

QT-Brightek SMD Display Series

0.40" Single Digit Display

Part No.: QBSS40ZXX

XX= Color

Z= 1: Common Cathode

Z = 0: Common Anode

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Introduction

Feature:

- 0.40" Single digit seven segments display
- Low power consumption
- Packed in reel
- White segment and grey surface
- XX = color code
- X=1: Common Cathode or 0: Common Anode

Description:

These 0.40" Single digit seven segments displays are made with white segment and grey surface. The viewing distance is up to seven meters.

Application:

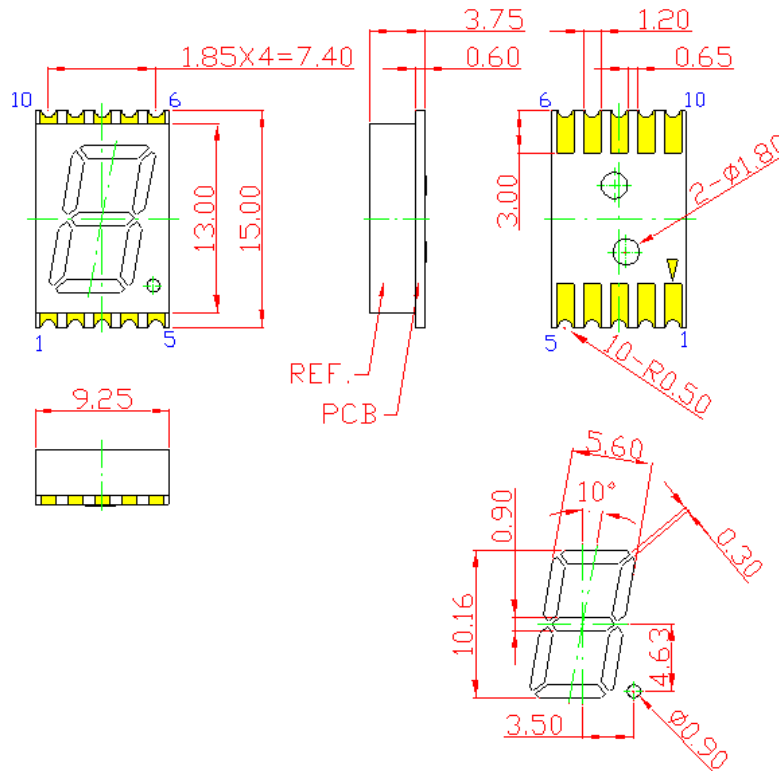
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

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

Product		Material	Color	I _F (mA)	V _F (V)		λ _d (nm)			I _V (mcd)
CC	CA				Typ.	Max.	Min.	Typ.	Max.	Typ.
QBSS401R	QBSS400R	AllnGaP	Red	20	2.0	2.6	--	624	--	38
QBSS401S	QBSS400S	AllnGaP	Deep Red	20	2.0	2.6	--	640	--	10
QBSS401Y	QBSS400Y	AllnGaP	Yellow	20	2.0	2.6	--	590	--	20
QBSS401O	QBSS400O	AllnGaP	Orange	20	2.0	2.6	--	610	--	20
QBSS401AG	QBSS400AG	AllnGaP	Yellow Green	20	2.0	2.6	--	570	--	10
QBSS401IG	QBSS400IG	InGaN	True Green	20	2.8	3.8	--	525	--	160
QBSS401IB	QBSS400IB	InGaN	Blue	20	3.1	4.0	--	470	--	20

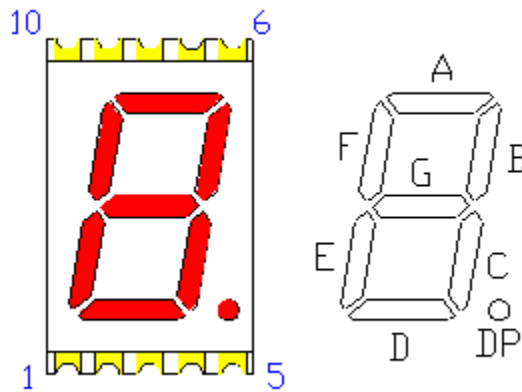
Absolute Maximum Rating

Material	P _d (mW)	Derating linear from 25°C per dice (mA/°C)	I _F (mA)	I _{PF} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
AllnGaP	70	0.28	25	90	5	-40 to +105	-40 to +105	260
InGaN	120	0.3	30	100	5	-40 to +105	-40 to +105	260

*Duty 1/10 @ 1KHz

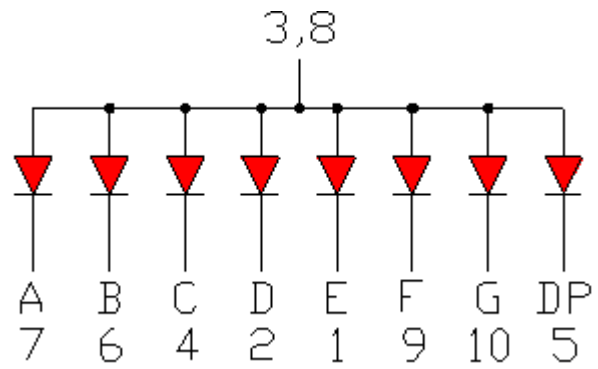
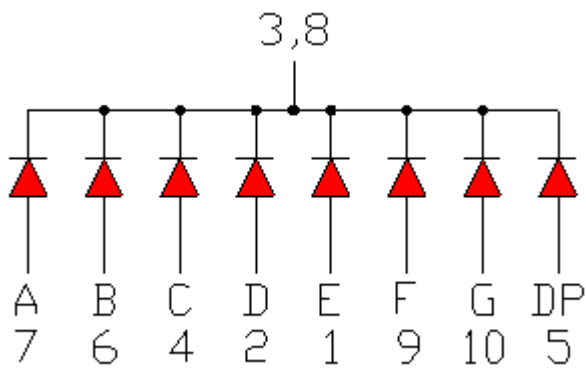
**IR Reflow for no more than 5 sec @ 260 °C

Pin Configuration



CC

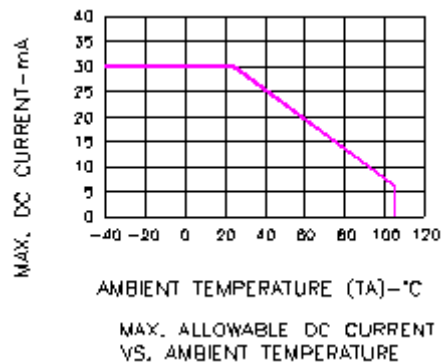
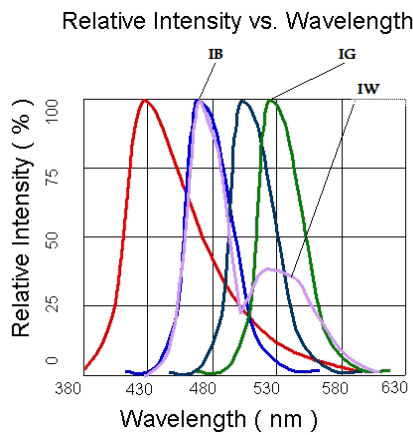
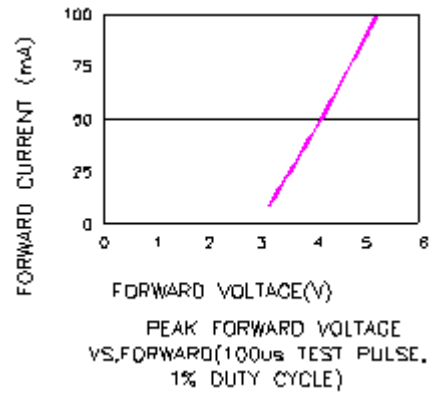
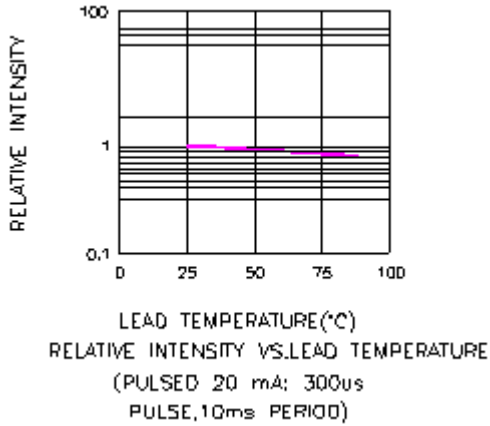
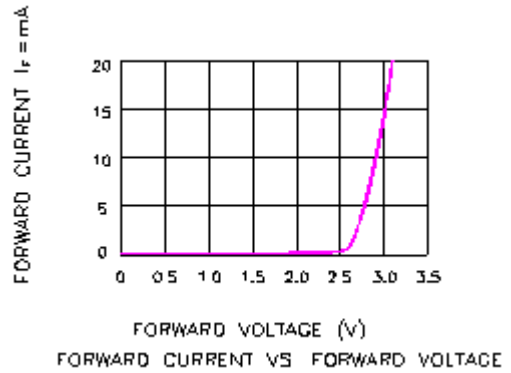
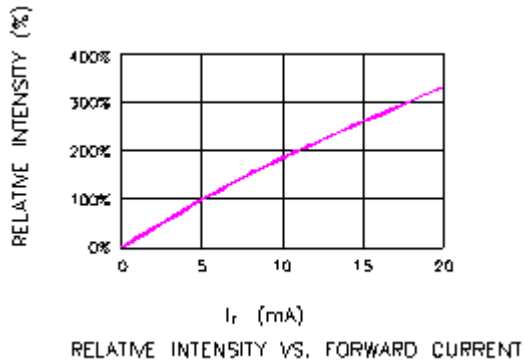
CA



Characteristic Curves

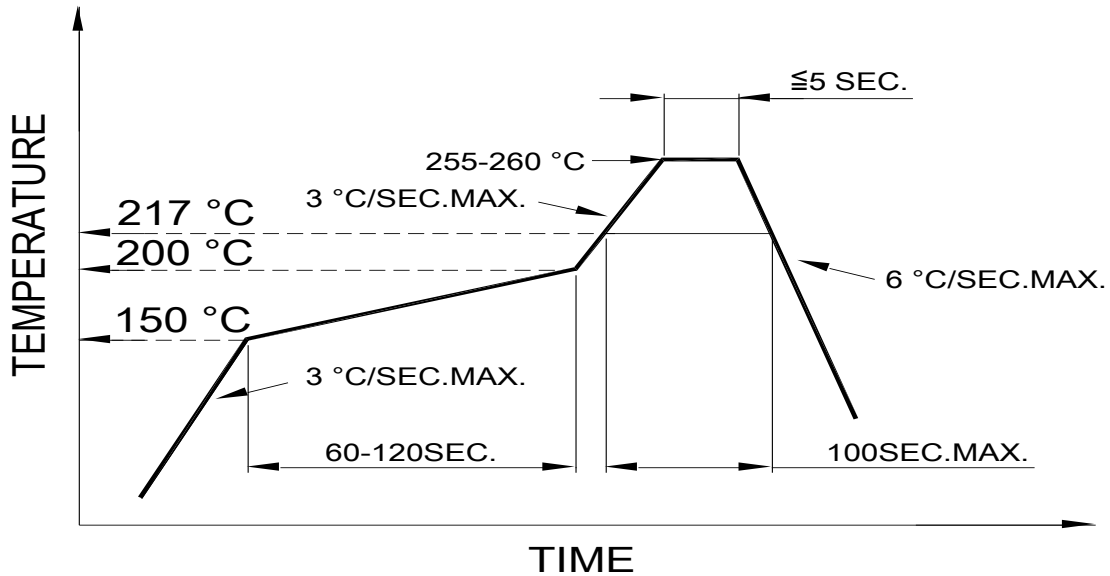
AllnGaP	
<p style="text-align: center;">FORWARD CURRENT VS. FORWARD VOLTAGE</p>	<p style="text-align: center;">RELATIVE INTENSITY VS. FORWARD CURRENT</p>
<p style="text-align: center;">FORWARD VOLTAGE VS. TEMPERATURE</p>	<p style="text-align: center;">RELATIVE INTENSITY VS. TEMPERATURE</p>
<p style="text-align: center;">Relative Intensity vs. Wavelength</p> <p style="text-align: center;">Wavelength (nm)</p>	<p style="text-align: center;">MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE</p>

InGaN

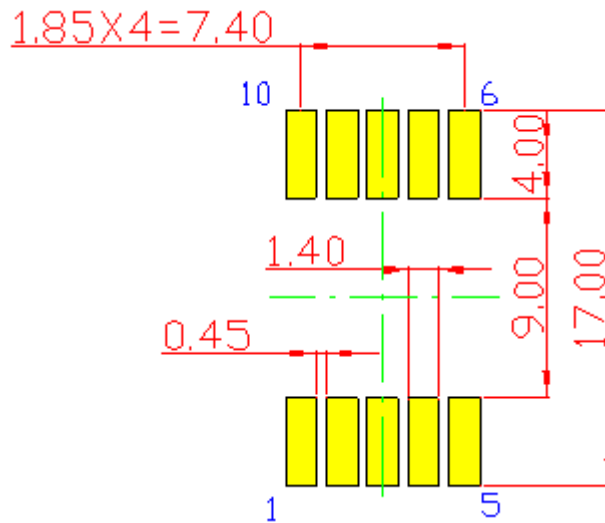


Solder Profile & Footprint

Pb free reflow soldering Profile



Recommended Pad Layout

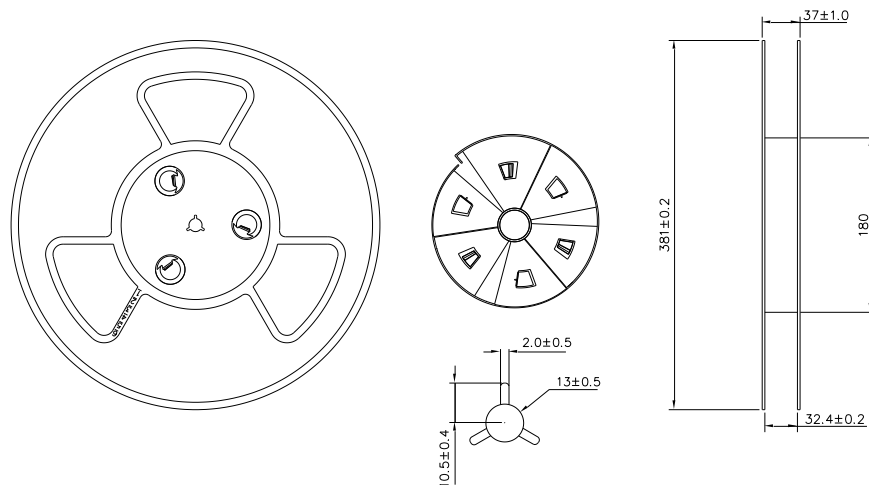


Units: mm

Tolerance: ±0.25mm

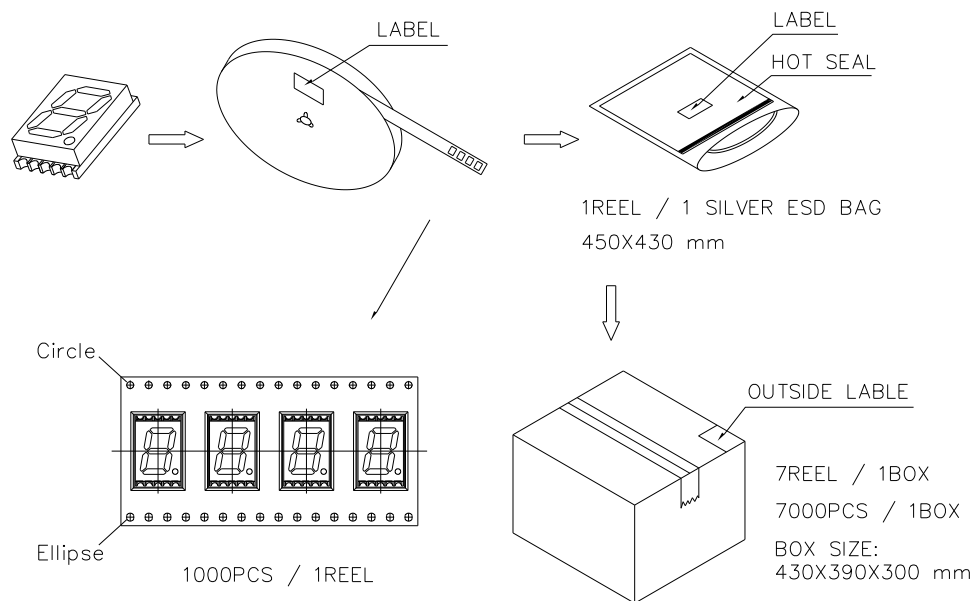
Packing & Labeling

Reel Dimension:



Unit: mm

Packing Method:



Ordering Information

Product		Orderable Part #		Spec Range	Quantity per Reel
CC	CA	CC	CA		
QBSS401R	QBSS400R	QBSS401R	QBSS400R	Iv=38mcd typ. @ I _F =20mA / λ _D :625nm typ.	1000
QBSS401S	QBSS400S	QBSS401S	QBSS400S	Iv=10mcd typ. @ I _F =20mA / λ _D :640nm typ.	1000
QBSS401Y	QBSS400Y	QBSS401Y	QBSS400Y	Iv=20mcd typ. @ I _F =20mA / λ _D :590nm typ.	1000
QBSS401O	QBSS400O	QBSS401O	QBSS400O	Iv=20mcd typ. @ I _F =20mA / λ _D :610nm typ.	1000
QBSS401AG	QBSS400AG	QBSS401AG	QBSS400AG	Iv=10mcd typ. @ I _F =20mA / λ _D :570nm typ.	1000
QBSS401IG	QBSS400IG	QBSS401IG	QBSS400IG	Iv=160mcd typ. @ I _F =20mA / λ _D :525nm typ.	1000
QBSS401IB	QBSS400IB	QBSS401IB	QBSS400IB	Iv=20mcd typ. @ I _F =20mA / λ _D :470nm typ.	1000

Revision History

Description:	Revision #	Revision Date
New Release of QBSS40ZXX	V1.0	09/25/2013
Add Packing spec	V1.1	03/25/2014
Update Spec	V1.2	09/01/2015

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.

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