

ST130F

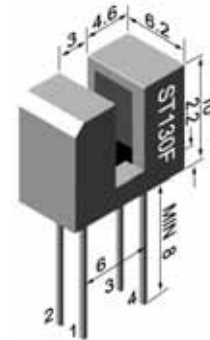
● Features

- Dust-proof package, for cards position detection.
- Combines high output GaAs IRED with high sensitive phototransistor.
- Non-contact detecting manner.

● Dimensions

Unit:mm

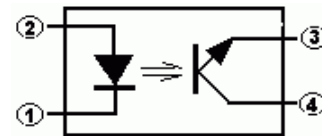
Unless otherwise specified, the tolerances are $\pm 0.2\text{mm}$



● Absolute Maximum Ratings(Ta=25°C)

| Parameter | | Symbol | Rating | Unit |
|--------------------------|-----------------------------|-----------|--------|------|
| Input | Forward Current | I_F | 50 | mV |
| | Reverse Voltage | V_R | 6 | V |
| | Power Dissipation | P | 75 | mW |
| Output | Collector-Emitter Voltage | V_{CEO} | 25 | V |
| | Emitter-Collector Voltage | V_{ECO} | 6 | V |
| | Collector Power Dissipation | P_C | 50 | mW |
| *Operating Temperature | | T_{opr} | -20~65 | °C |
| Storage Temperature | | T_{stg} | -30~75 | °C |
| ** Soldering Temperature | | T_{sol} | 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 | V_F | $I_F=20\text{mA}$ | - | 1.25 | 1.5 | V |
| | Reverse Current | I_R | $V_R=3\text{V}$ | - | - | 10 | μA |
| Output | Collector Dark Current | I_{CEO} | $V_{CE}=20\text{V}$ | - | - | 1 | μA |
| | Collector Light Current | I_L | $V_{CE}=5\text{V}$ $I_F=8\text{mA}$ | 0.15 | - | - | mA |
| | Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_F=8\text{mA}$ $I_C=0.15\text{mA}$ | - | - | 0.4 | V |
| Transfer Character-istics | Response Time | Rise Time | $I_F=20\text{mA}$ $V_{CE}=5\text{V}$ $R_C=100\Omega$ | - | 5 | - | μS |
| | | Fall Time | | T_f | - | 5 | - |