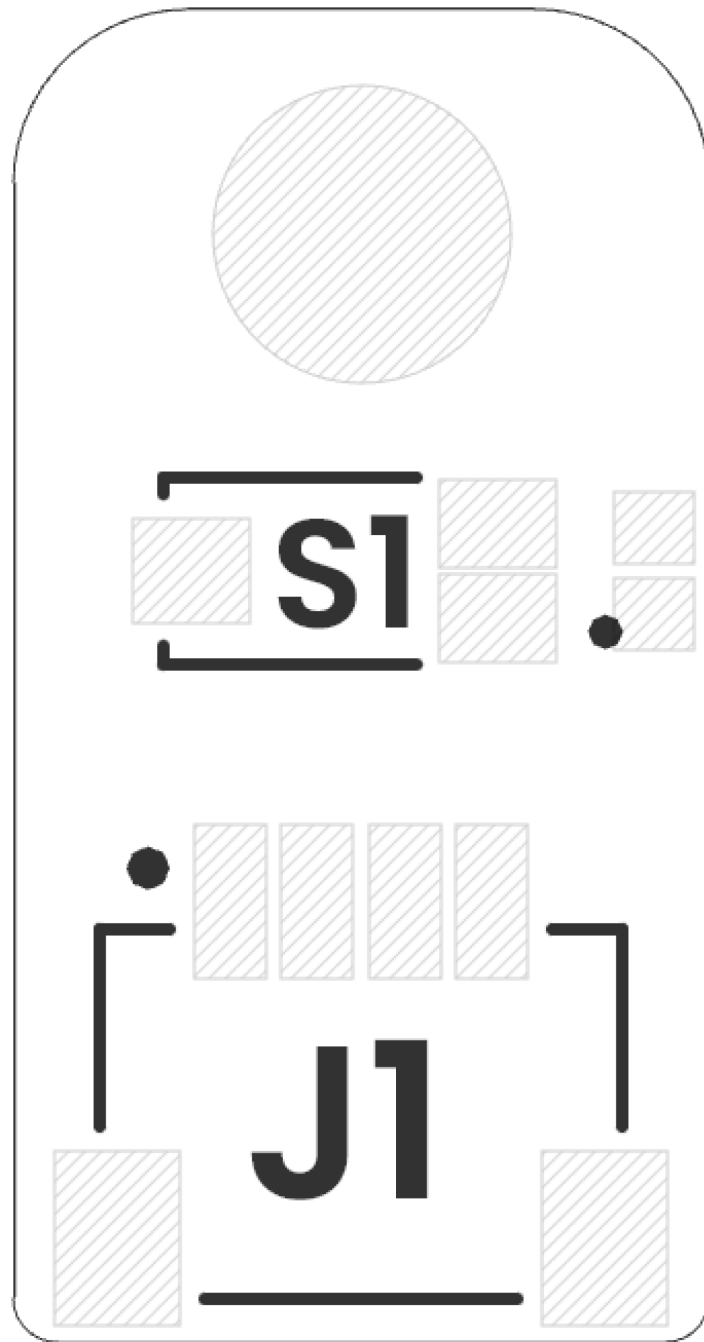
HARDWARE DOCUMENTATION

MECHANICAL DIMENSIONS



Physical dimensions and mounting specifications (measurements in millimeters)

SYSTEM TOPOLOGY



Top View of Board Topology

Connection topology and system integration diagram

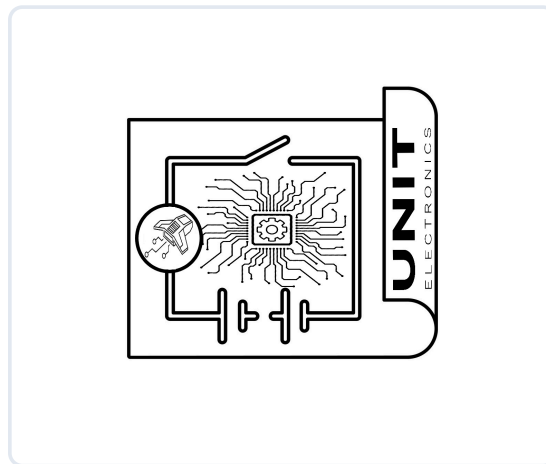
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COMPONENT REFERENCE

| REF. | DESCRIPTION |
|------|--|
| S1 | TEMT6000 Ambient Light Sensor |
| J1 | JST 1 mm pitch Connector for Power Supply and Signal |

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CIRCUIT SCHEMATIC



Complete circuit schematic showing all component connections

[View Complete Schematic PDF](#)

PIN DESCRIPTION

Detailed pin assignment and electrical specifications

SIGNAL DESCRIPTION

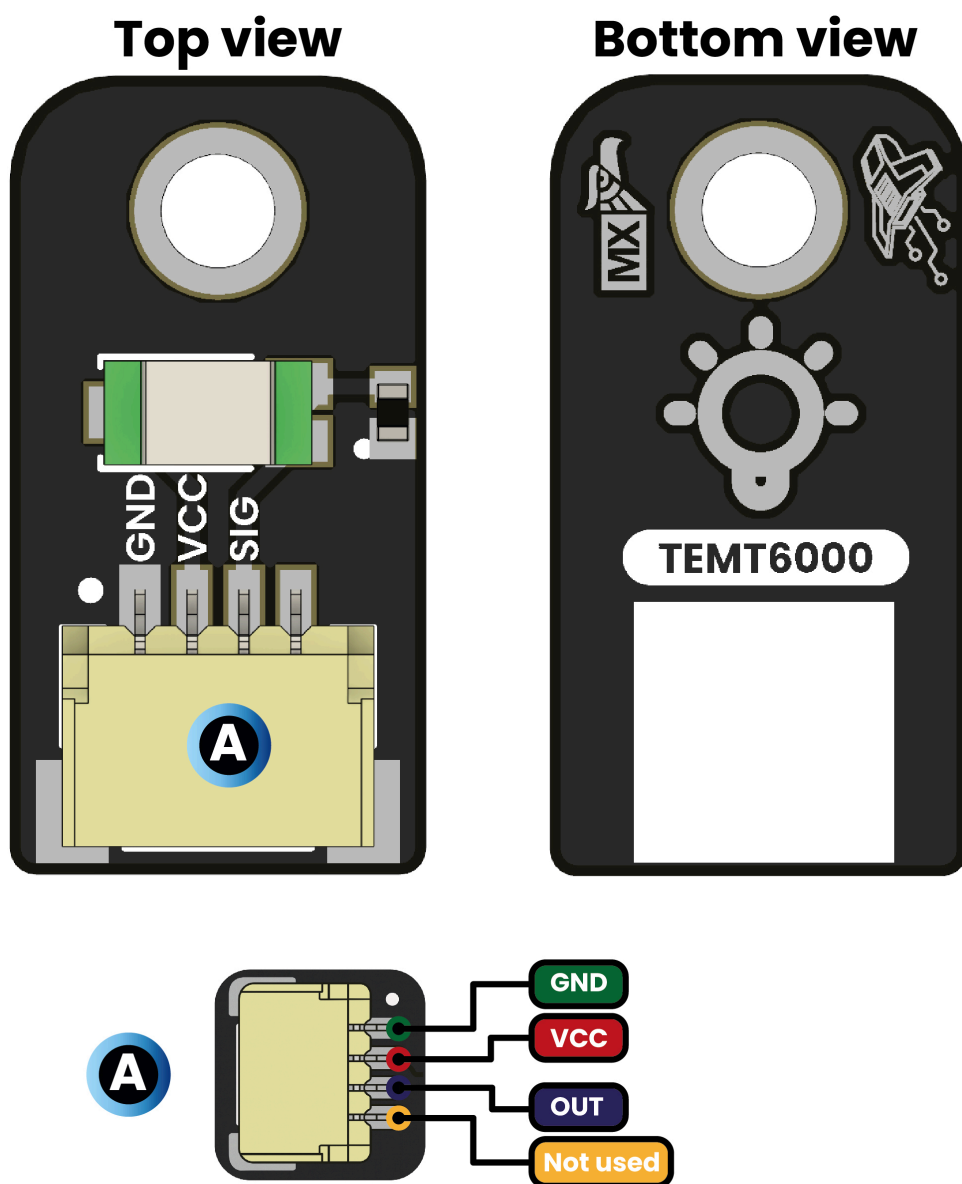
| FUNCTION | NOTES |
|--------------|---------------------------------|
| Power Supply | 3.3V or 5V, depending on design |
| Ground | Common ground reference |
| Data Signal | Digital input/output signal |

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PIN CONFIGURATION LAYOUT

Physical connector layout and pin positioning

PINOUT



Description:

 Supply voltage  GND  Output

Complete pin configuration diagram showing all connectors, pin assignments, and electrical connections for proper integration