

**Feature:**

- 0.39" Single digit seven segments display
- Low power consumption
- Packed in tube
- AlInGaP Technology R/Y/AG
- InGaN Technology IB/IG
- XX= color; Z= 1:Common Cathode or 0:Common Anode

**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:**

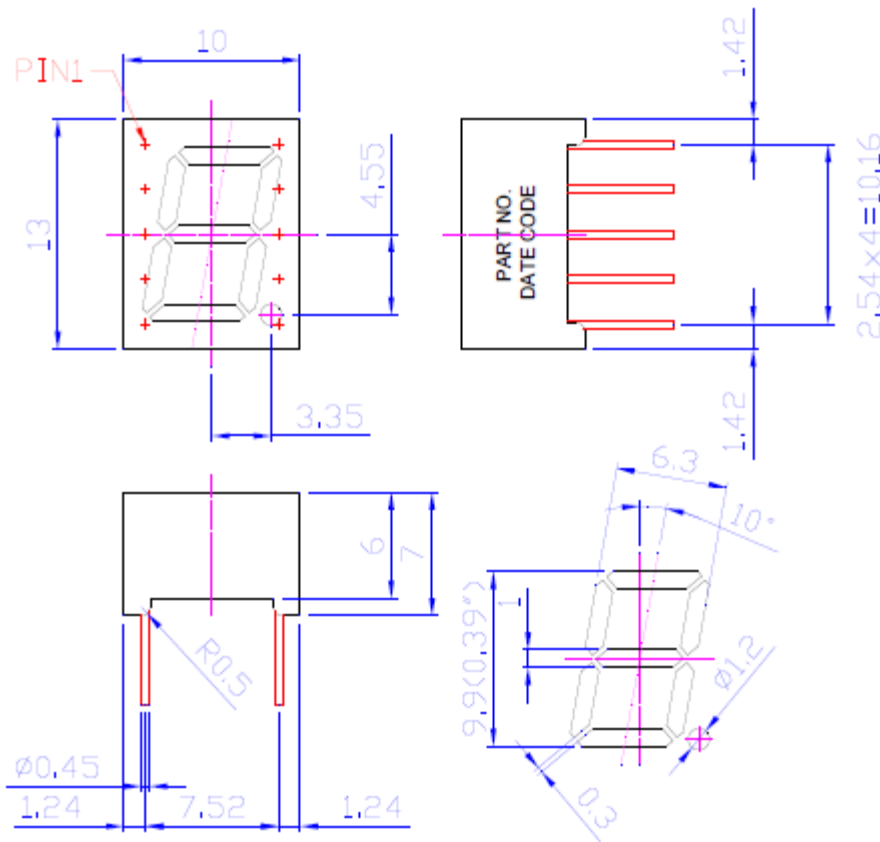
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

**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 <sub>D</sub> (nm) |      | I <sub>V</sub> (mcd) |
|----------|----------|----------|--------------|---------------------|--------------------|---------------------|------|----------------------|
| CC       | CA       |          |              |                     | Typ.               | Min.                | Max. | typ.                 |
| QBS39IB1 | QBS39IB0 | InGaN    | Blue         | 20                  | 3.2                | 460                 | 470  | 160                  |
| QBS39IG1 | QBS39IG0 | InGaN    | Green        | 20                  | 3.2                | 500                 | 535  | 200                  |
| QBS39R1  | QBS39R0  | AllnGaP  | Red          | 20                  | 2.0                | 619                 | 629  | 60                   |
| QBS39Y1  | QBS39Y0  | AllnGaP  | Yellow       | 20                  | 2.0                | 585                 | 595  | 35                   |
| QBS39AG1 | QBS39AG0 | AllnGaP  | Yellow Green | 20                  | 2.0                | 565                 | 575  | 25                   |

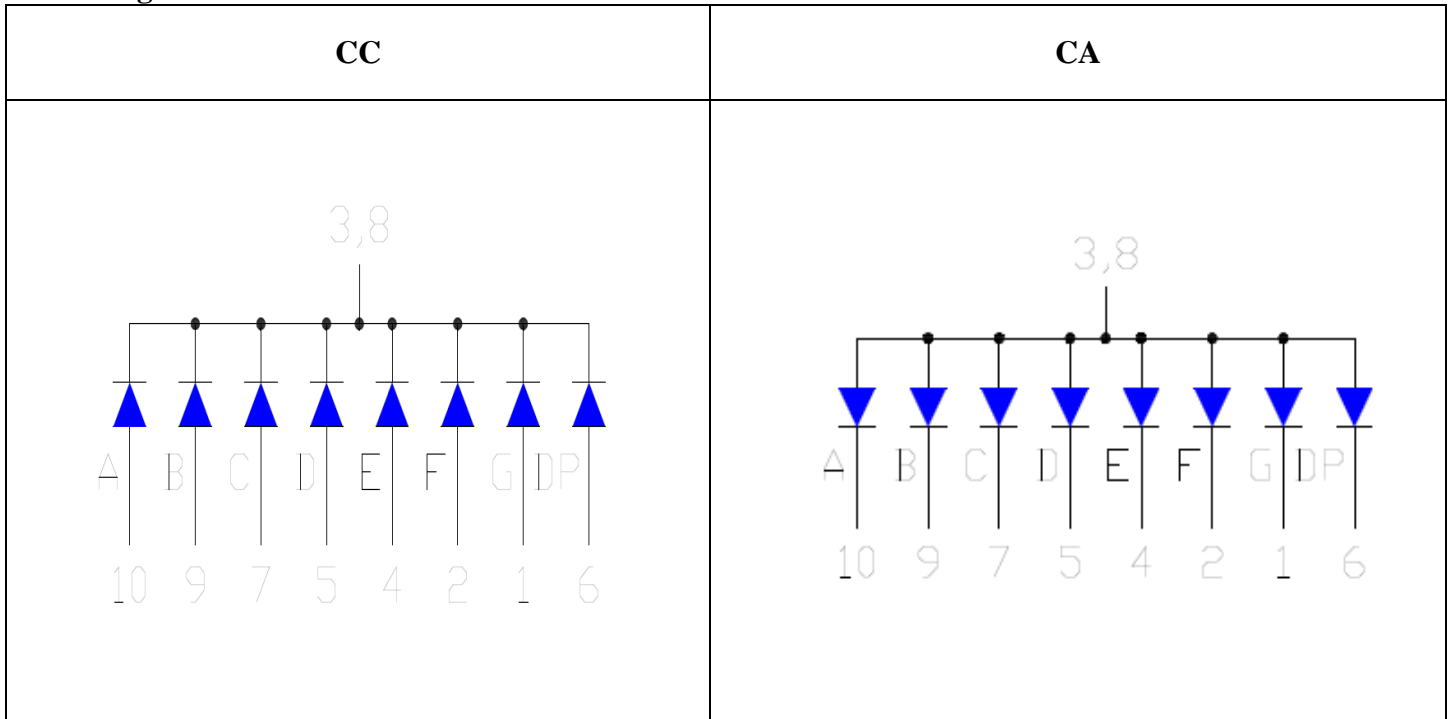
**Absolute Maximum Rating**

| Material | P <sub>d</sub> (mW) | Derating liner from 25 °C per dice (mA/°C) | I <sub>F</sub> (mA) | I* <sub>PF</sub> (mA) | V <sub>R</sub> (V) | T <sub>OP</sub> (°C) | T <sub>ST</sub> (°C) |
|----------|---------------------|--|---------------------|-----------------------|--------------------|----------------------|----------------------|
| InGaN    | 120                 | 0.4  | 30                  | 120                   | 5                  | -40 to + 85          | -40 to +100          |
| AllnGaP  | 70                  | 0.33                                       | 25                  | 90                    | 5                  | -40 to + 85          | -40 to +100          |

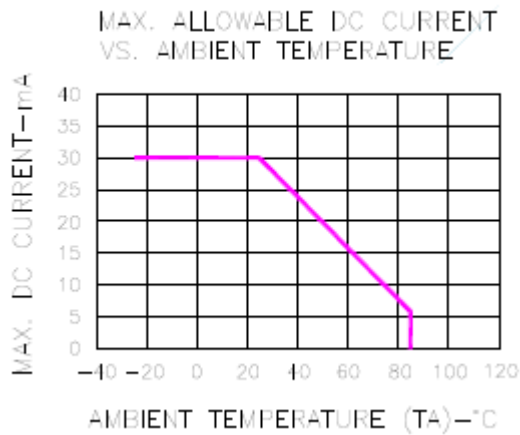
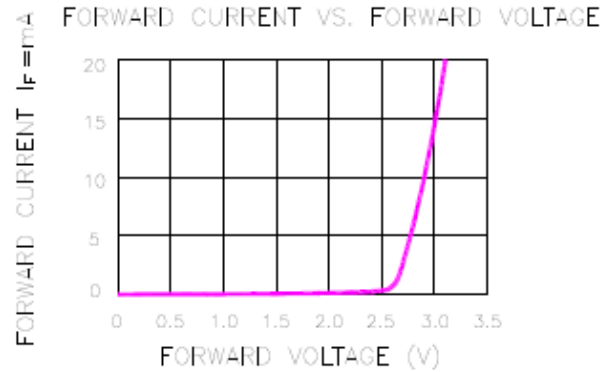
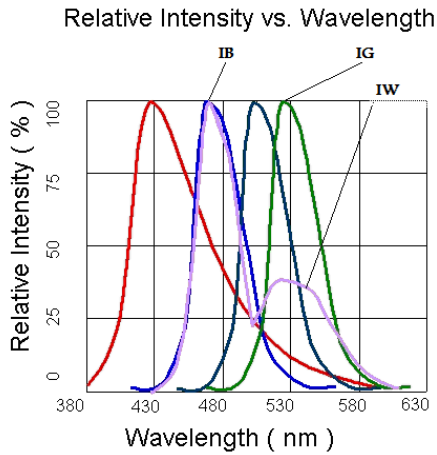
\*Duty 1/10 @ 1KHz

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

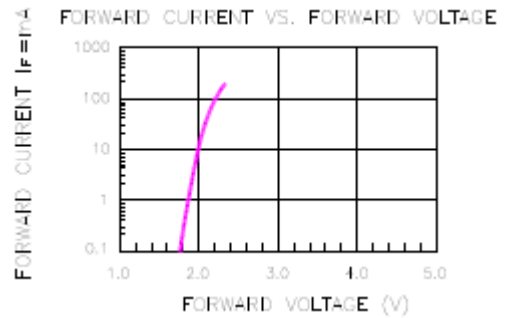
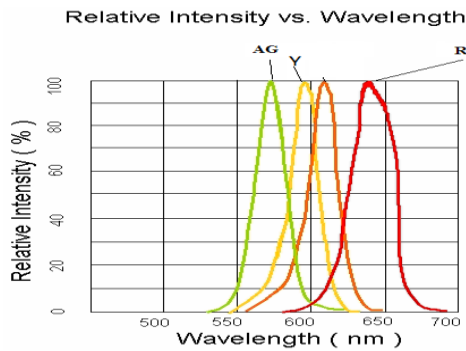
**Pin Configuration**

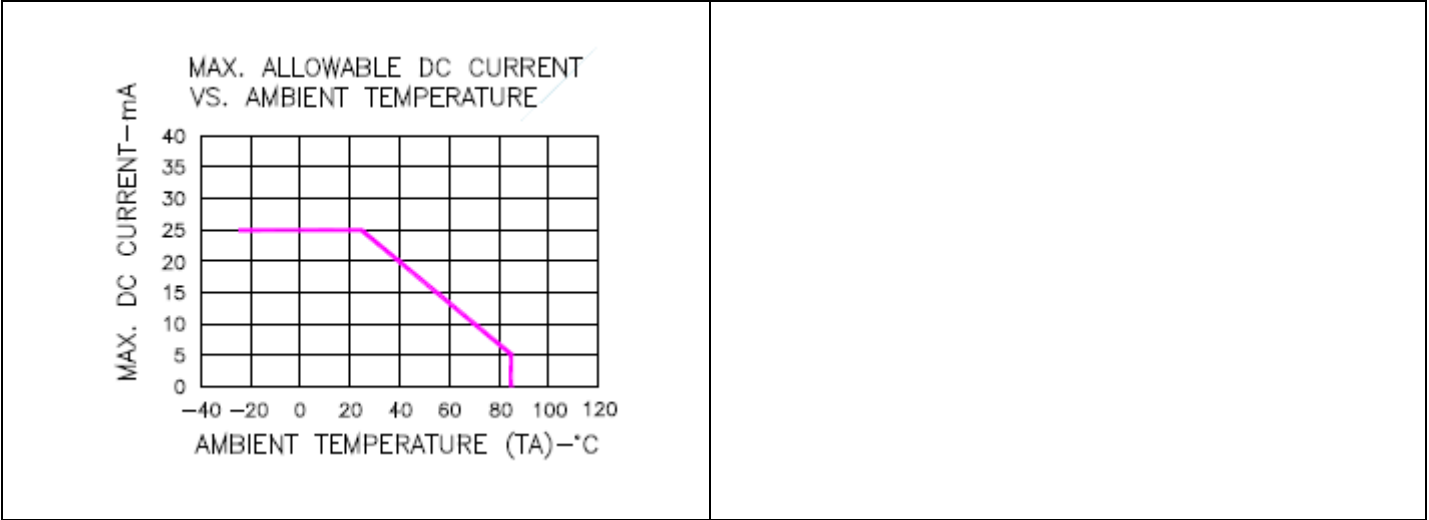


**Characteristic Curves: (InGaN)**



**Characteristic Curves: (AlInGaP)**





**Ordering Information:**

| Product  |          | Orderable Part # |          | Spec Range       | Quantity per tube |
|----------|----------|------------------|----------|------------------|-------------------|
| CC       | CA       | CC               | CA       |                  |                   |
| QBS39IB1 | QBS39IB0 | QBS39IB1         | QBS39IB0 | lv= 40 mcd typ.  | TBD               |
| QBS39IG1 | QBS39IG0 | QBS39IG1         | QBS39IG0 | lv= 200 mcd typ. | TBD               |
| QBS39R1  | QBS39R0  | QBS39R1          | QBS39R0  | lv= 60 mcd typ.  | TBD               |
| QBS39Y1  | QBS39Y0  | QBS39Y1          | QBS39Y0  | lv= 35 mcd typ.  | TBD               |
| QBS39AG1 | QBS39AG0 | QBS39AG1         | QBS39AG0 | lv= 25 mcd typ.  | TBD               |

**Revision History:**

| Description:  | Revision # | Revision Date |
|---|------------|---------------|
| New Release of QBS39XXX_series                        | V1.0       | 09/20/2010    |
| Information Updates                                   | V2.0       | 05/04/2011    |
| Amend Part number to QBS39XXZ and information updates | V2.1       | 06/24/2011    |
|   |            |               |
|   |            |               |