

**QT-Brightek Display Series**  
**0.50" Single Digit Alphanumeric Display**

**Part No.: QBAS50XXZ**

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

Product: QBAS50XXZ	Date: September 28, 2015	Page 1 of 11
	Version# 2.1	

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## Introduction

**Feature:**

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

**Description:**

These 0.50" single digit sixteen-segment displays are made with white segment and gray surface. The viewing distance is up to seven meters.

**Application:**

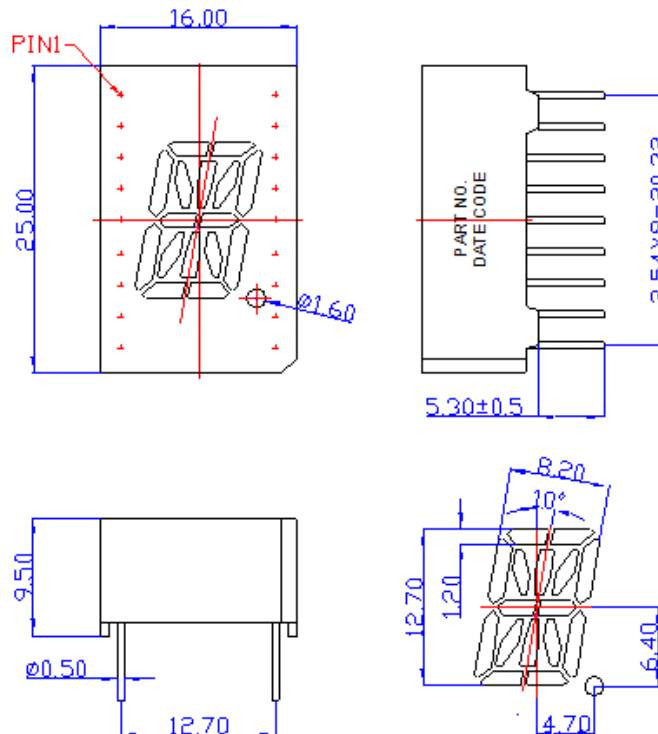
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

**Certification & Compliance:**

- TS16949
- ISO9001
- RoHS Compliant



**Dimension:**



Units: mm / tolerance = +/-0.25mm

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

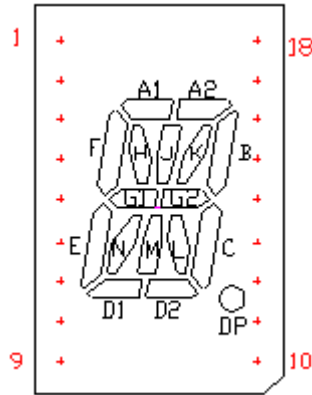
Product		Material	Color	I <sub>F</sub> (mA)	V <sub>F</sub> (V)		λ <sub>D</sub> (nm)			I <sub>V</sub> (mcd)
CC	CA				Typ.	Max.	Min.	Typ.	Max.	Typ.
QBAS50R1	QBAS50R0	AllnGaP	Red	20	2.0	2.6	-	624	-	40
QBAS50S1	QBAS50S0	AllnGaP	Deep Red	20	2.0	2.6	-	639	-	20
QBAS50Y1	QBAS50Y0	AllnGaP	Yellow	20	2.0	2.6	-	590	-	40
QBAS50O1	QBAS50O0	AllnGaP	Orange	20	2.0	2.6	-	606	-	40
QBAS50AG1	QBAS50AG0	AllnGaP	Yellow Green	20	2.0	2.6	-	571	-	15
QBAS50IG1	QBAS50IG0	InGaN	True Green	20	3.2	4.0	-	525	-	200
QBAS50IB1	QBAS50IB0	InGaN	Blue	20	3.0	4.0	-	465	-	40

**Absolute Maximum Rating**

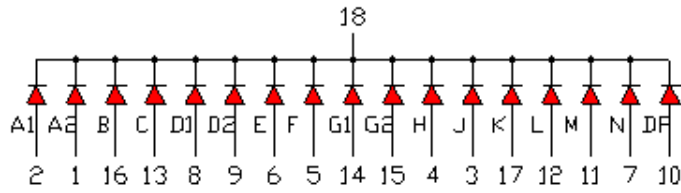
Material	P <sub>d</sub> (mW)	Derating liner from 25 °C per dice (mA/°C)	I <sub>F</sub> (mA)	I <sub>PF</sub> (mA)*	V <sub>R</sub> (V)	T <sub>OP</sub> (°C)	T <sub>ST</sub> (°C)
AllnGaP	70	0.33	25	90	5	-25 to +85	-25 to +85
InGaN	120	0.4	30	100	5	-25 to +85	-25 to +85

\*Duty 1/10 @ 1KHz

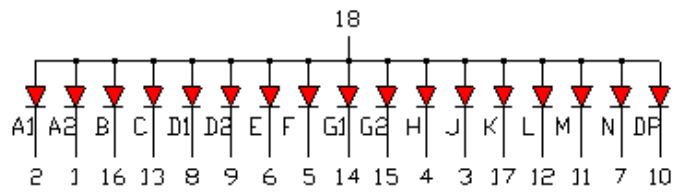
**Pin Configuration**



**CC**

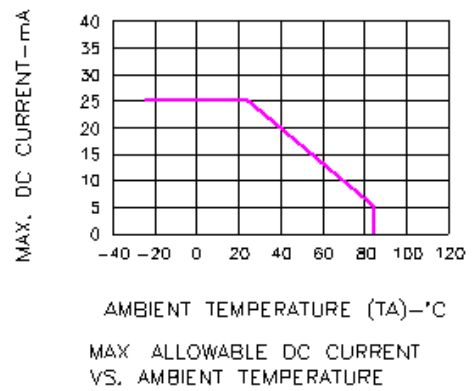
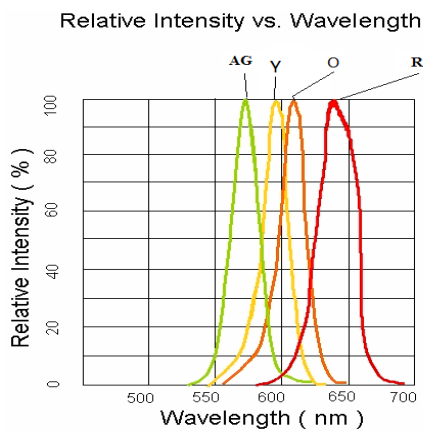
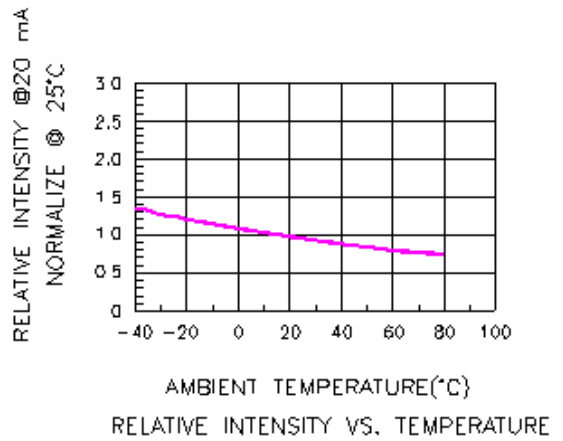
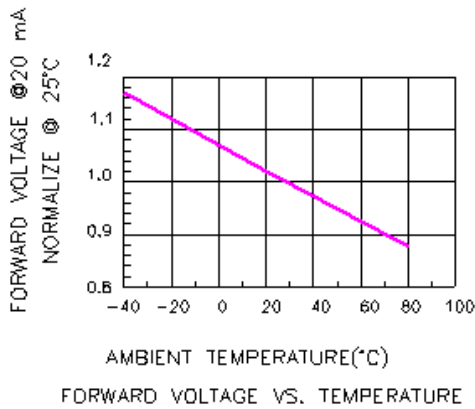
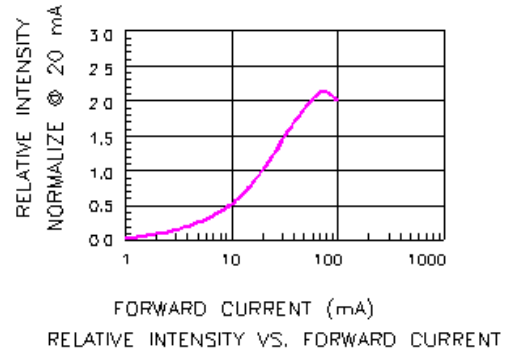
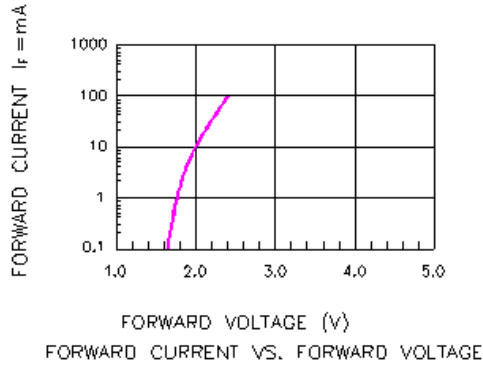


**CA**

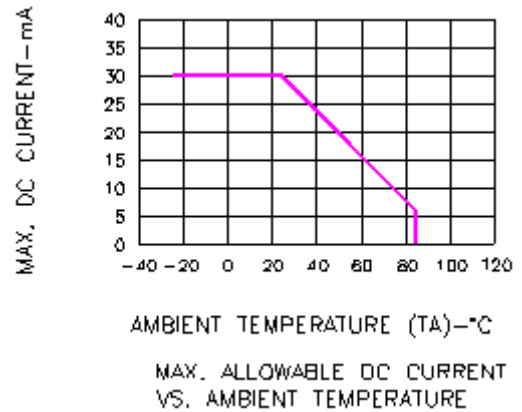
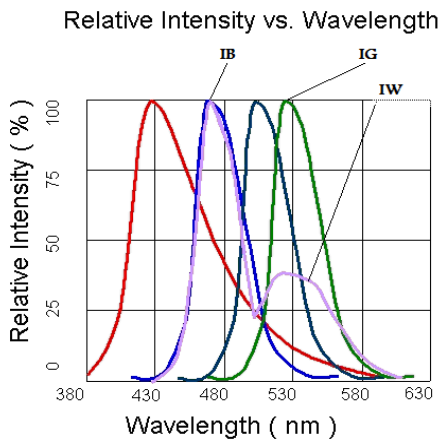
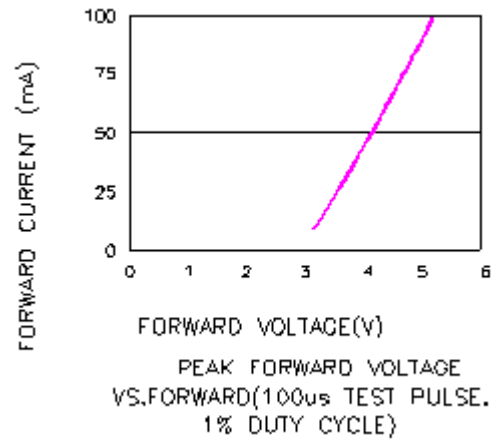
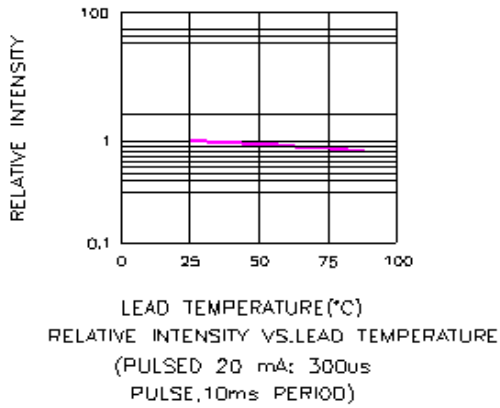
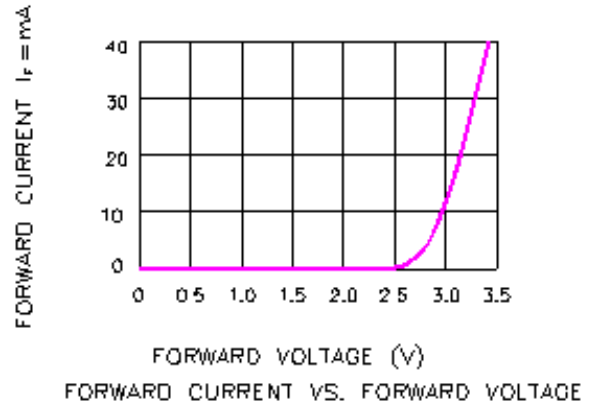
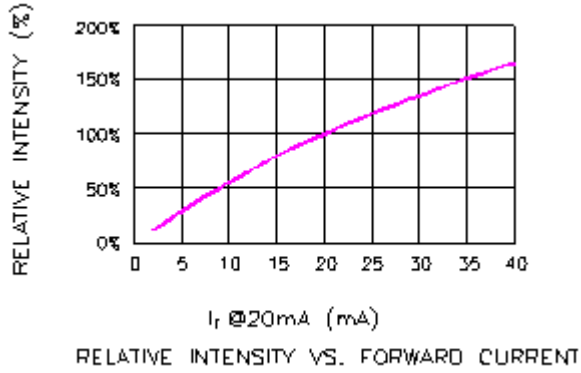


**Characteristic Curves**

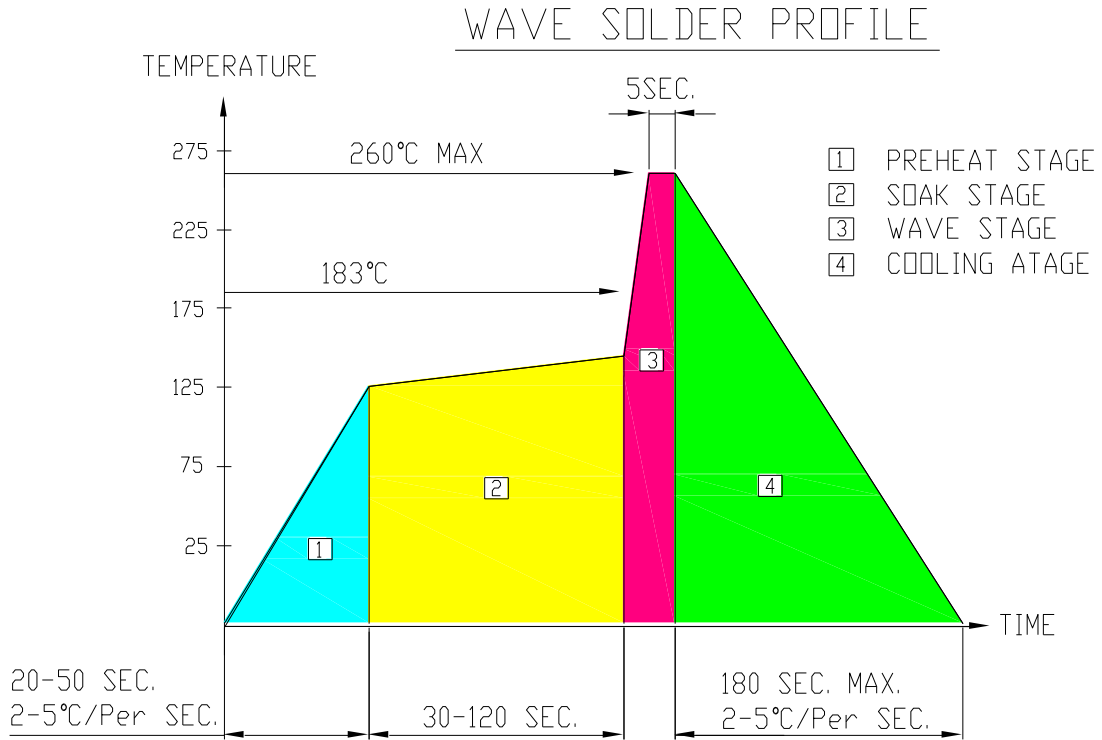
AllnGaP



InGaN



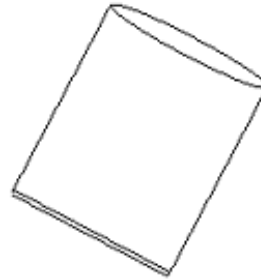
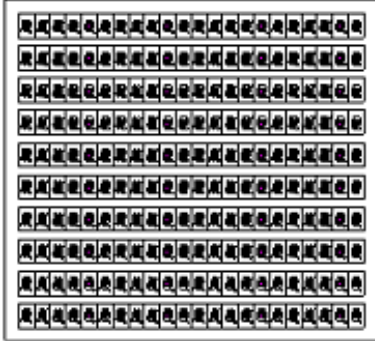
**Soldering Profile**





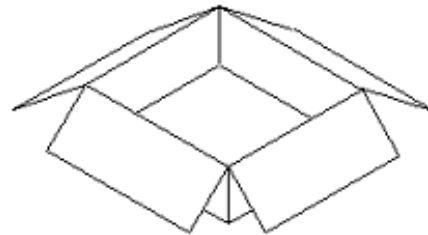
**Packing**

220 PCS ( 22 x 10 PCS) / 1 White Polyform



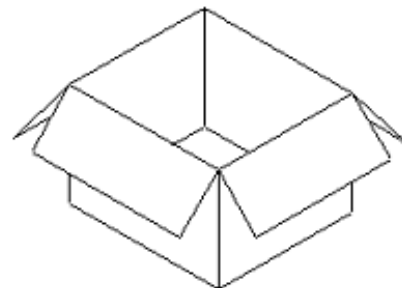
BAG SIZE : 450X410X560

5 White Polyform / 1 BAG  
1100 PCS / 1 Inner Carton



INNER BOX SIZE : 394 x 370 x 138 mm

2200 PCS / 2 Inner Carton / 1 Outer Carton



OUTER BOX SIZE : 430 x 390 x 300 mm

### Ordering Information

Product		Orderable Part #		Spec Range	Quantity per foam
CC	CA	CC	CA		
QBAS50R1	QBAS50R0	QBAS50R1	QBAS50R0	Iv=40mcd typ. @ 20mA, $\lambda_D=624\text{nm}$ typ.	220pcs
QBAS50S1	QBAS50S0	QBAS50S1	QBAS50S0	Iv=20mcd typ. @ 20mA, $\lambda_D=639\text{nm}$ typ.	220pcs
QBAS50Y1	QBAS50Y0	QBAS50Y1	QBAS50Y0	Iv=40mcd typ. @ 20mA, $\lambda_D=590\text{nm}$ typ.	220pcs
QBAS50O1	QBAS50O0	QBAS50O1	QBAS50O0	Iv=40mcd typ. @ 20mA, $\lambda_D=606\text{nm}$ typ.	220pcs
QBAS50AG1	QBAS50AG0	QBAS50AG1	QBAS50AG0	Iv=15mcd typ. @ 20mA, $\lambda_D=571\text{nm}$ typ.	220pcs
QBAS50IG1	QBAS50IG0	QBAS50IG1	QBAS50IG0	Iv=200mcd typ. @ 20mA, $\lambda_D=525\text{nm}$ typ.	220pcs
QBAS50IB1	QBAS50IB0	QBAS50IB1	QBAS50IB0	Iv=40mcd typ. @ 20mA, $\lambda_D=465\text{nm}$ typ.	220pcs

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## Revision History

Description:	Revision #	Revision Date
New Release of QBAS50XXZ_series	V1.0	02/02/2012
Add multiple color options / update to new format	V2.0	03/23/2015
Fix a typo in datasheet / Add wave soldering profile	V2.1	09/28/2015

## Disclaimer

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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.