



TEMT600

# TEMT600 Ambient Light Sensor

*Professional electronic component*

v1.0

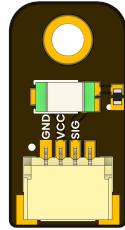
2025-10-01  
Rev. A

## 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)
Supply Voltage	3.3V - 5V
Interface	Analog Output
Light Sensitivity	0.2 to 1000 lux (typical)
Response Time	~100 ms
Operating Temperature	-40°C to +85°C
Connector Type	JST 1.0mm 4-pin

### TECHNICAL SPECIFICATIONS

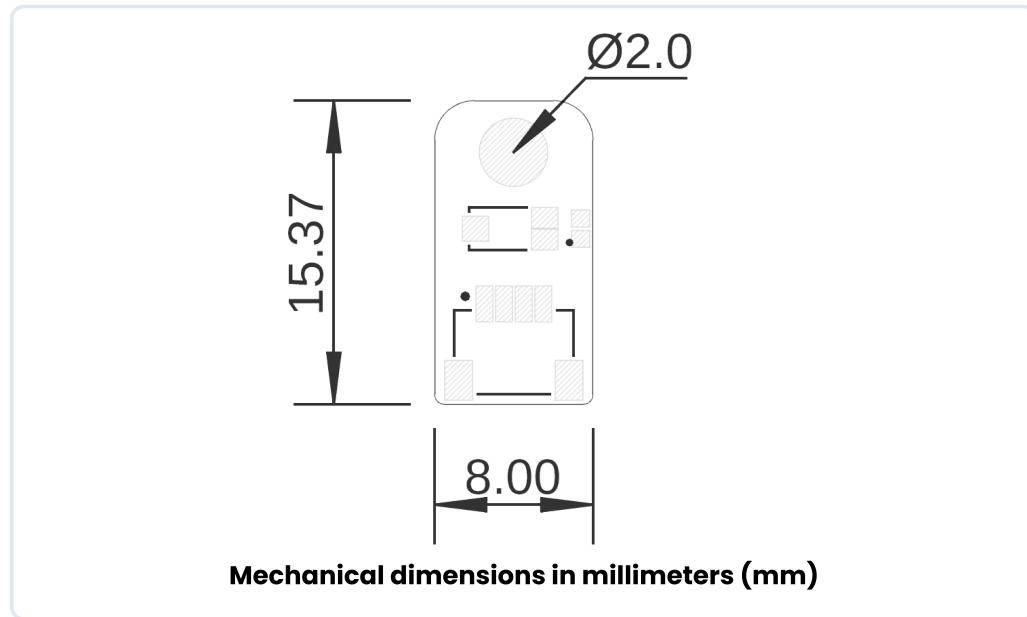
PIN	SYMBOL	TYPE	DESCRIPTION
1	GND	Power	Ground reference (connect to MCU GND)
2	VCC	Power	+3.3 V to +5 V supply voltage
3	D0	Analog	voltage $\propto$ ambient light; connect to an ADC input of your MCU

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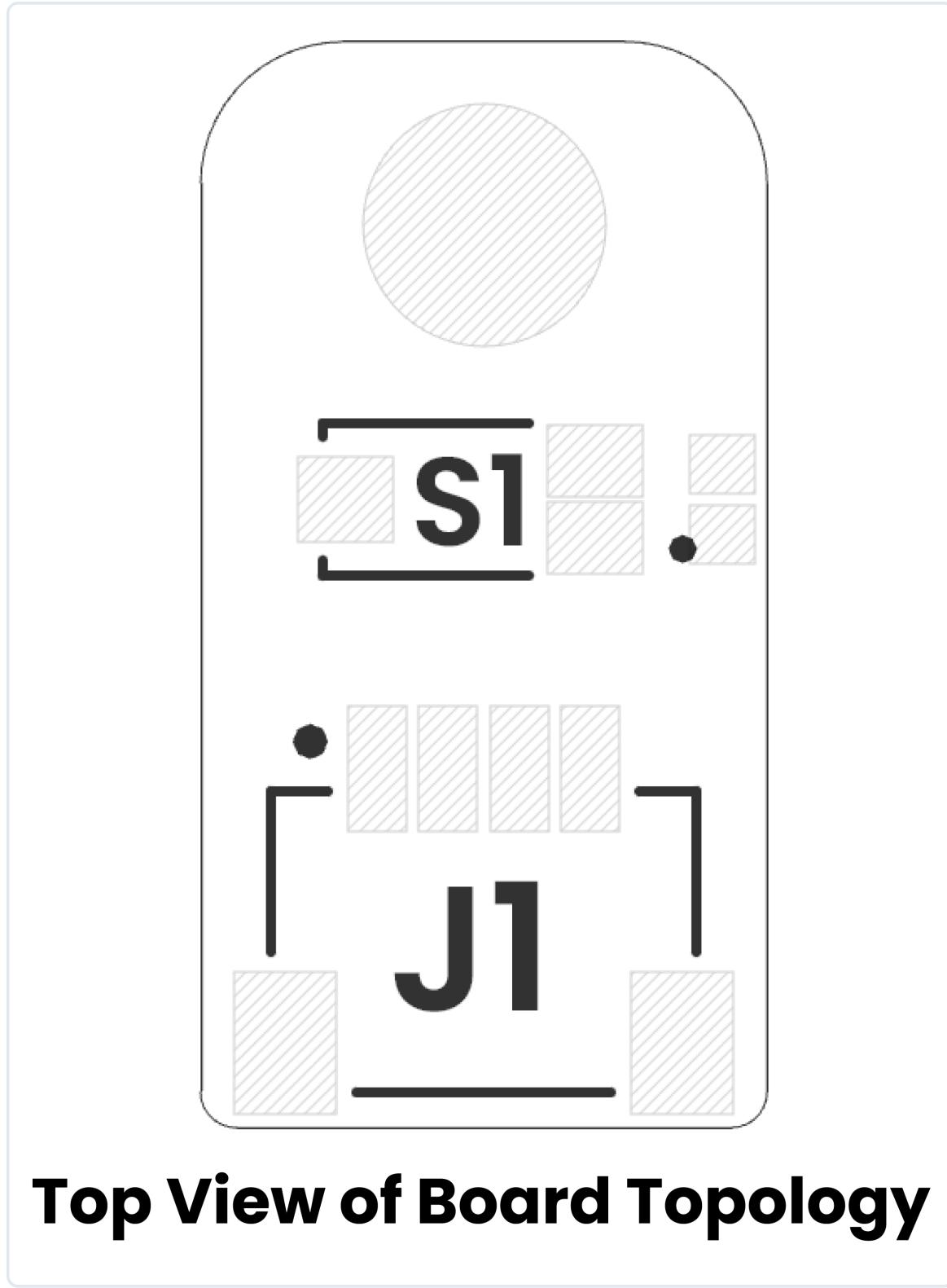
## HARDWARE DOCUMENTATION

## MECHANICAL DIMENSIONS



Physical dimensions and mounting specifications (measurements in millimeters)

## SYSTEM TOPOLOGY



## Top View of Board Topology

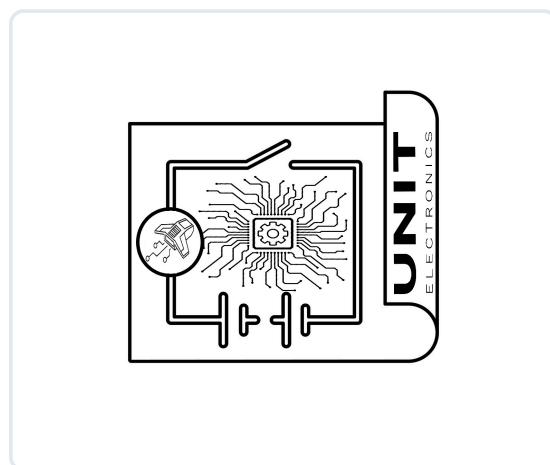
Connection topology and system integration diagram

*Click image to open in full size*

**COMPONENT REFERENCE**

<b>REF.</b>	<b>DESCRIPTION</b>
S1	TEMT6000 Ambient Light Sensor
J1	JST 1 mm pitch Connector for Power Supply and Signal
<b>REF.</b>	<b>DESCRIPTION</b>
S1	TEMT6000 Ambient Light Sensor
J1	JST 1 mm pitch Connector for Power Supply and Signal

## 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

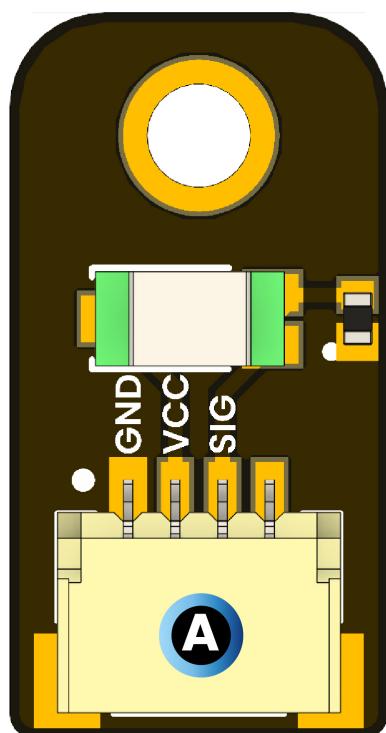
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# PIN CONFIGURATION LAYOUT

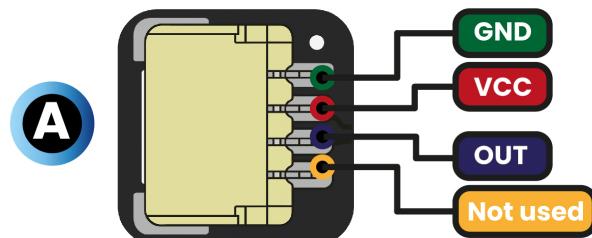
*Physical connector layout and pin positioning*

# PINOUT

**Top view**



**Bottom view**



## Description:



Supply voltage



GND



Output

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

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**TEMT600 v1.0**  
**Professional Technical Datasheet**

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For commercial distribution