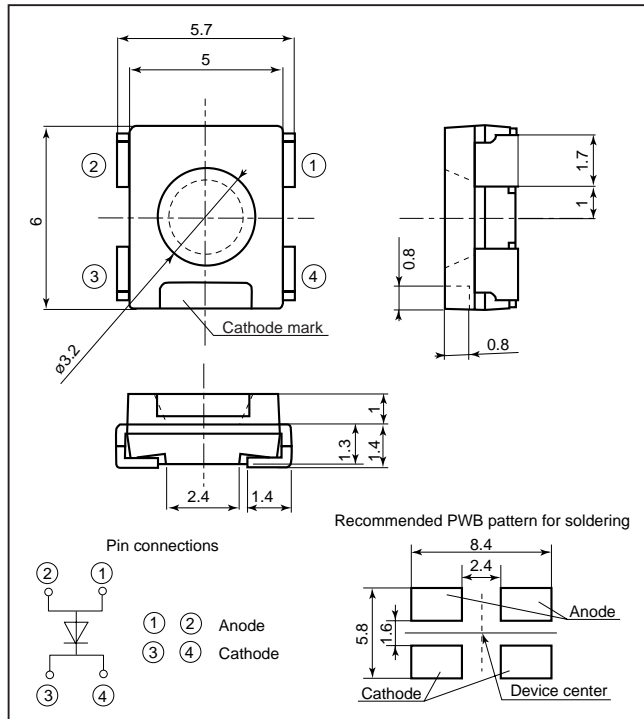


# GM5Y□01200A series (Under development)

6050 Size, 2.4mm Thickness,  
Leadless Chip LED

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(T<sub>a</sub>=25°C)

Model No.	Radiation color	Radiation material	Power dissipation P (mW)	Forward current I <sub>F</sub> (mA)	Peak forward current I <sub>F</sub> M <sup>*1</sup> (mA)	Derating factor (mA/°C)		Reverse voltage V <sub>R</sub> (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)	Soldering temperature T <sub>sol</sub> <sup>*2</sup> (°C)
						DC	Pulse				
GM5YJ01200A	Orange	AlGaInP on GaAs	400	180	200	2.40	2.67	5	-55 to +100	-55 to +100	295
GM5YS01200A	Sunset orange	AlGaInP on GaAs	400	180	200	2.40	2.67	5	-55 to +100	-55 to +100	295
GM5YV01200A	Amber	AlGaInP on GaAs	400	180	200	2.40	2.67	5	-55 to +100	-55 to +100	295

\*1 Duty ratio=1/10, Pulse width=0.1ms

\*2 For 3s or less at the temperature of hand soldering. Temperature of reflow soldering is shown on the page 7.

■ Electro-optical Characteristics

(I<sub>F</sub>=150mA, T<sub>a</sub>=25°C)

Lens type	Model No.	Forward voltage V <sub>F</sub> (V)		Peak emission wavelength λ <sub>F</sub> (nm) TYP	Dominant wavelength λ <sub>d</sub> (nm) TYP	Target luminous intensity I <sub>v</sub> (mcd) TYP	Spectrum radiation bandwidth Δλ(nm) TYP	Reverse current		Page for characteristics diagrams
		TYP	MAX					I <sub>R</sub> (μA) MAX	V <sub>R</sub> (V)	
Colorless transparency	GM5YJ01200A	2.5	3.4	627	618	(1500)	18	100	4	-
	GM5YS01200A	2.5	3.4	609	605	(1700)	18	100	4	-
	GM5YV01200A	2.5	3.4	591	588	(1300)	18	100	4	-

Notice In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.

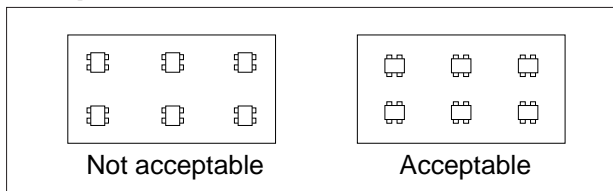
Internet Internet address for Electronic Components Group <http://www.sharp.co.jp/ecg/>

# General Description of Light Emitting Diodes

## E: Chip LED Device Type

### ■ Mounting to a PWB

Design the product so that the devices will not be mounted in the same direction as the warp of the PWB.

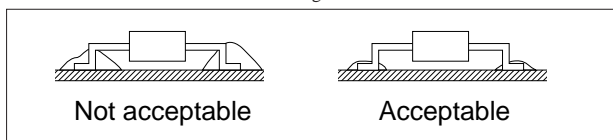


### ■ Soldering Conditions

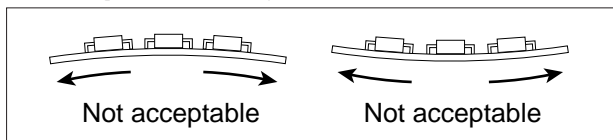
Solder the lead pins under the following conditions.

Type of Soldering	Conditions
1. Manual soldering	300°C ± 5°C within 5 seconds
2. Reflow soldering	Preheating 100°C to 150°C within 2 minutes Soldering 245°C ± 5°C within 5 seconds Gradual cooling (Avoid quenching)

- In manual soldering, do not move the lead pins with the soldering edge.
- Avoid applying excessive solder reinforcement.
- In using surface mount type numeric LEDs, please refer to the specification sheet because conditions shall be changed.



- Do not try to correct the position of the devices after soldering.
- Do not warp PWB after soldering.



### ■ Cleaning

#### (1) Solvents

The package resin may be penetrated by solvents used in cleaning. Refer to the table below for usable solvents.

Solvent	Usable
Ethyl alcohol	○
Isopropyl alcohol	○
Chlorosen	×
Acetone	×
Trichloroethylene	×

- : Acceptable
- × : Not acceptable

(Notes) • There is a world-wide movement to restrict the use of chlorofluorocarbon (CFC) based solvents and we recommend that you avoid their use. However, before using a CFC substitute solvent, carefully check that it will not penetrate the package resin.

#### (2) Cleaning Methods

Cleaning Method	Usable	Remarks
Solvent cleaning	○	Immersion up to one minute at room temperature
Ultrasonic cleaning	△	Test the cleaning under actual conditions and check for abnormalities before actual use.

- : Acceptable
- △ : Acceptability depends on device type and conditions

(Notes) • The affect on the device from ultrasonic cleaning differs depending on the size of the cleaning bath, ultrasonic output, duration, board size and device mounting method. Test the cleaning method under actual conditions and check for abnormalities before actual use.

- Please contact our representative before using a cleaning solvent or method not given above.
- Since the device is very small, it may be damaged by excessive stress. So, pay special attention to the transport method and handling.

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    - Telecommunication equipment [terminal]
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    - Industrial control
    - Audio visual equipment
    - Consumer electronics
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    - Traffic signals
    - Gas leakage sensor breakers
    - Alarm equipment
    - Various safety devices, etc.
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