



## **Specification For Approval**

| C          | Customer    | :   |       |           |       |  |
|------------|-------------|-----|-------|-----------|-------|--|
| D          | Description | :   | LED   | Display   |       |  |
| P          | art Numbe   | er: | RL-D  | 05611SBAV | W/D15 |  |
| D          | ate         | :   | 2004- | 8-06      |       |  |
| Approved   | By:         |     |       |           |       |  |
| Prepared I | By:         |     |       |           |       |  |
|            | Checked     | (   | QC    | Designed  | Sales |  |

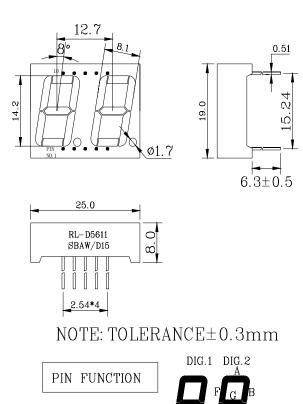


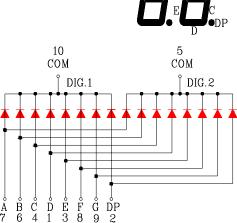


#### Part No:RL-D5611SBAW/D15

## **★** Package Dimensions

**Unit:mm** 





## **★**Selection Guide

|                      | Cl          | LED Display          |               |          |               |
|----------------------|-------------|----------------------|---------------|----------|---------------|
| Part NO.             | Material    | <b>Emitted Color</b> | Surface color | Polarity | Colloid color |
| RL-D5611<br>SBAW/D15 | GaAlAs/GaAs | Super red            | Gray          | CC       | White         |





#### Part No:RL-D5611SBAW/D15

## ★Absolute Maximum Ratings

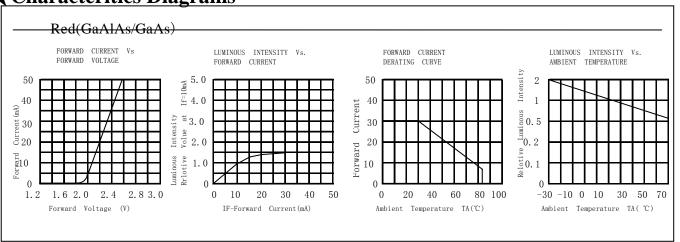
(Ta=25°C)

| Patameter                                   | Symbol | MAX. Rating | Unit                   |  |  |  |  |
|---|--------|-------------|------------------------|--|--|--|--|
| Power Dissipation                           | Pd     | 110         | mW                     |  |  |  |  |
| Peak forward current (10µs Pulse)           | IFM    | 200         | mA                     |  |  |  |  |
| Reverse Current                             | IR     | 100         | μΑ                     |  |  |  |  |
| Continuous Forward Current                  | IF     | 20          | mA                     |  |  |  |  |
| Operating Temperature                       | Topr   | -40~+85     | $^{\circ}\!\mathbb{C}$ |  |  |  |  |
| Storage Temperature                         | Tstg   | -40~+85     | $^{\circ}\!\mathbb{C}$ |  |  |  |  |
| Lead Soldering Temperature: 260°C For 5 SEC |        |             |                        |  |  |  |  |

## ★Electric-Optical Characteristics

| Patameter                | Symbol | Test Condition | MIN  | TYP  | MAX | Unit     |
|--------------------------|--------|----------------|------|------|-----|----------|
| Forward Voltage          | VF     | IF=20mA        | 1.5  | 1.8  | 2.4 | V        |
| Reverse Voltage          | VR     | IR=100uA       | 5    |      |     | V        |
| Luminous Intensity       | IV     | IF=10mA        | 2750 | 4120 |     | $\mu$ cd |
| Peak Emission Wavelength | λР     | IF=20mA        |      | 645  |     | nm       |

## ★ Characteritics Diagrams



# **EXCEED** Light-emitting diode



**Products: Led Displays** 

**★**Reliability Test

| No | Item                               | <b>Test Condition</b>  | Test<br>Hours/Cycles | Samples<br>Tested | Acc./Rej |
|----|------------------------------------|--|----------------------|-------------------|----------|
| 1  | Room Temperature DC Operating Life | $Ta=25^{\circ}\mathbb{C}$ , $I_{F=}20mA$   | 1000 Hrs             | 76                | 0/1      |
| 2  | Thermal Shock                      | $-10^{\circ} C (5min) \rightarrow$ $(10sec) \rightarrow +100$ $^{\circ} C (5min)$    | 100 Cycles           | 76                | 0/1      |
| 3  | Temperature<br>Cycle               | $-40^{\circ} C (30 min)$ $\rightarrow (5 min) \rightarrow +85$ $^{\circ} C (30 min)$ | 100 Cycles           | 76                | 0/1      |
| 4  | High Temp./<br>High Humi.<br>Test  | 85°C/85%RH   | 1000 Hrs             | 76                | 0/1      |
| 5  | High<br>Temperature<br>Storage     | Ta=100°C   | 1000 Hrs             | 76                | 0/1      |
| 6  | Low<br>Temperature<br>Storage      | Ta= - 40°C   | 1000 Hrs             | 76                | 0/1      |
| 7  | Soldering Heat                     | 260°C±5°C  | 5 Seconds            | 76                | 0/1      |