

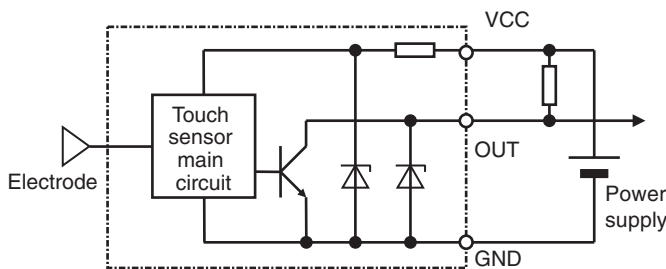
## Ratings and Specifications

<b>Detected capacitance *</b>	25 ± 5 pF
<b>Power supply voltage</b>	5 VDC (-10%) to 15 VDC (+10%)
<b>Output</b>	Open collector (max. output current: 10 mA)
<b>Residual output voltage</b>	0.4 V max.
<b>Operation mode</b>	When detecting capacitance (human touch detected): Output transistor ON When not detecting capacitance (no human touch detected): Output transistor OFF
<b>Current consumption</b>	10 mA max.
<b>Voltage influence</b>	With rated supply voltage within a range of ±10% and a rate of change for detected capacitance within ±10% when powered using the rated supply voltage
<b>Temperature influence</b>	Within an ambient temperature range when operating and a rate of change for detected capacitance within ±10% at +23°C
<b>Ambient temperature</b>	When in use: -10 to 60°C (no icing or condensation) When in storage: -20 to 70°C (no icing or condensation)
<b>Ambient humidity</b>	25 to 85%RH

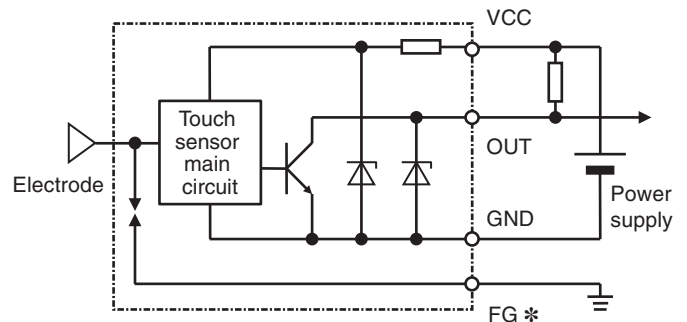
\* "Detected capacitance" refers to the detected capacitance value when capacitance is applied between the electrode and the ground terminal of the touch sensor circuit.

## Output Circuit Diagram

FG terminal not provided  
(W7ED-11F, W7ED-11L)



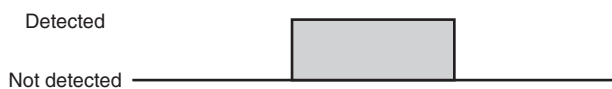
FG terminal provided  
(W7ED-12F, W7ED-12L)



\* We recommend connecting the FG terminal to a stable potential on the device's frame ground.

## Operation Chart

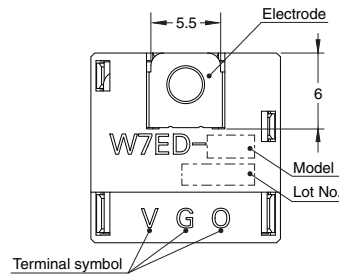
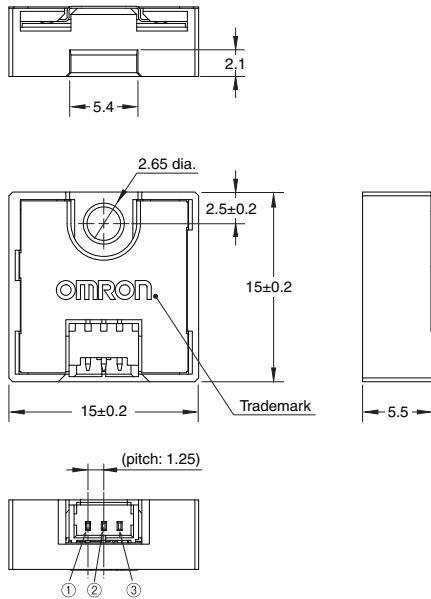
Capacitance detection



Output transistor



W7ED-11F



**Note: 1.** Details of connector terminal symbols are shown below.

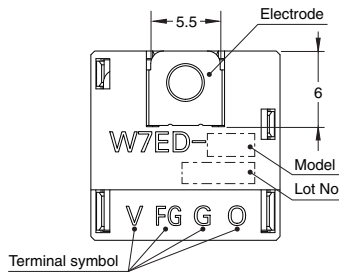
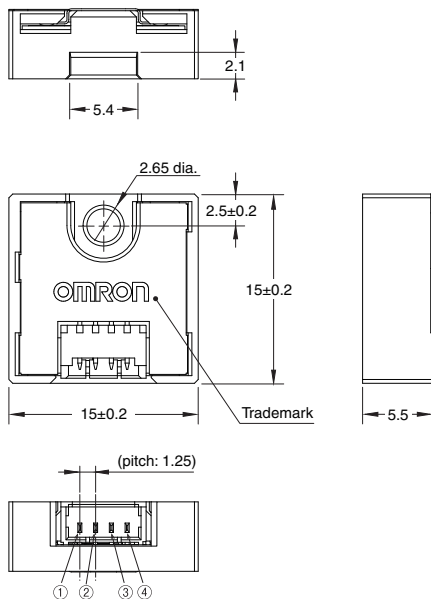
Connector terminal No.	Terminal symbol	Name
1	O	Output (OUT)
2	G	Ground (GND)
3	V	Power supply (VCC)

**2.** Compatible housings for connector include 51021-03□□ series models from Molex.

**3.** The Lot No. is 4-digit number located at the position indicated in the figure.

\* Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

W7ED-12F



**Note: 1.** Details of connector terminal symbols are shown below.

Connector terminal No.	Terminal symbol	Name
1	O	Output (OUT)
2	G	Ground (GND)
3	FG	Frame ground (FG)
4	V	Power supply (VCC)

**2.** Compatible housings for connector include 51021-04□□ series models from Molex.

**3.** The Lot No. is 4-digit number located at the position indicated in the figure.

\* Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.