



LG-256PT2C94F-908 **PHOTO TRANSISTOR DATA SHEET**

 SPEC. NO.
 :
 SZ20111602

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 2021/03/29

 REV.
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 A/2

Approved By:

Checked By:

Prepared By:

Part No. LG-256PT2C94F-908

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Features

Pb free product—RoHS compliant High Photo Sensitivity General purpose leads Reliable and rugged Long life – solid state reliability

Package Dimension



- 3. Protruded resin under flange is 1.0mm max.
- 4. Lead spacing is measured where the leads emerge from the package.
- 5. Specifications are subject to change without notice.

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PARAMETER	SYMBOL	MIN	ТҮР	MAX	UNITS	TEST CONDITIONS
Range of Spectral Bandwidth	0.5	400		1100	nm	
Wavelength of Peak Sensitivity	Р		860		nm	
Collector- Emitter Breakdown Voltage	V _{(BR)CEO}	30			v	I _C =0.1mA Ee=0mW/cm ²
Emitter-Collector Breakdown Voltage	V _{(BR)ECO}	5			v	I _R =0.1mA Ee=0 mW/cm ²
Collector- Emitter Saturation Voltage	V _{CE(SAT)}			0.4	V	I _C =0.1mA Ee=1.0mW/cm ²
Rise Time	Tr		15		μS	Vcc=5V $R_L=1K$ $I_C=1mA$
Fall Time	$T_{\rm f}$		15		μS	Vcc=5V $R_L=1K$ $I_C=1mA$
Viewing Angle	2 1/2		55		Deg.	
Collector Dark Current	I _{CEO}			100	nA	$V_{CE}=10V$ $E_e=0$ mW/cm ²
On State Collector Current	I _{C(ON)}	2.2	4.5		mA	$V_{CE}=5V E_{e}=1.0 \text{mW/cm}^{2}$ $_{p}=940 \text{nm}$

Electrical Optical Characteristics at Ta=25°C

Note:

LIGH

- 1. 2 $_{1/2}$ 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.

Recommended Wave Soldering Profile





Photo Transistor Diode Specification

Commodity: Photo Transistor

●Ic(on) Bin Code (V_{CE}=5V, Ee=1mW/cm², p=940nm)

BIN CODE	Min. (mA)	Max. (mA)
BIN1	2.2	2.6
BIN2	2.6	3.1
BIN3	3.1	3.7
BIN4	3.7	4.4
BIN5	4.4	5.3

NOTE: The Ic(on) guarantee should be added $\pm 15\%$ tolerance.

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LED MOUNTING METHOD

LIGHT

1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures (Fig.1).



" " Correct mounting method " \times " Incorrect mounting method

Note 1-2: Do not route PCB trace in the contact area between the lead frame and the PCB to prevent short-circuits.

2. When soldering wire to the LED, use individual heat-shrink tubing to insulate the exposed leads to prevent accidental contact short-circuit (Fig.2).



3. Use stand-offs (Fig.3) or spacers (Fig.4) to securely position the LED above the PCB.



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LEAD FORMING PROCEDURES

LIGHT

1. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend (Fig.5 and Fig.6).



2. Lead forming or bending must be performed before soldering, never during or after soldering.

3. Do not stress the LED lens during lead-forming in order to fractures in the lens epoxy and damage the internal structures.

4. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB (Fig.7).

5. Do not bend the leads more than twice (Fig.8).



6. After soldering or other high-temperature assembly, allow the LED to cool down to 50°C before applying outside force (Fig.9). In general, avoid placing excess force on the LED to avoid damage. For any questions please consult with LIGHT representative for proper handling procedures.



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PACKAGE

