

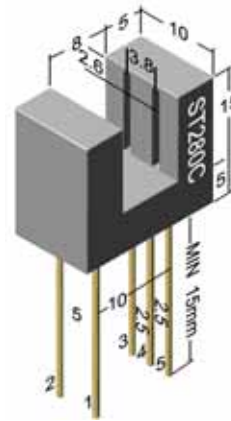
ST280C

● Features

- Combines high output GaAs IRED with high sensitive twin phototransistor.
 - The phototransistors' centre distance is 3.8mm. any moving object's direction over 4mm width can be detected.
 - Non-contact detecting manner.
- ### ● Applications
- IC card electric power meter.
 - AMR system.
 - Measuring speed of rotation and movement position.
 - Combined with direction detector IC(st288A), it can be used as detecting moving direction, rotating speed and moving distance etc.

● Dimensions Unit:mm

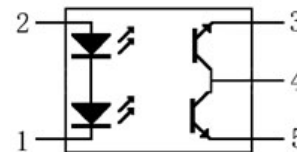
Unless otherwise specified, the tolerances are $\pm 0.2\text{mm}$



● Absolute Maximum Ratings(Ta=25°C)

| Parameter | | Symbol | Rating | Unit |
|--------------------------|-----------------------------|--------|--------|------|
| Input | Forward Current | IF | 50 | mV |
| | Reverse Voltage | VR | 6 | V |
| | Power Dissipation | P | 75 | mW |
| Output | Collector-Emitter voltage | VCEO | 25 | V |
| | Emitter-Collector voltage | VECO | 6 | V |
| | Collector Power Dissipation | PC | 50 | mW |
| *Operating Temperature | | Topr | -20~65 | °C |
| Storage Temperature | | Tstg | -30~75 | °C |
| ** Soldering Temperature | | Tsol | 260 | °C |

Internal Circuit



*The special requirement could be met according to customer's request.

**Soldering time: 5s max. soldering position: at least 1.5mm from the base of the package.

● Electro-Optical Characteristics(Ta=25°C)

| Parameter | | Symbol | Condition | Min. | Typ. | Max. | Unit |
|--------------------------------------|-------------------------|---------------------|-------------------|------|------|------|------|
| Input | Forward Voltage | VF | IF=20mA | - | 2.5 | 3 | V |
| | Reverse Current | IR | VR=3V | - | - | 10 | μA |
| Output | Collector Dark Current | ICEO1 | VCE=20V | - | - | 1 | μA |
| | | ICEO2 | | | | | |
| | Collector Light Current | IL1 | VCE=5V IF=8mA | 0.18 | - | - | mA |
| | | IL2 | | | | | |
| Collector-Emitter Saturation Voltage | VCE(SAT) | IF=8mA IC=0.15mA | - | - | 0.4 | V | |
| | VCE(SAT) | | | | | | |
| Transfer Characteristics | Response Time | Rise Time | IF=20mA VCE=5V | - | 5 | - | μS |
| | | Fall Time | RC=100Ω | - | 5 | - | μS |