



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



QT-Brightek SMD Display Series

0.56" Three Digit SMD Display

Part No.: QBTS56ZXX

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

Product: QBTS56ZXX	Date: November 19, 2015	Page 1 of 11
	Version# 1.3	

Table of Contents:

Introduction	3
Electrical / Optical Characteristic: (Ta=25 °C)	4
Absolute Maximum Rating	4
Pin Configuration	5
Characteristic Curves.....	6
Solder Profile & Footprint.....	8
Packing	9
Ordering Information	10
Revision History	11
Disclaimer	11

Product: QBTS56ZXX	Date: November 19, 2015	Page 2 of 11
	Version# 1.3	

Introduction

Feature:

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

Description:

These 0.56" Three digit seven segments displays are made with white segment and grey surface. The viewing distance is up to seven meters.

Application:

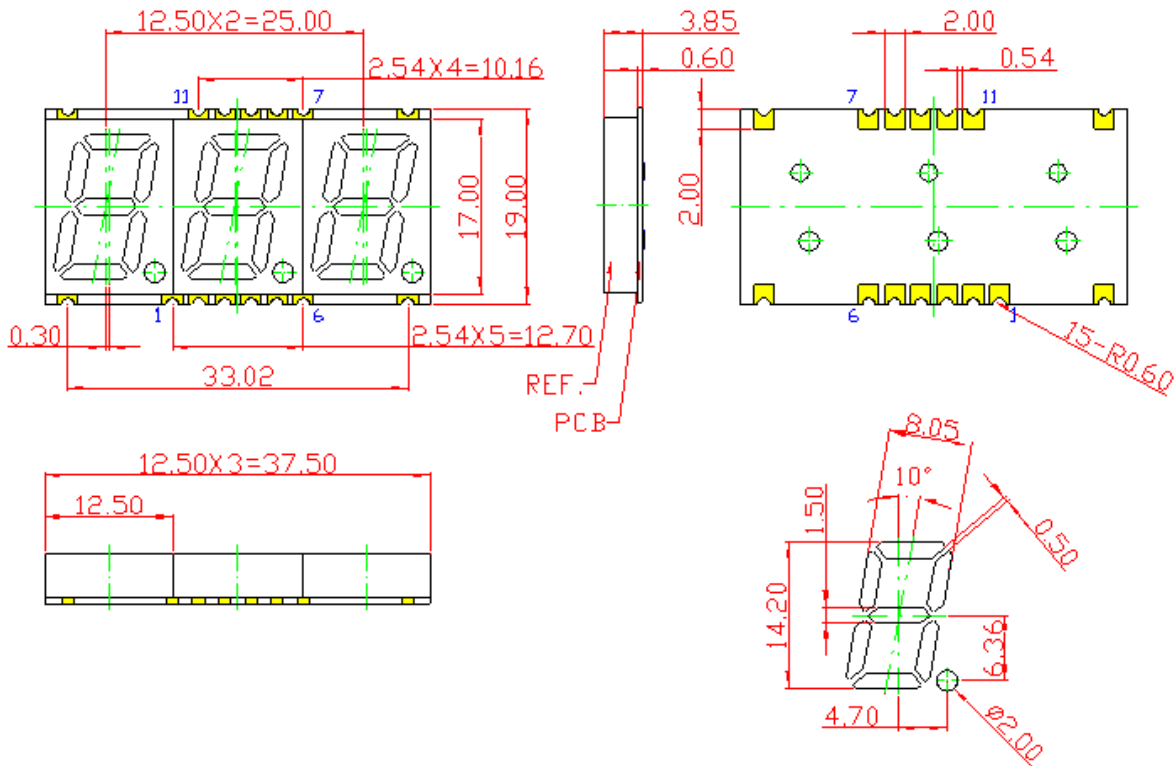
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

Electrical / Optical Characteristic: (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.
QBTS561R	QBTS560R	AllnGaP	Red	20	2.0	2.6	-	624	-	40
QBTS561S	QBTS560S	AllnGaP	Deep Red	20	2.0	2.6	-	640	-	12
QBTS561Y	QBTS560Y	AllnGaP	Yellow	20	2.0	2.6	-	590	-	40
QBTS561O	QBTS560O	AllnGaP	Orange	20	2.0	2.6	-	605	-	40
QBTS561AG	QBTS560AG	AllnGaP	Yellow Green	20	2.0	2.6	-	571	-	15
QBTS561IG	QBTS560IG	InGaN	True Green	20	3.2	4.0	-	525	-	200
QBTS561IB	QBTS560IB	InGaN	Blue	20	3.2	4.0	-	470	-	30

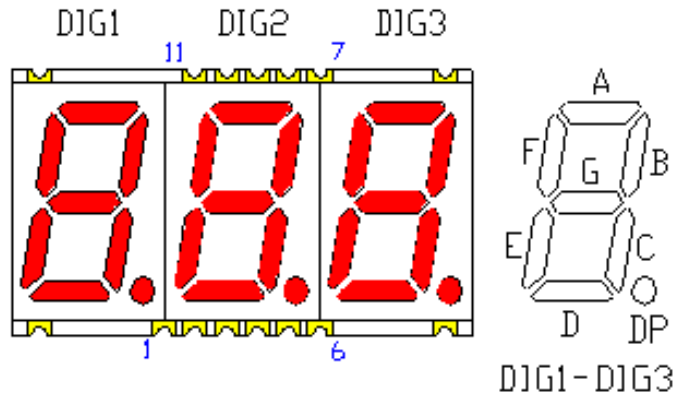
Absolute Maximum Rating

Material	P _d (mW)	Derating linear from 25°C (mA/°C)	I _F (mA)	I _{FP} (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

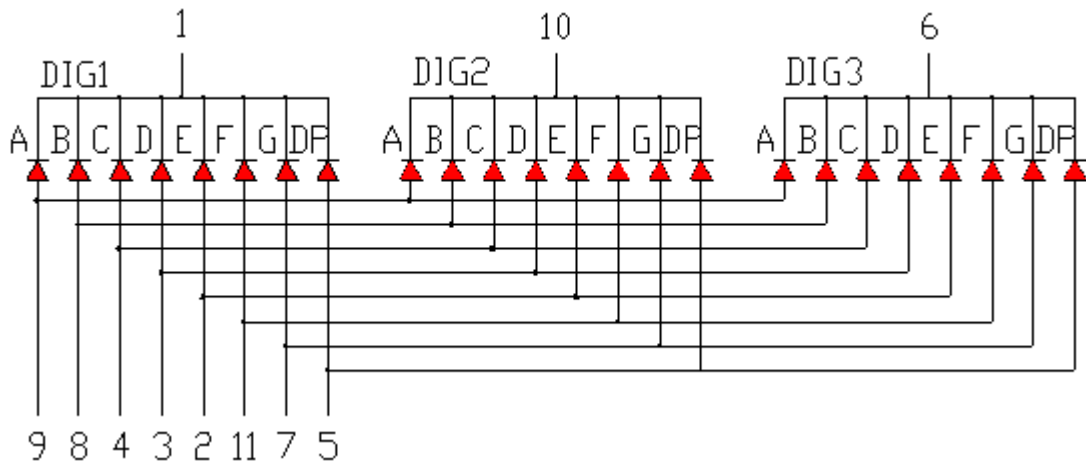
*Duty 1/10 @ 1KHz

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

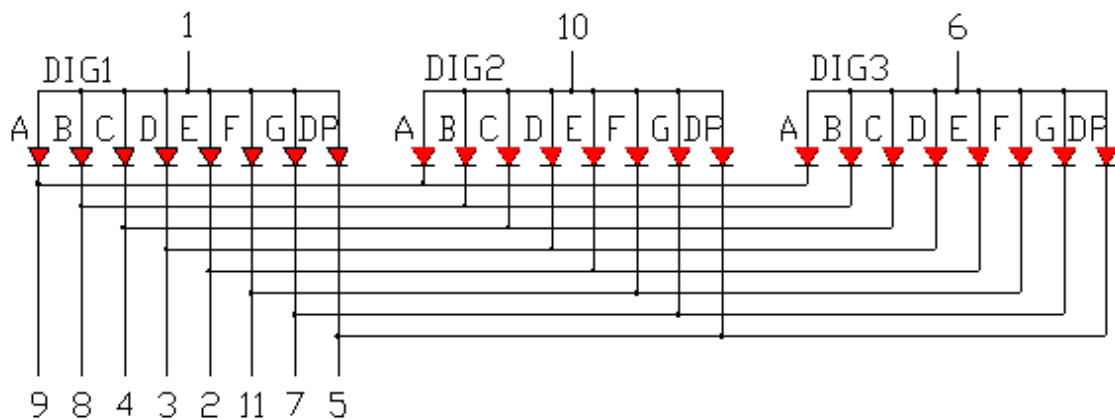
Pin Configuration



CC

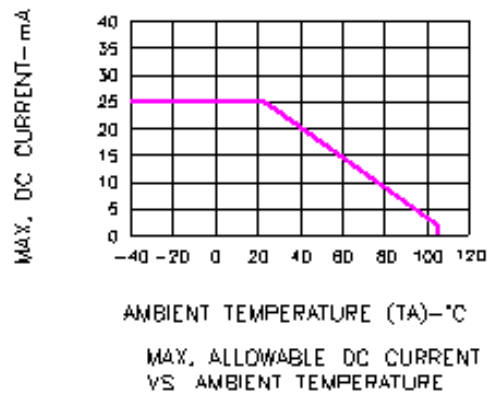
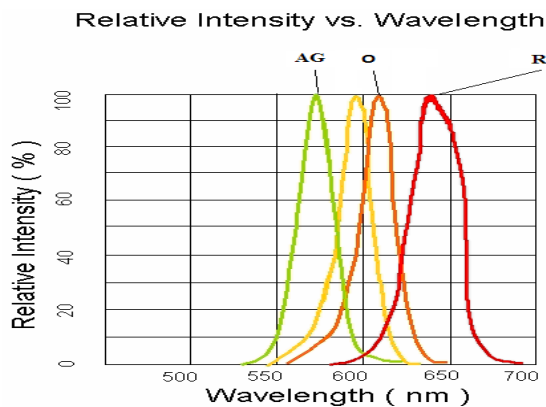
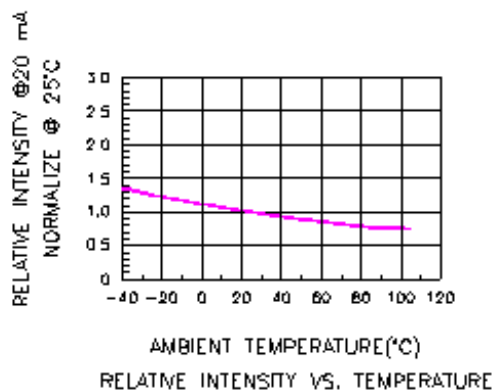
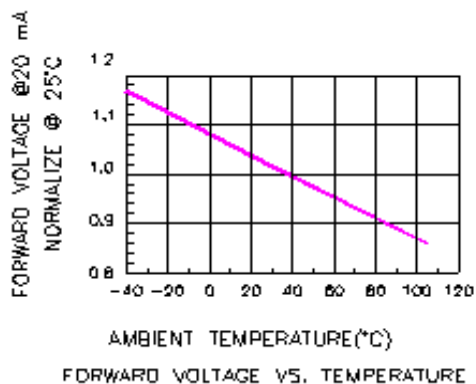
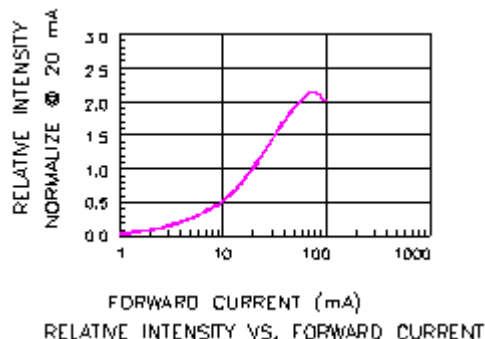
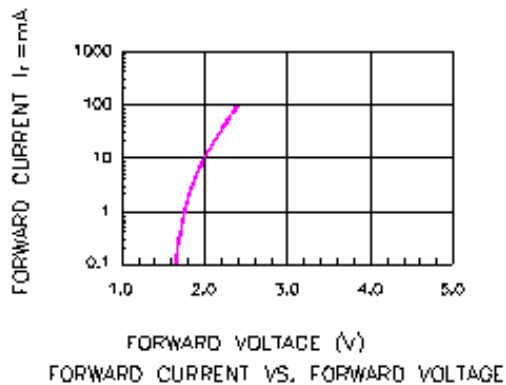


CA

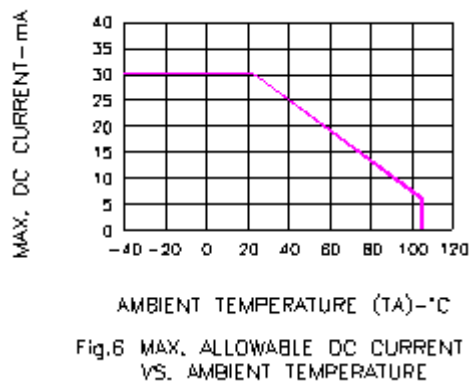
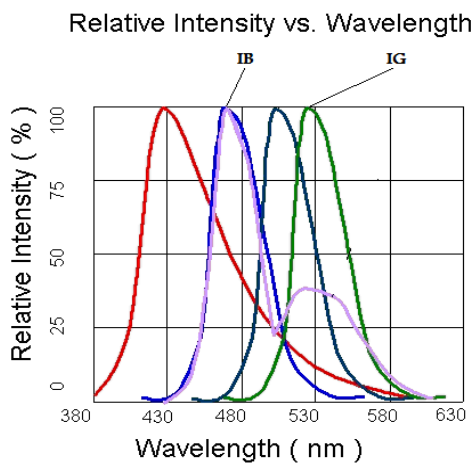
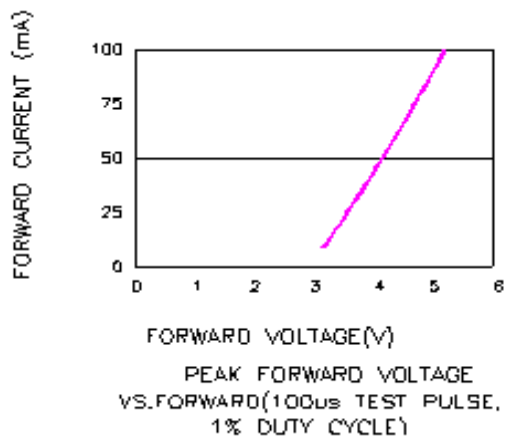
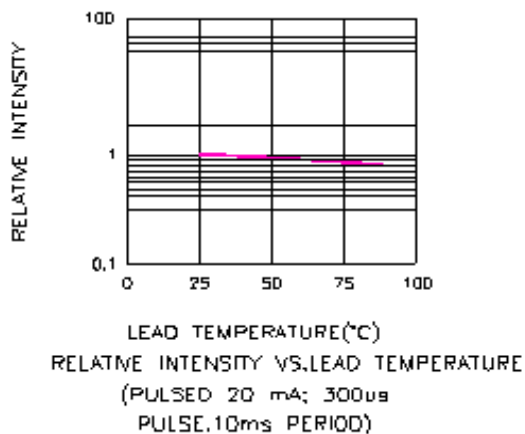
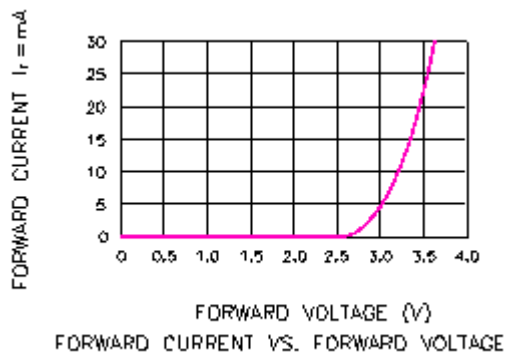
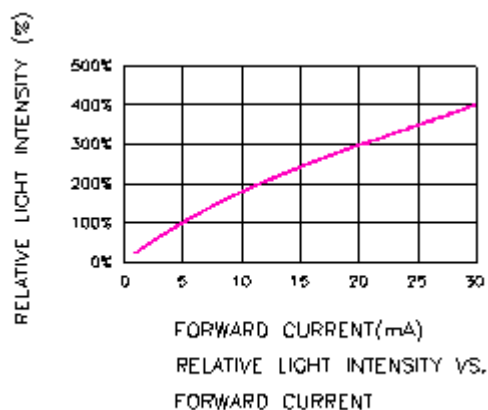


Characteristic Curves

AllnGaP

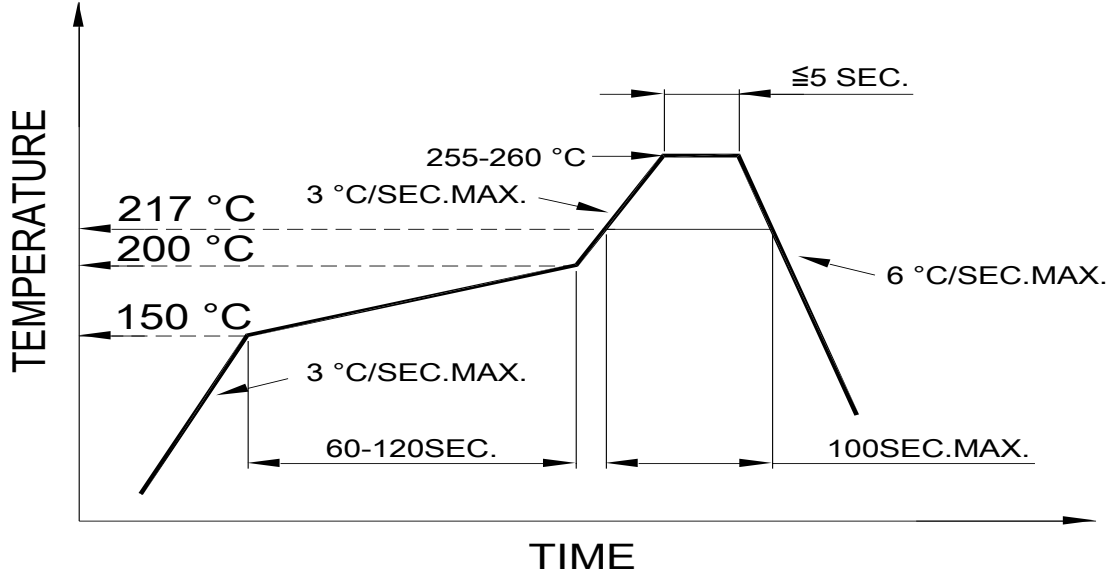


InGaN

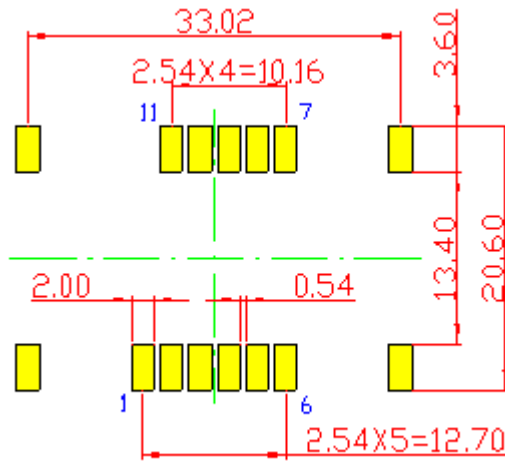


Solder Profile & Footprint

Recommended Lead-free Solder Profile
 Pb free reflow soldering Profile



Recommended Pad Layout



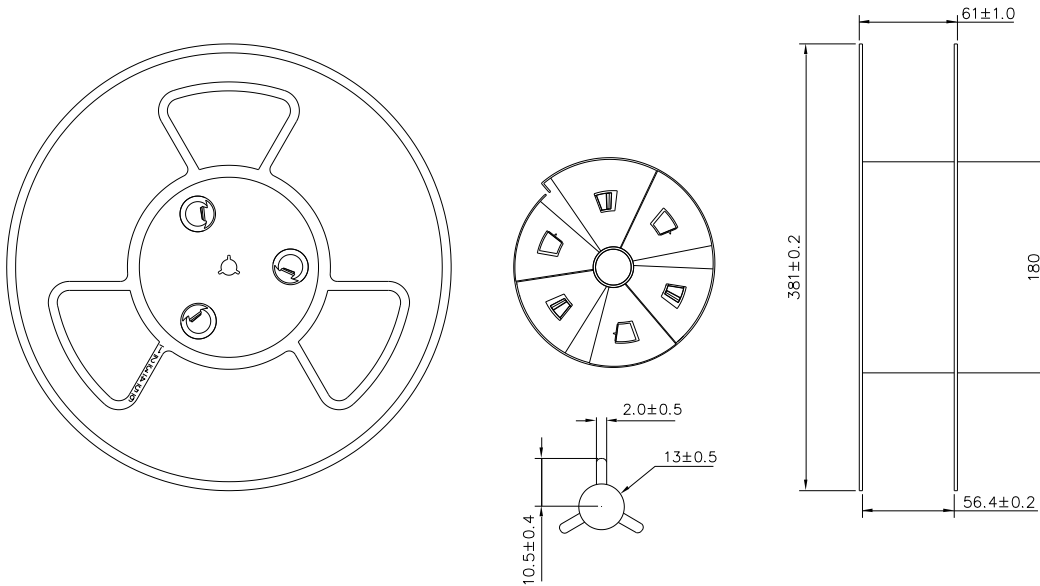
Units: mm

Tolerance: ±0.2mm

Product: QBTS56ZXX	Date: November 19, 2015	Page 8 of 11
	Version# 1.3	

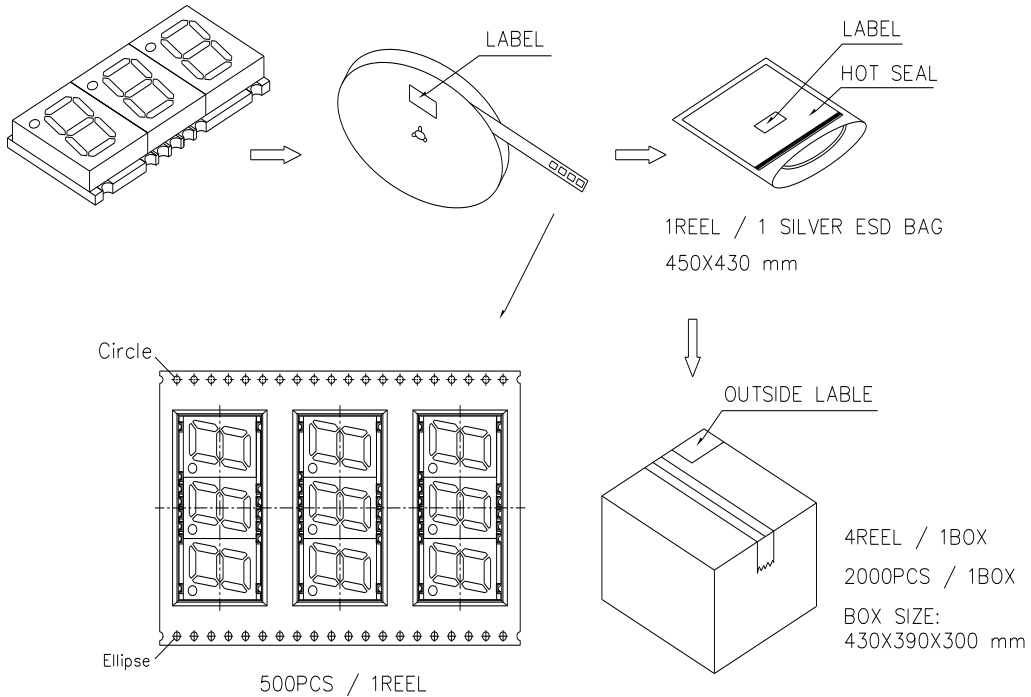
Packing

Reel Dimensions:



Unit: mm

Packing Specifications:



Product: QBTS56ZXX	Date: November 19, 2015	Page 9 of 11
	Version# 1.3	

Ordering Information

Product		Orderable Part #		Spec Range	Quantity per Reel
CC	CA	CC	CA		
QBTS561R	QBTS560R	QBTS561R	QBTS560R	I _v =40mcd typ. @ I _F =20mA / λ _D :624nm typ.	500
QBTS561S	QBTS560S	QBTS561S	QBTS560S	I _v =12mcd typ. @ I _F =20mA / λ _D :640nm typ.	500
QBTS561Y	QBTS560Y	QBTS561Y	QBTS560Y	I _v =40mcd typ. @ I _F =20mA / λ _D :590nm typ.	500
QBTS561O	QBTS560O	QBTS561O	QBTS560O	I _v =40mcd typ. @ I _F =20mA / λ _D :605nm typ.	500
QBTS561AG	QBTS560AG	QBTS561AG	QBTS560AG	I _v =15mcd typ. @ I _F =20mA / λ _D :571nm typ.	500
QBTS561IG	QBTS560IG	QBTS561IG	QBTS560IG	I _v =200mcd typ. @ I _F =20mA / λ _D :525nm typ.	500
QBTS561IB	QBTS560IB	QBTS561IB	QBTS560IB	I _v =30mcd typ. @ I _F =20mA / λ _D :470nm typ.	500

Revision History

Description:	Revision #	Revision Date
New Release of QBTS56ZXX	V1.0	06/24/2011
Amend format and optical spec/ Add packing spec	V1.1	03/24/2014
Add more color options / Update packing spec	V1.2	03/24/2015
Update dimension drawing and brightness	V1.3	11/19/2015

Disclaimer

QT-BRIGHTTEK reserves the right to make changes without further notice to any products herein to improve reliability, function or design. QT-BRIGHTTEK does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

Life Support Policy

QT-BRIGHTTEK's products are not authorized for use as critical components in life support devices or systems without the express written approval of QT-BRIGHTTEK. As used herein:

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.

Product: QBTS56ZXX	Date: November 19, 2015	Page 11 of 11
	Version# 1.3	