

# PT601T

## Chip Type Phototransistor

### ■ Features

1. Subminiature (Dimensions: 1.6 x 1.6 x 0.8mm)
2. Thin type (Thickness: 0.8mm)
3. High sensitivity (Darlington output)
4. Surface mount type (leadless type)
5. Taped model (4 000pcs./reel)

### ■ Applications

1. For ON/OFF control of LEDs for LCD backlight
2. Pagers
3. Cellular phones
4. Other portable equipment

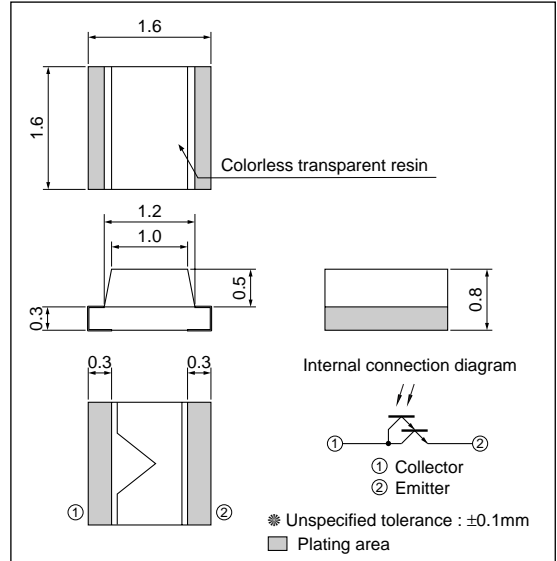
### ■ Absolute Maximum Ratings (Ta=25°C)

| Parameter                   | Symbol           | Rating      | Unit |
|-----------------------------|------------------|-------------|------|
| Collector-emitter voltage   | V <sub>CEO</sub> | 35          | V    |
| Emitter-collector voltage   | V <sub>ECO</sub> | 6           | V    |
| Collector current           | I <sub>C</sub>   | 20          | mA   |
| Collector power dissipation | P <sub>C</sub>   | 50          | mW   |
| Operating temperature       | T <sub>opr</sub> | -25 to +85  | °C   |
| Storage temperature         | T <sub>stg</sub> | -25 to +100 | °C   |
| *1 Soldering temperature    | T <sub>sol</sub> | 260         | °C   |

\*1 Hand soldering temperature, for MAX. 3s

### ■ Outline Dimensions

(Unit : mm)



## ■ Electro-optical Characteristics

(Ta=25°C)

| Parameter                            | Symbol         | Conditions *2   | MIN. | TYP.     | MAX. | Unit          |
|--------------------------------------|----------------|---|------|----------|------|---------------|
| Collector current                    | $I_C$          | $E_e=0.01\text{mW/cm}^2$ , $V_{CE}=10\text{V}$            | 0.03 | –        | 0.3  | mA            |
| Collector dark current               | $I_{CEO}$      | $E_e=0$ , $V_{CE}=10\text{V}$                             | –    | –        | 1.0  | $\mu\text{A}$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$  | $E_e=1\text{mW/cm}^2$ ,<br>$I_C=2.5\text{mA}$             | –    | –        | 1.0  | V             |
| Peak sensitivity wavelength          | $\lambda_p$    | –   | –    | 880      | –    | nm            |
| Response time                        | Rise time      | $V_{CE}=2\text{V}$ , $I_C=10\text{mA}$<br>$R_L=100\Omega$ | –    | 100      | –    | $\mu\text{s}$ |
|                                      | Fall time      |   | –    | 100      | –    | $\mu\text{s}$ |
| Half intensity angle                 | $\Delta\theta$ | –   | –    | $\pm 60$ | –    | °             |

\*2  $E_e$ : Illuminance, irradiance by CIE standard light source A (tungsten lamp)

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