

# LG-03PT4D94H-302C

## PHOTO TRANSISTOR

### DATA SHEET

SPEC. NO. : SZ20022102  
DATE : 2021/08/12  
REV. : A/1

Approved By:

Checked By:

Prepared By:



## Absolute Maximum Ratings at Ta=25°C

| Parameter                  | Maximum Rating      | Unit |
|----------------------------|---------------------|------|
| Power Dissipation          | 100                 | mW   |
| Collector- Emitter Voltage | 30                  | V    |
| Emitter- Collector Voltage | 5                   | V    |
| Operating Temperature      | -40°C ~+85°C        |      |
| Storage Temperature Range  | -45°C ~+100°C       |      |
| Lead Soldering Temperature | 260°C for 5 seconds |      |

### 1. Storage

The storage ambient for the LEDs should not exceed 30 °C temperature or 70% relative humidity.

It is recommended that LEDs out of their original packaging are used within three months.

For extended storage out of their original packaging, it is recommended that the LEDs be stored in a sealed container with appropriate desiccant or in desiccators with nitrogen ambient.

### 2. Precautions in handling:

- When soldering, leave 2mm of minimum clearance from the resin to the soldering point.
- Dipping the resin to solder must be avoided.
- Correcting the soldered position after soldering must be avoided.
- In soldering, do not apply any stress to the lead frame particularly when heated.
- When forming a lead, make sure not to apply any stress inside the resin.
- Lead forming must be done before soldering.
- It is necessary to cut the lead frame at normal temperature.

### 3. Caution in ESD:

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

## Electrical Optical Characteristics at Ta=25°C

| PARAMETER                             | SYMBOL          | MIN | TYP | MAX  | UNITS | TEST CONDITIONS                                   |
|---------------------------------------|-----------------|-----|-----|------|-------|---------------------------------------------------|
| Range of Spectral Bandwidth           | $\lambda_{0.5}$ | 840 | --- | 1100 | nm    | ---                                               |
| Wavelength of Peak Sensitivity        | $\lambda_P$     | --- | 940 | ---  | nm    | ---                                               |
| Collector- Emitter Breakdown Voltage  | $V_{(BR)CEO}$   | 30  | --- | ---  | V     | $I_C=0.1mA$ $E_e=0mW/cm^2$                        |
| Emitter-Collector Breakdown Voltage   | $V_{(BR)ECO}$   | 5   | --- | ---  | V     | $I_R=0.1mA$ $E_e=0 mW/cm^2$                       |
| Collector- Emitter Saturation Voltage | $V_{CE(SAT)}$   | --- | --- | 0.5  | V     | $I_C=0.1 mA$ $E_e=1.0mW/cm^2$                     |
| Rise Time                             | $T_r$           | --- | 15  | ---  |       | $V_{CC}=5V$ $R_L=1K\Omega$ $I_C=1mA$              |
| Fall Time                             | $T_f$           | --- | 15  | ---  |       | $V_{CC}=5V$ $R_L=1K\Omega$ $I_C=1mA$              |
| Viewing Angle                         | $2\theta_{1/2}$ | --- | 50  | ---  | Deg.  |                                                   |
| Collector Dark Current                | $I_{CEO}$       | --- | --- | 100  | nA    | $V_{CE}=10V$ $E_e=0 mW/cm^2$                      |
| On State Collector Current            | $I_{C(ON)}$     | --- | 9.0 | ---  | mA    | $V_{CE}=5V$ $E_e=1.0mW/cm^2$<br>$\lambda_P=940nm$ |

### Note:

1.  $2\theta_{1/2}$  is the off-axis angle at which the  $I_{C(ON)}$  is half the axial  $I_{C(ON)}$ .
2. The  $I_{C(ON)}$  guarantee should be added  $\pm 15\%$  tolerance.

## PHOTO TRANSISTOR Specification

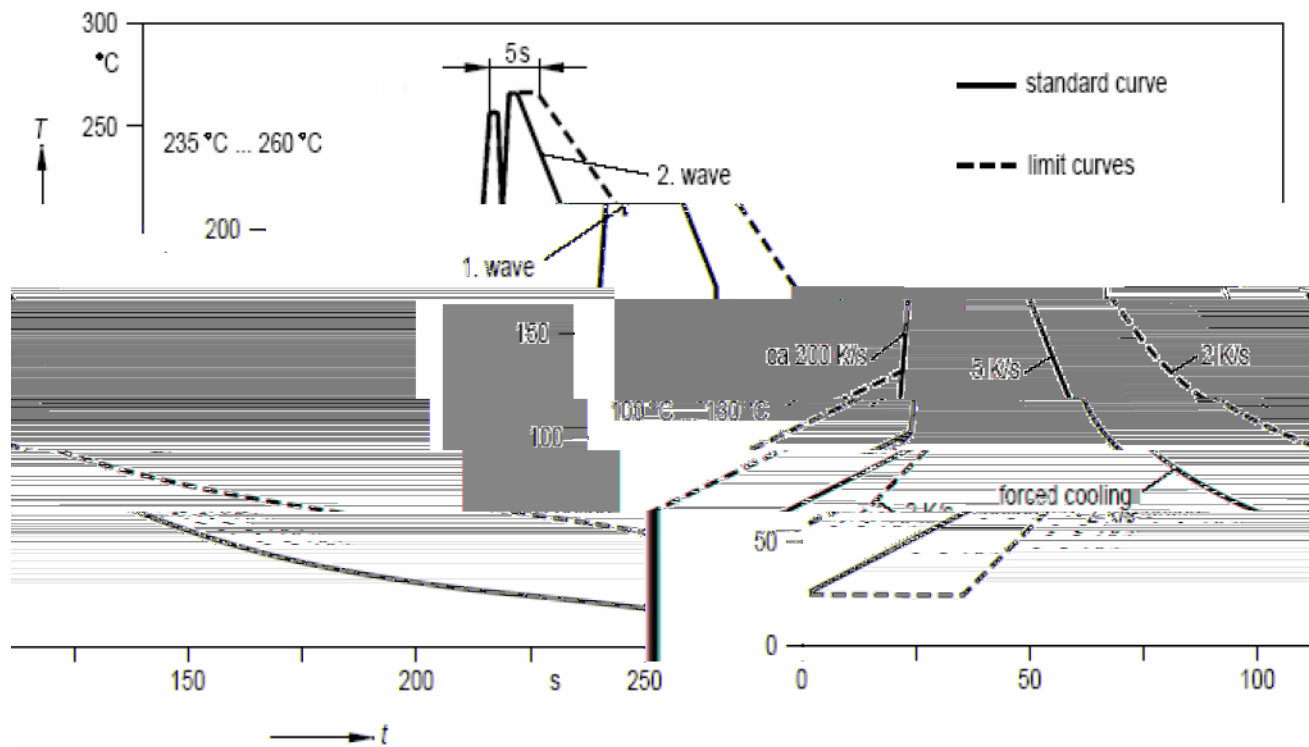
●Commodity: PHOTO TRANSISTOR

● $I_{C(on)}$  Bin Limits

| BIN CODE | Min. (mA) | Max. (mA) |
|----------|-----------|-----------|
| 63       | 4.5       | 6         |
| 64       | 6         | 8         |
| 65       | 8         | 10        |
| 66       | 10        | 12.5      |
| 67       | 12.5      | 15.6      |

**NOTE:** The  $I_{C(on)}$  guarantee should be added  $\pm 15\%$  tolerance.

## Recommended Wave Soldering Profile







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