

# **QT-Brightek Display Series**

## **2.2" Single Digit Alphanumeric Display**

**Part No.: QBAS220XXZ**

**XX: Color Code**  
**Z= 1: Common Cathode**  
**Z = 0: Common Anode**

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## Introduction

### Feature:

- 2.2" Single digit sixteen-segment display
- Low power consumption
- Packed in foam
- Gray face and white segment
- AlInGaP Technology for R, S, Y, O, AG
- InGaN Technology for IG, IB
- XX= color; Z=1: common cathode or 0: common anode

### Description:

These 2.2" single digit sixteen-segment displays are made with white segment and gray surface. The viewing distance is up to seven meters.

### Application:

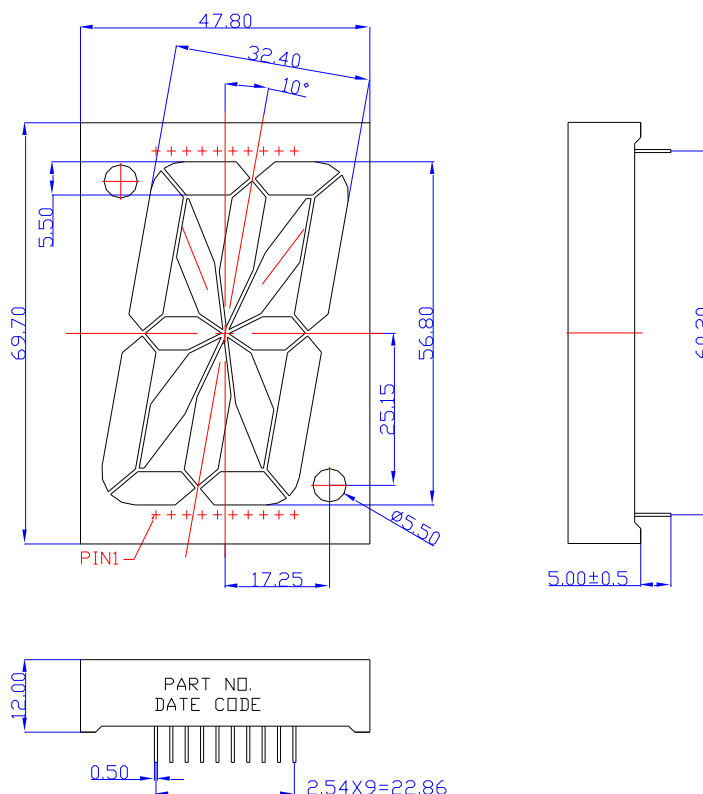
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

### Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



### Dimension:



Units: mm / tolerance = +/-0.25mm

## Electrical / Optical Characteristic (Ta=25 °C)

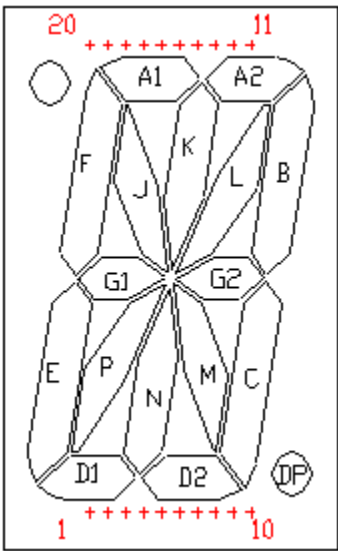
| Product    |            | Material | Color        | I <sub>F</sub> (mA) | V <sub>F</sub> (V) |      | λ <sub>D</sub> (nm) |      |      | I <sub>V</sub> (mcd) |
|------------|------------|----------|--------------|---------------------|--------------------|------|---------------------|------|------|----------------------|
| CC         | CA         |          |              |                     | Typ.               | Max. | Min.                | Typ. | Max. | Typ.                 |
| QBAS220R1  | QBAS220R0  | AlInGaP  | Red          | 20                  | 4.0                | 5.2  | -                   | 624  | -    | 100                  |
| QBAS220S1  | QBAS220S0  | AlInGaP  | Deep Red     | 20                  | 4.0                | 5.2  | -                   | 639  | -    | 50                   |
| QBAS220Y1  | QBAS220Y0  | AlInGaP  | Yellow       | 20                  | 4.0                | 5.2  | -                   | 590  | -    | 100                  |
| QBAS220O1  | QBAS220O0  | AlInGaP  | Orange       | 20                  | 4.0                | 5.2  | -                   | 606  | -    | 100                  |
| QBAS220AG1 | QBAS220AG0 | AlInGaP  | Yellow Green | 20                  | 4.2                | 5.2  | -                   | 571  | -    | 40                   |
| QBAS220IG1 | QBAS220IG0 | InGaN    | True Green   | 20                  | 6.0                | 8.0  | -                   | 525  | -    | 600                  |
| QBAS220IB1 | QBAS220IB0 | InGaN    | Blue         | 20                  | 6.0                | 8.0  | -                   | 465  | -    | 100                  |

## Absolute Maximum Rating per Dice

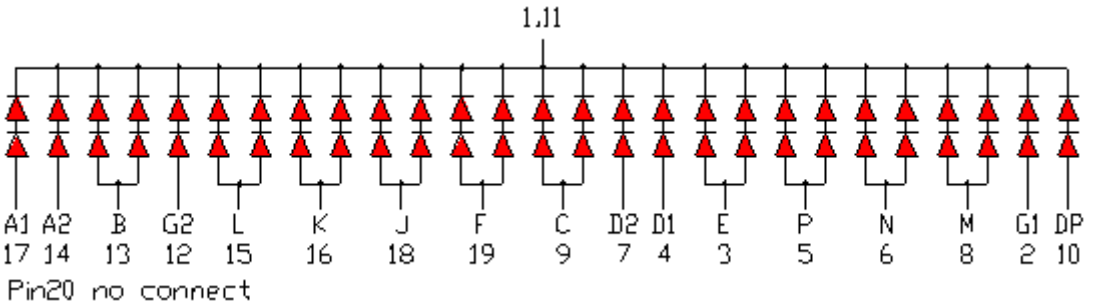
| Material | P <sub>d</sub> (mW) | Derating liner from 25 °C per dice (mW/°C) | I <sub>F</sub> (mA) | I <sub>PF</sub> (mA)* | V <sub>R</sub> (V) | T <sub>OP</sub> (°C) | T <sub>ST</sub> (°C) |
|----------|---------------------|--------------------------------------------|---------------------|-----------------------|--------------------|----------------------|--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

\*Duty 1/10 @ 1KHz

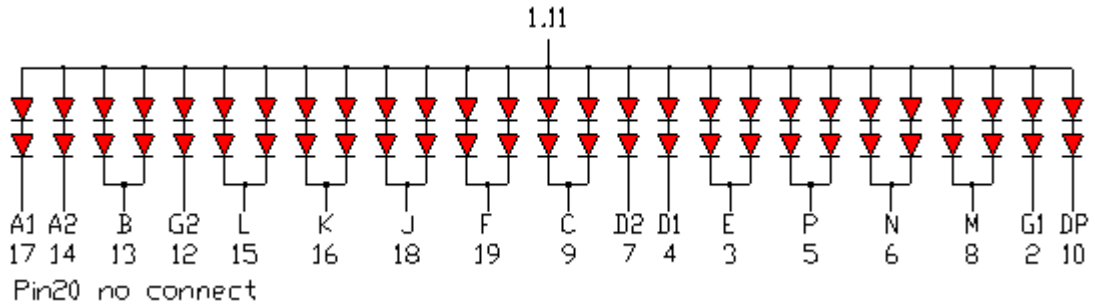
Pin Configuration



CC

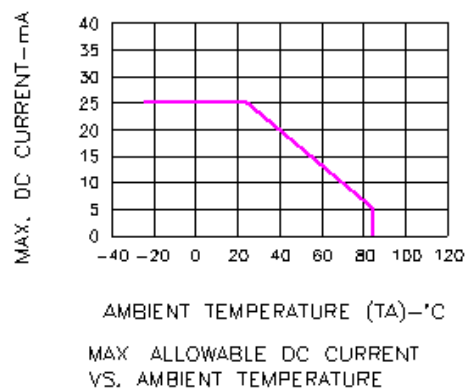
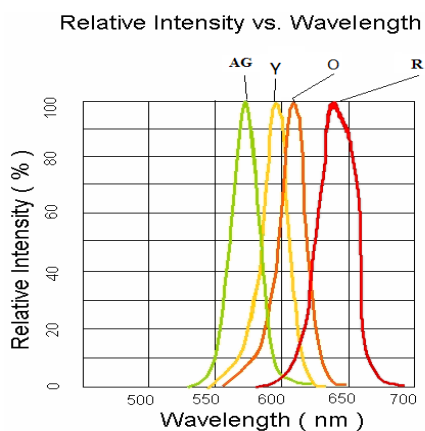
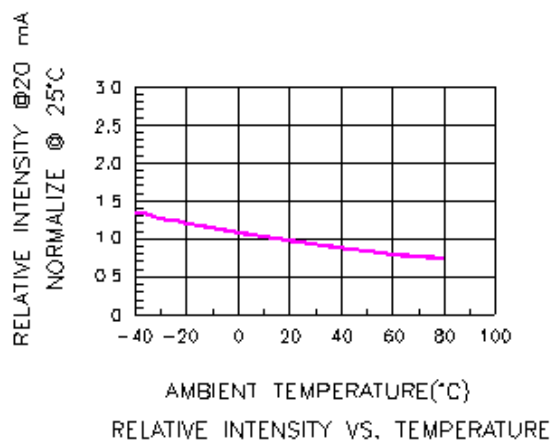
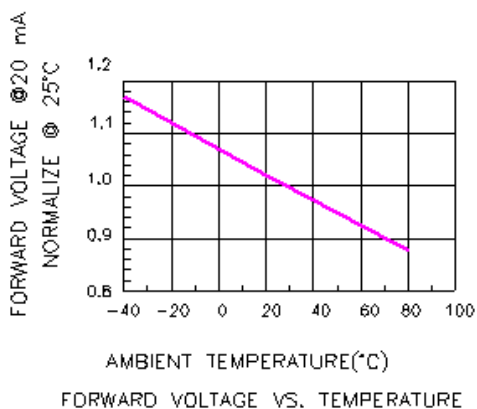
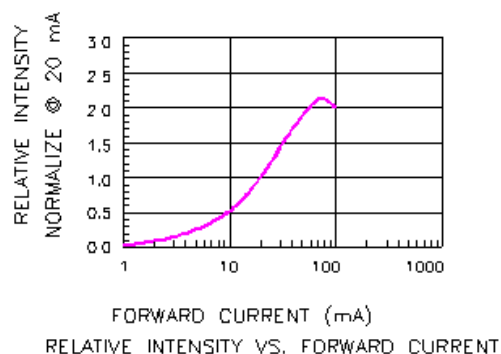
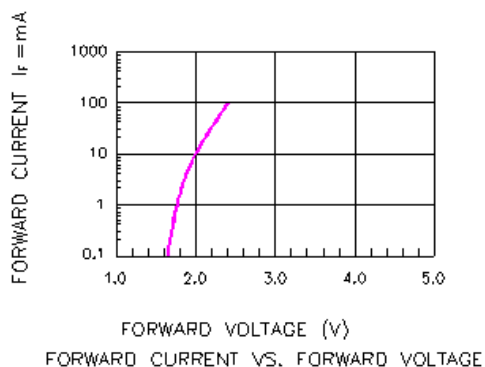


CA

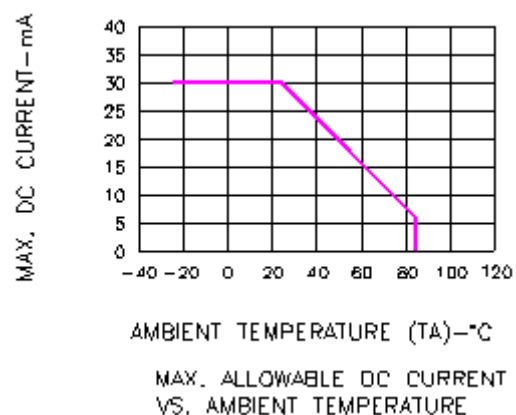
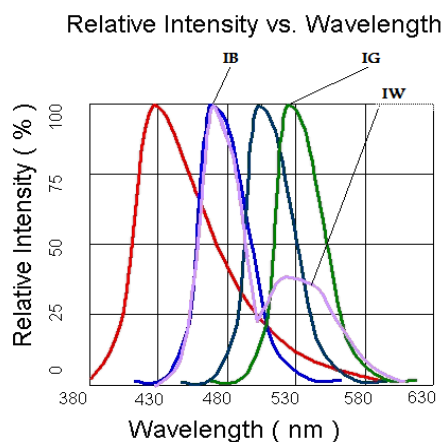
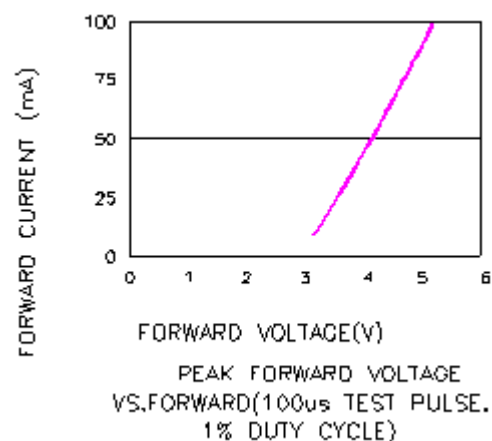
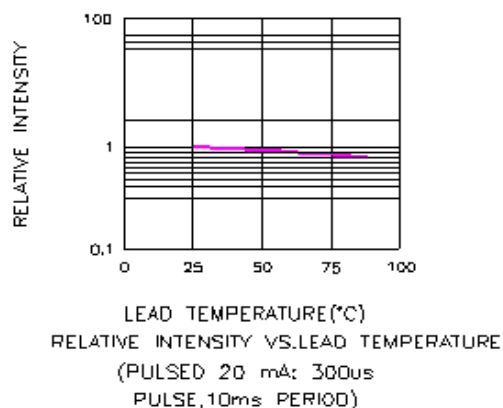
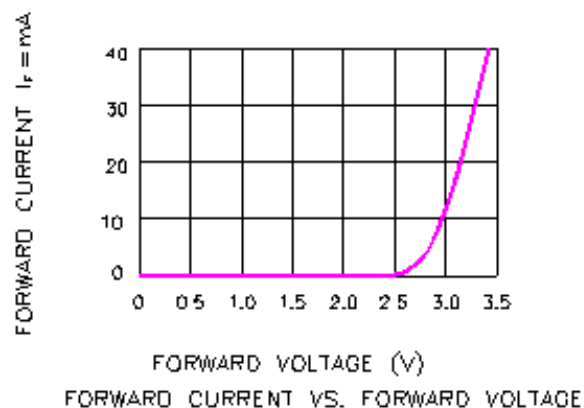
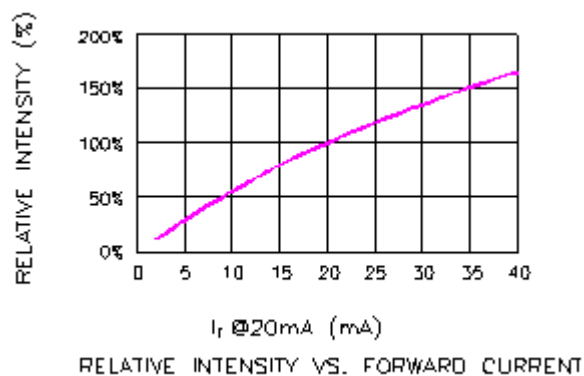


## Characteristic Curves

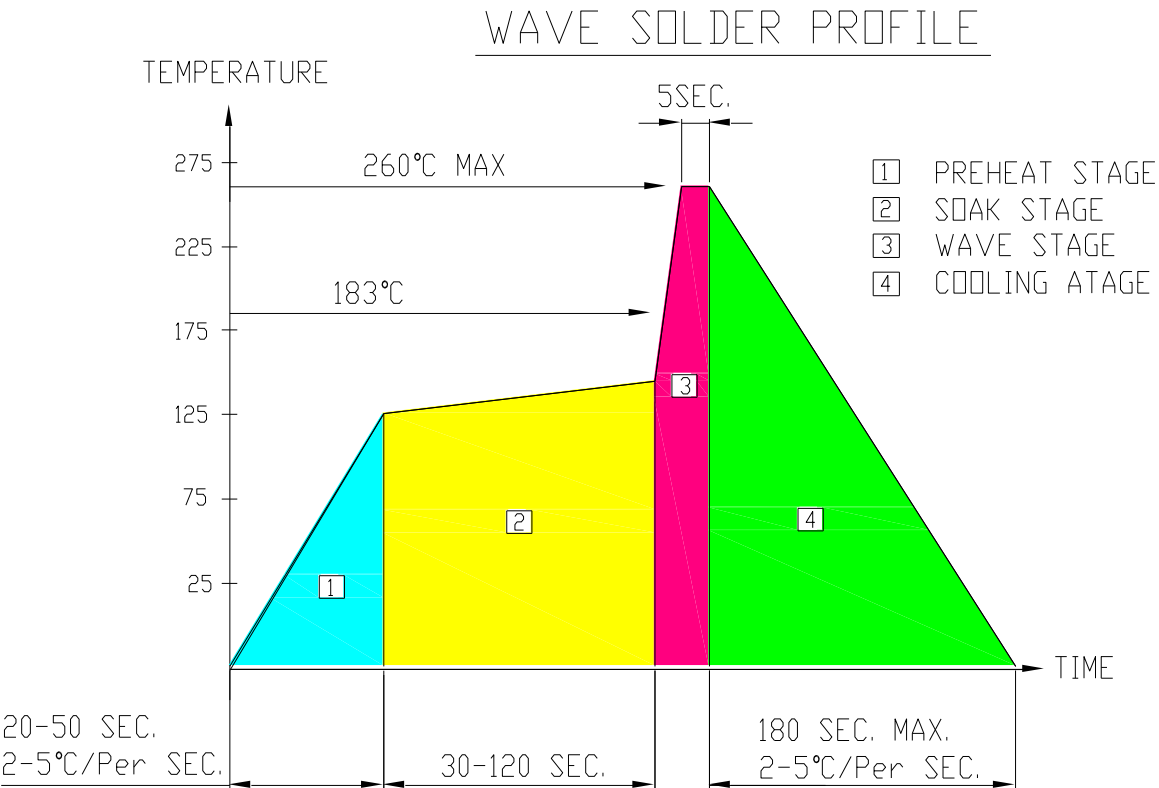
AlInGaP



InGaN

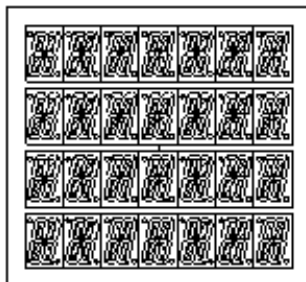


Soldering Profile



## Packing

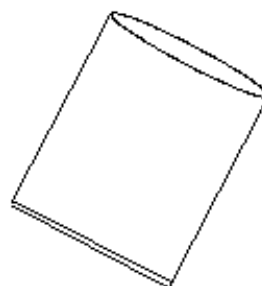
28 PCS / 1 Polyform ( 7 X 4 PCS )



5 Polyform / 1 BAG  
140 PCS / 1 Inner Carton

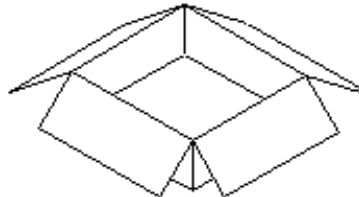


A reference for packing within bag.

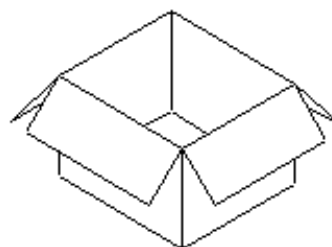


ESD BAG SIZE : 650 x 550 mm

140 PCS / 1 INNER CARTON & 280 PCS / 2 INNER CARTON / 1 OUTER CARTON



INNER BOX SIZE : 394 x 370 x 138 mm



OUTER BOX SIZE : 430 x 390 x 300 mm

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**Ordering Information**

| Product    |            | Orderable Part # |            | Spec Range                                           | Quantity per foam |
|------------|------------|------------------|------------|------------------------------------------------------|-------------------|
| CC         | CA         | CC               | CA         |                                                      |                   |
| QBAS220R1  | QBAS220R0  | QBAS220R1        | QBAS220R0  | Iv=100mcd typ. @ 20mA, $\lambda_D=624\text{nm}$ typ. | 28pcs             |
| QBAS220S1  | QBAS220S0  | QBAS220S1        | QBAS220S0  | Iv=50mcd typ. @ 20mA, $\lambda_D=639\text{nm}$ typ.  | 28pcs             |
| QBAS220Y1  | QBAS220Y0  | QBAS220Y1        | QBAS220Y0  | Iv=100mcd typ. @ 20mA, $\lambda_D=590\text{nm}$ typ. | 28pcs             |
| QBAS220O1  | QBAS220O0  | QBAS220O1        | QBAS220O0  | Iv=100mcd typ. @ 20mA, $\lambda_D=606\text{nm}$ typ. | 28pcs             |
| QBAS220AG1 | QBAS220AG0 | QBAS220AG1       | QBAS220AG0 | Iv=40mcd typ. @ 20mA, $\lambda_D=571\text{nm}$ typ.  | 28pcs             |
| QBAS220IG1 | QBAS220IG0 | QBAS220IG1       | QBAS220IG0 | Iv=600mcd typ. @ 20mA, $\lambda_D=525\text{nm}$ typ. | 28pcs             |
| QBAS220IB1 | QBAS220IB0 | QBAS220IB1       | QBAS220IB0 | Iv=100mcd typ. @ 20mA, $\lambda_D=465\text{nm}$ typ. | 28pcs             |

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## Revision History

| Description:                     | Revision # | Revision Date |
|----------------------------------|------------|---------------|
| New Release of QBAS220XXZ_series | V1.0       | 09/29/2015    |
|                                  |            |               |
|                                  |            |               |
|                                  |            |               |
|                                  |            |               |

## Disclaimer

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.