

**Feature:**

- 0.39" Single digit seven segments display
- Low power consumption
- Packed in reel
- White segment and grey surface
- Z = 0 (common anode) or 1 (common cathode)
- XX = color code

**Description:**

These 0.39" Single digit seven segments displays are made with white segment and grey surface. The viewing distance is up to seven meters.

**Application:**

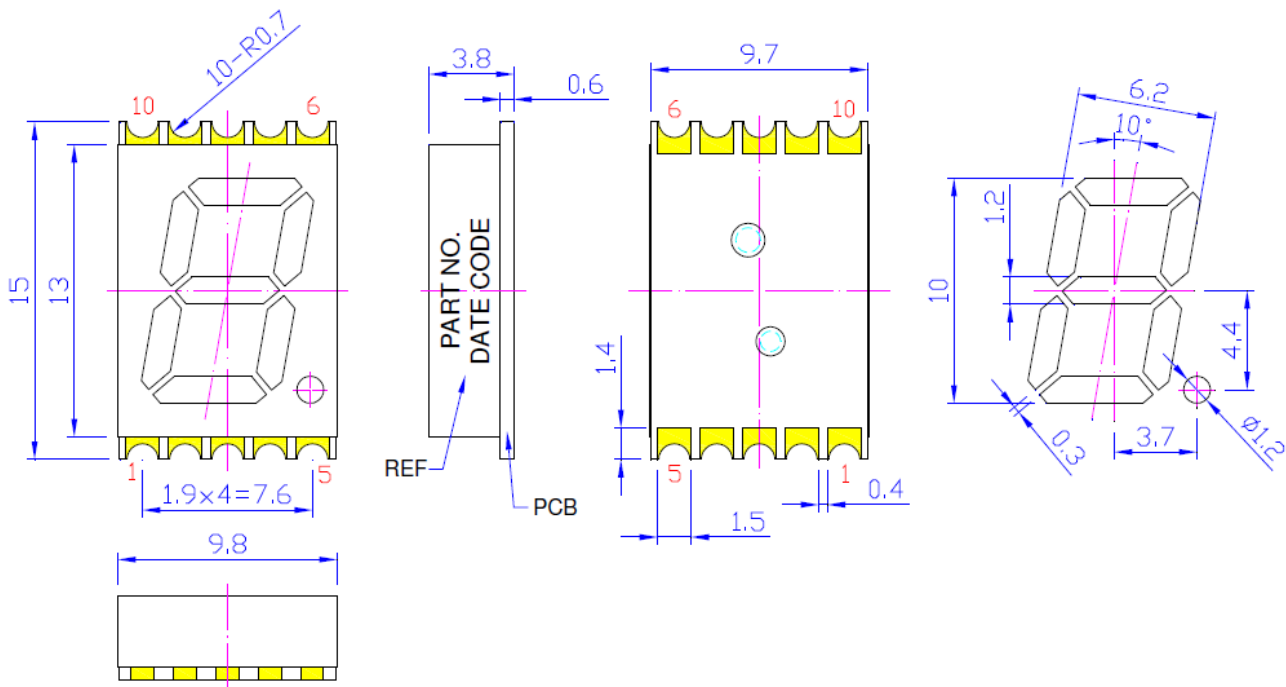
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.25mm

**Electrical / Optical Characteristic: (T=25 °C)**

| Product   |           | Material | Color        | I <sub>F</sub> (mA) | V <sub>F</sub> (V) | λ(nm) |      | I <sub>V</sub> (mcd) |
|-----------|-----------|----------|--------------|---------------------|--------------------|-------|------|----------------------|
| CA        | CC        |          |              |                     | Typ.               | Min.  | Max. | Typ.                 |
| QBSS390R  | QBSS391R  | AllnGaP  | Red          | 20                  | 2.0                | 619   | 629  | 60                   |
| QBSS390Y  | QBSS391Y  | AllnGaP  | Yellow       | 20                  | 2.0                | 585   | 595  | 35                   |
| QBSS390AG | QBSS391AG | AllnGaP  | Yellow Green | 20                  | 2.0                | 566   | 574  | 25                   |
| QBSS390IB | QBSS391IB | InGaP    | Blue         | 20                  | 3.0                | 460   | 470  | 200                  |
| QBSS390IG | QBSS391IG | InGaP    | Green        | 20                  | 3.0                | 520   | 535  | 200                  |

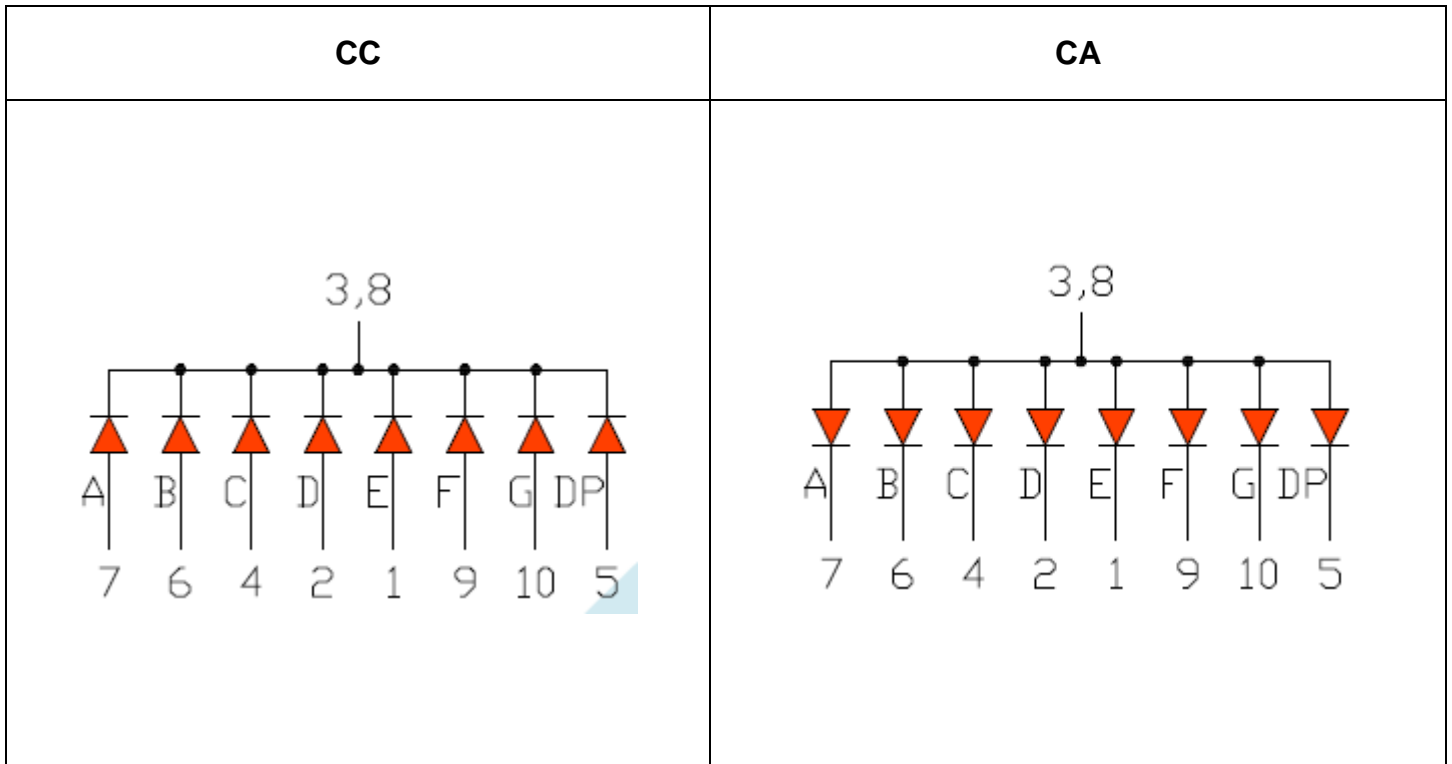
**Absolute Maximum Rating:**

| Material | P <sub>d</sub> (mW) | Derating linear<br>from 25C per dice<br>(mA/C) | I <sub>F</sub> (mA) | V <sub>R</sub> (V) | T <sub>OP</sub> (°C) | T <sub>ST</sub> (°C) | T <sub>SOL</sub> (°C)** |
|----------|---------------------|--|---------------------|--------------------|----------------------|----------------------|-------------------------|
| AllnGaP  | 70                  | 0.28   | 25                  | 5                  | -40 to + 105         | -40 to +105          | 260                     |
| InGaP    | 120                 | 0.3  | 30                  | 5                  | -40 to +105          | -40 to +105          | 260                     |

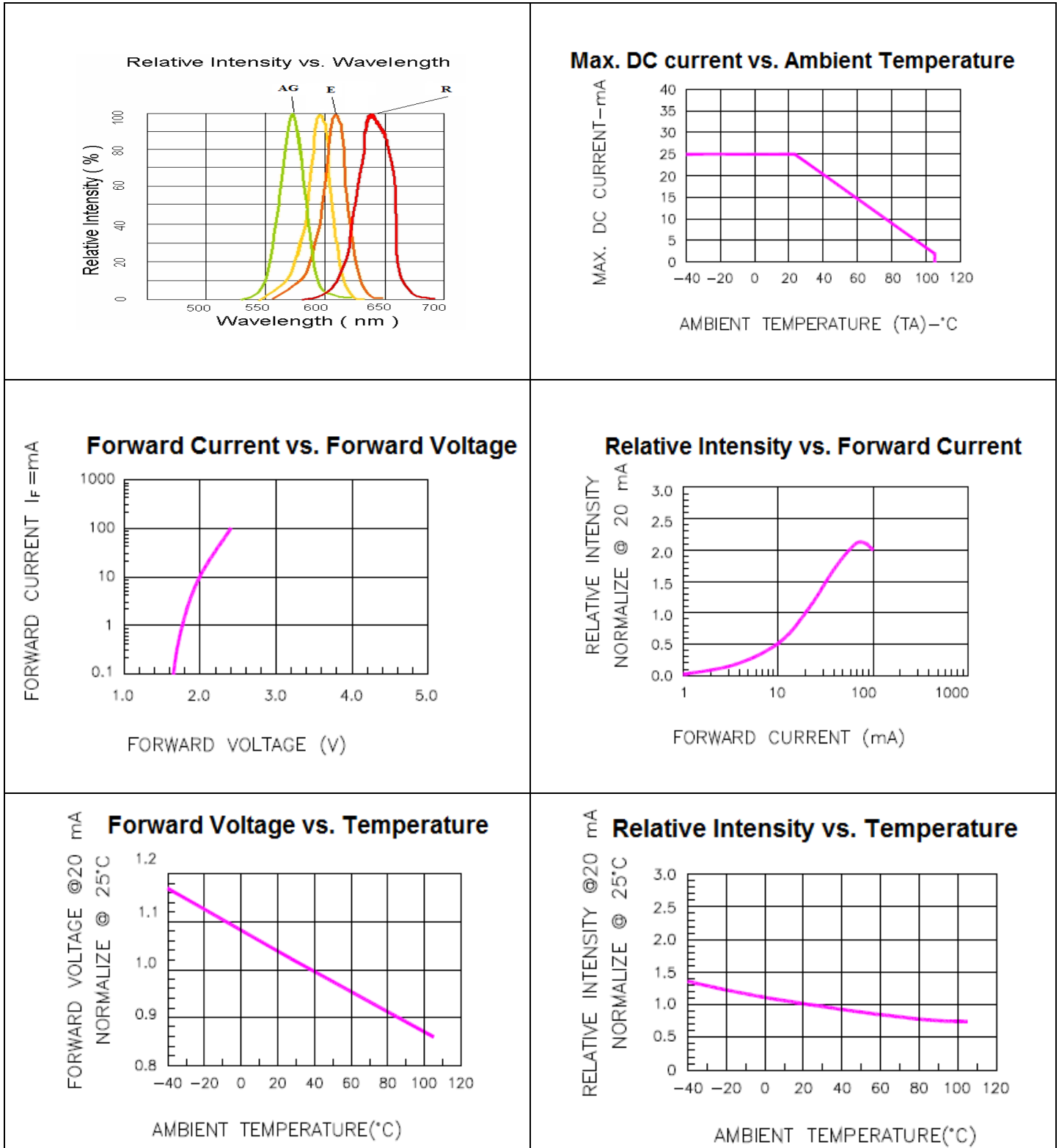
\*Duty 1/10 @ 1KHz

\*\* IR Reflow for no more than 5 sec @ 260 °C

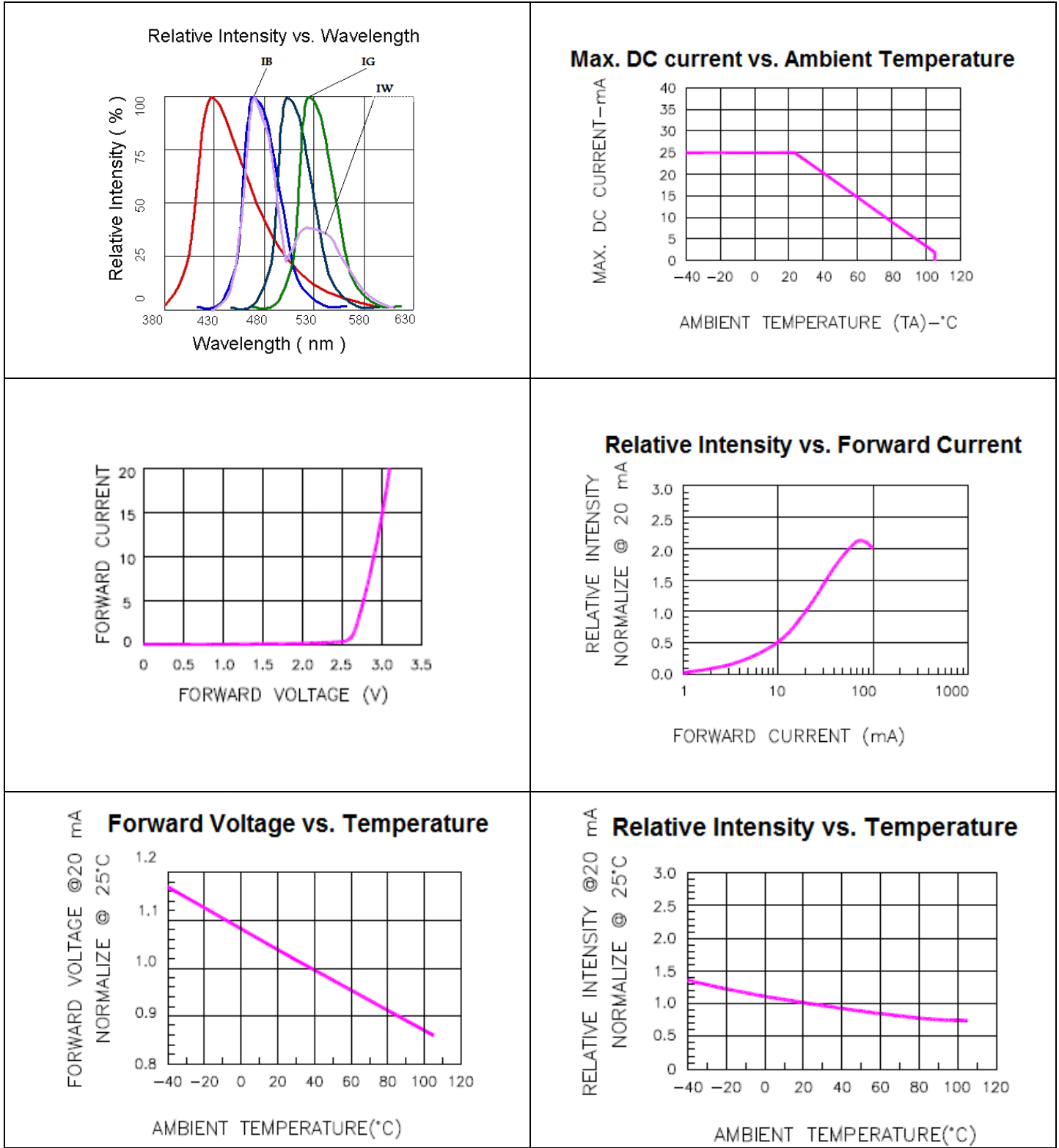
**Pin Configuration:**



**Characteristic Curves: (AlInGaP)**

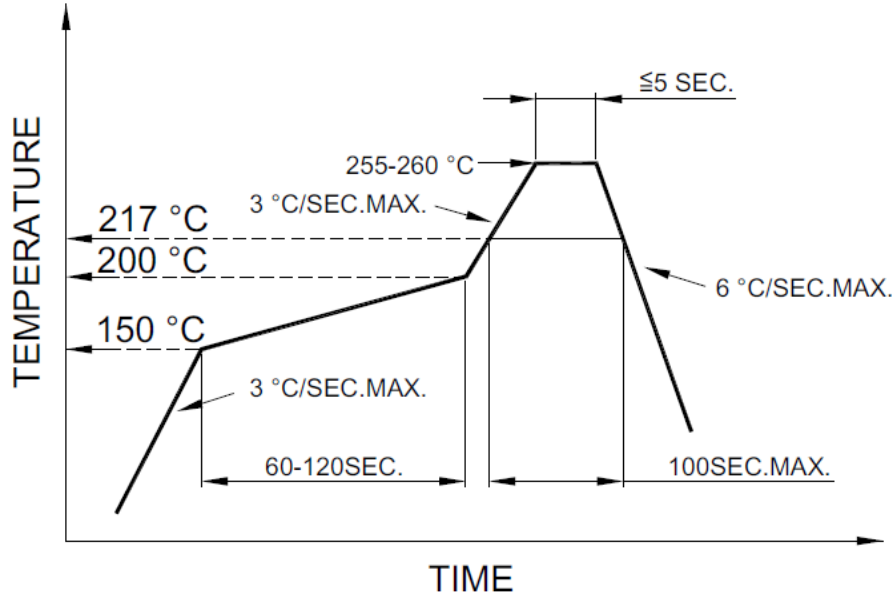


**Characteristic Curves: (InGaN)**

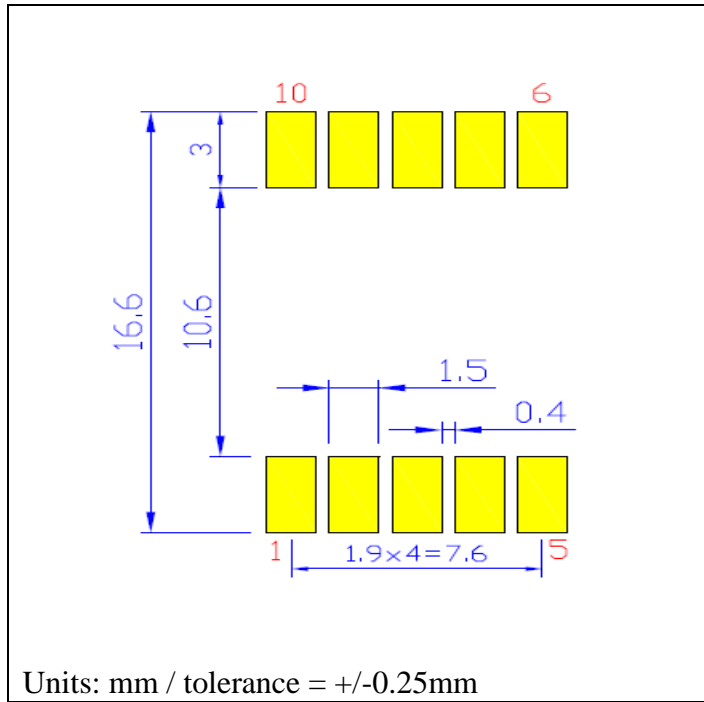


**Solder Profile & Footprint:**

**Lead-free Solder Profile**



**Soldering Profile**



**Ordering Information:**

| Product   |           | Spec Range       | Quantity per reel |
|-----------|-----------|------------------|-------------------|
| CA        | CA        |                  |                   |
| QBSS390R  | QBSS391R  | lv = 60mcd typ.  | 1000pcs           |
| QBSS390Y  | QBSS391Y  | lv = 35mcd typ.  | 1000pcs           |
| QBSS390AG | QBSS391AG | lv = 25mcd typ.  | 1000pcs           |
| QBSS390IB | QBSS391IB | lv = 200mcd typ. | 1000pcs           |
| QBSS390IG | QBSS391IG | lv = 200mcd typ. | 1000pcs           |

**Revision History:**

| Description:             | Revision # | Revision Date |
|--------------------------|------------|---------------|
| New Release of QBSS39ZXX | V1.0       | 6/24/2011     |
|                          |            |               |
|                          |            |               |
|                          |            |               |