QT-Brightek SMD Display Series

0.40” Single Digit Display

Part No.: QBASS40XXZ

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

Tablet of Contents:

Introduction

Feature:

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

Description:

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

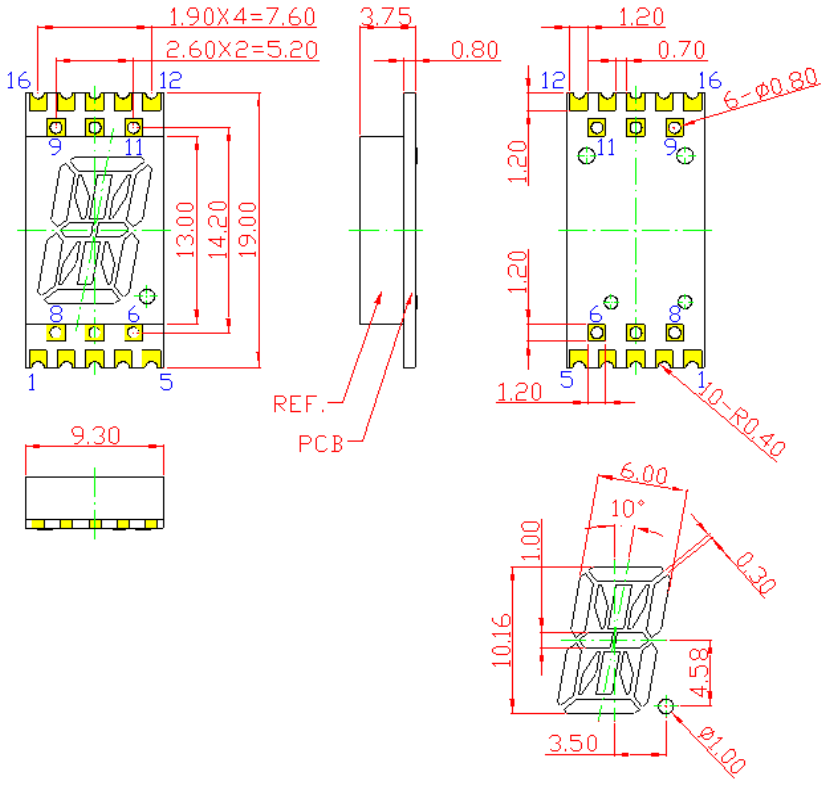
Application:

- 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_F (mA)	V_F (V)		λ_D (nm)			I_V (mcd)
CC	CA				Typ.	Max.	Min.	Typ.	Max.	Typ.
QBASS40R1	QBASS40R0	AlInGaP	Red	20	2.0	2.6	-	624	-	35
QBASS40S1	QBASS40S0	AlInGaP	Deep Red	20	2.0	2.6	-	639	-	4
QBASS40Y1	QBASS40Y0	AlInGaP	Yellow	20	2.0	2.6	-	590	-	35
QBASS40O1	QBASS40O0	AlInGaP	Orange	20	2.0	2.6		606	-	35
QBASS40AG1	QBASS40AG0	AlInGaP	Yellow Green	20	2.0	2.6	-	571	-	15
QBASS40IG1	QBASS40IG0	InGaN	True Green	20	3.2	4.0	-	525	-	120
QBASS40IB1	QBASS40IB0	InGaN	Blue	20	3.2	4.0	-	465	-	40

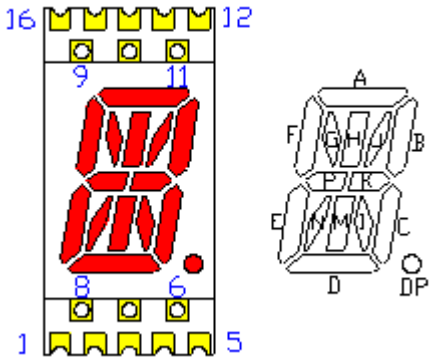
Absolute Maximum Rating

Material	P_d (mW)	Derating liner from 25 °C per dice (mA/ °C)	I_F (mA)	I_{PF} (mA)*	V_R (V)	T_{OP} (°C)	T_{ST} (°C)
AlInGaP	70	0.28	25	90	5	-40 to +105	-40 to +105
InGaN	120	0.3	30	100	5	-40 to +105	-40 to +105

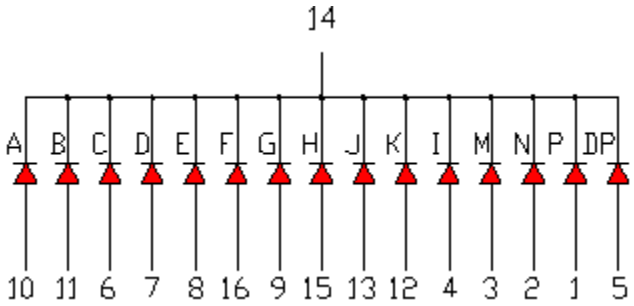
*Duty 1/10 @ 1kHz

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

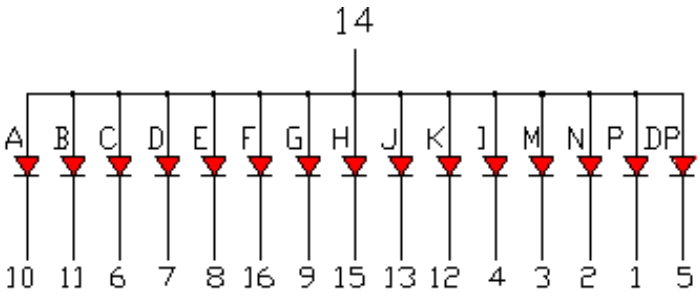
Pin Configuration



CC

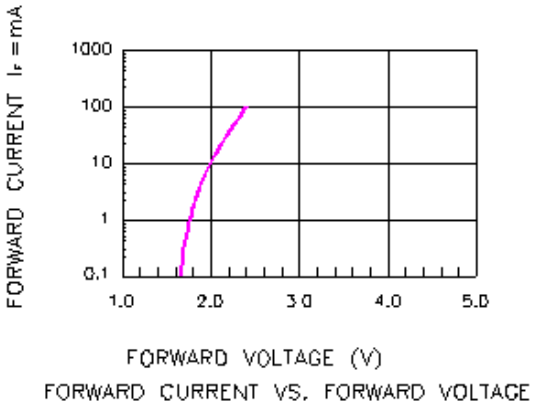


CA

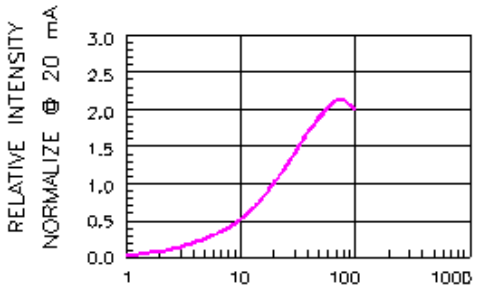


Characteristic Curves

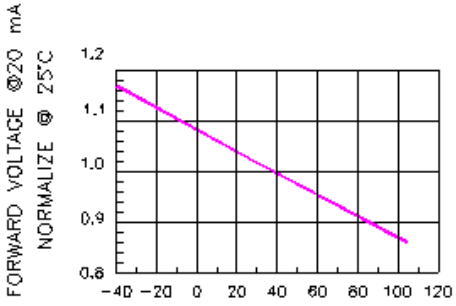
AlInGaP



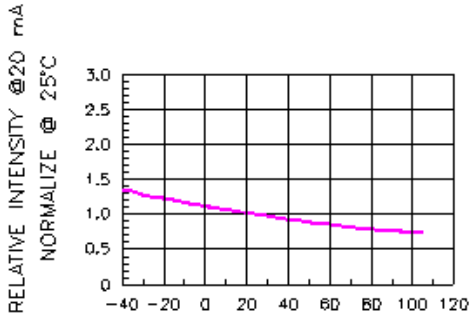
FORWARD CURRENT VS. FORWARD VOLTAGE



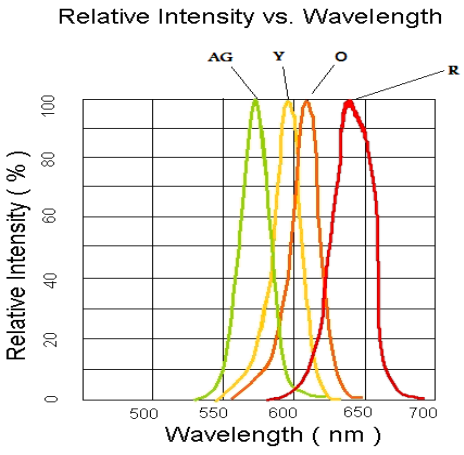
RELATIVE INTENSITY VS. FORWARD CURRENT

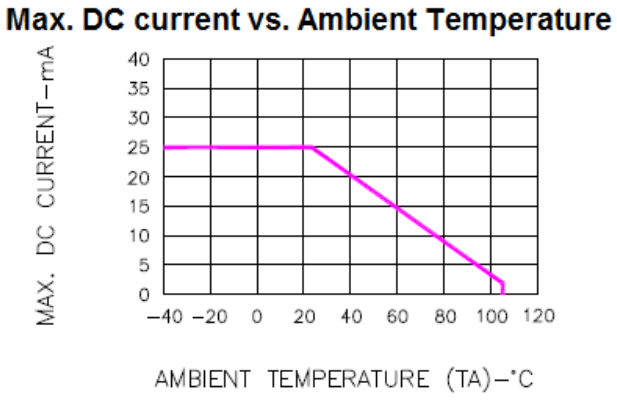


FORWARD VOLTAGE VS. TEMPERATURE

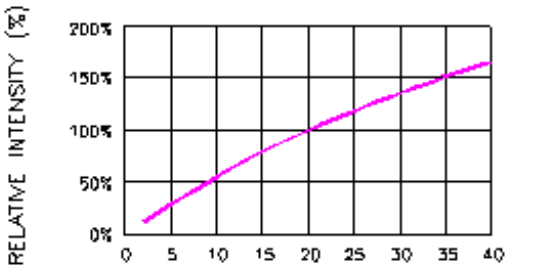


RELATIVE INTENSITY VS. TEMPERATURE

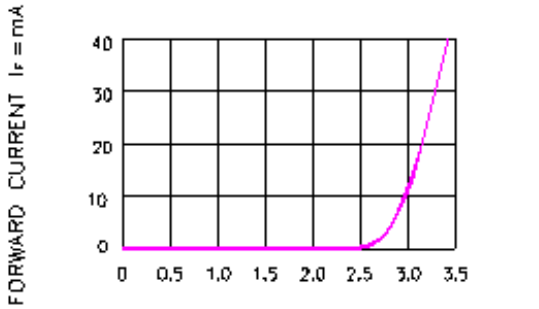




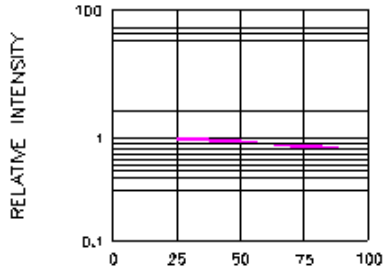
InGaN



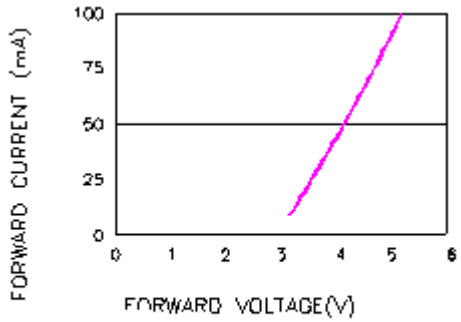
RELATIVE INTENSITY VS. FORWARD CURRENT



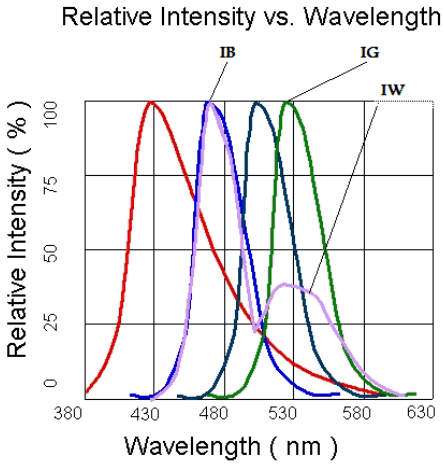
FORWARD CURRENT VS. FORWARD VOLTAGE

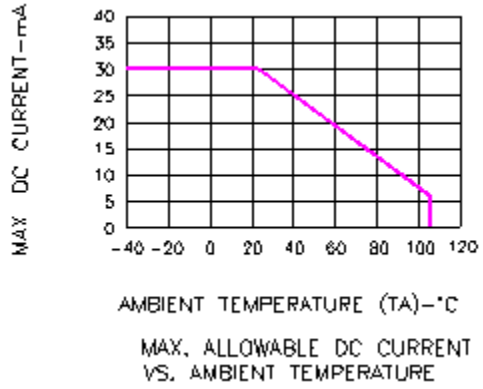


RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us
PULSE,10ms PERIOD)



PEAK FORWARD VOLTAGE
VS.FORWARD(100us TEST PULSE,
1% DUTY CYCLE)

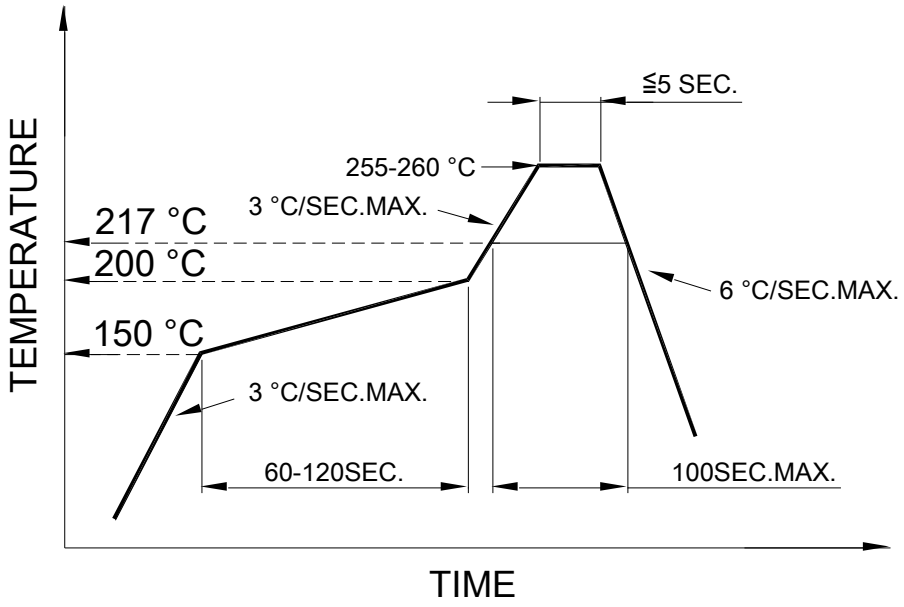




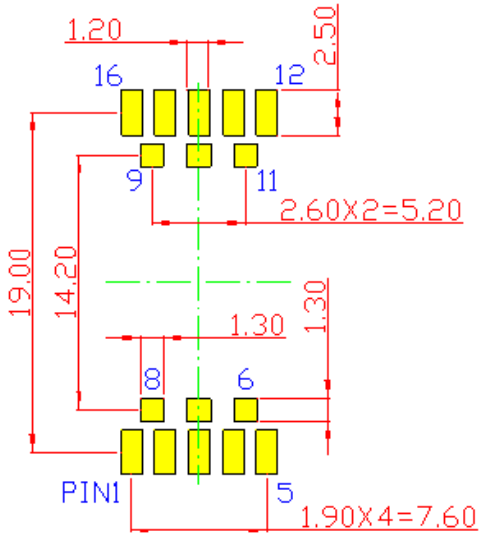
MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE

Soldering Profile

Recommended Pb Free Reflow Soldering Profile



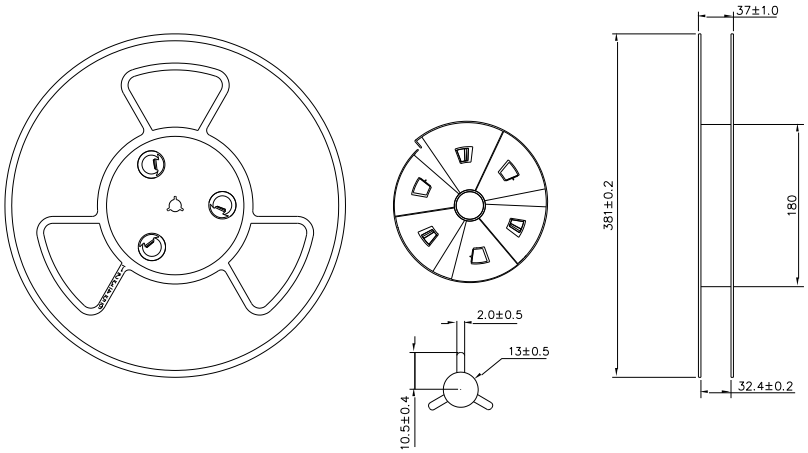
Recommended Pad Layout



Units: mm | Tolerance: ±0.25mm

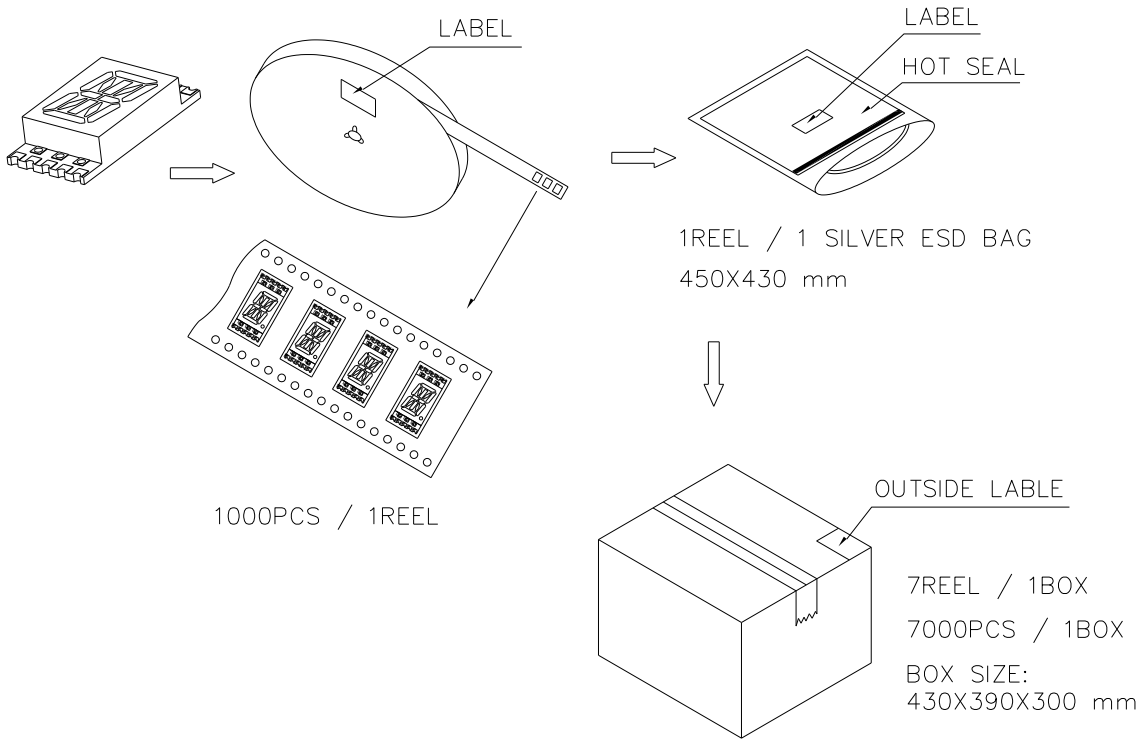
Packing

Reel Dimensions:



Unit: mm

Packing Method:



Ordering Information

Product		Orderable Part #		Spec Range	Quantity per Reel
CC	**CA**	**CC**	**CA**		
QBASS40R1	QBASS40R0	QBASS40R1	QBASS40R0	Iv=35mcd typ. @ I_F =20mA, λ_D:624nm typ.	1000
QBASS40S1	QBASS40S0	QBASS40S1	QBASS40S0	Iv=4mcd typ. @ I_F =20mA, λ_D:639nm typ.	1000
QBASS40Y1	QBASS40Y0	QBASS40Y1	QBASS40Y0	Iv=35mcd typ. @ I_F =20mA, λ_D:590nm typ.	1000
QBASS40O1	QBASS40O0	QBASS40O1	QBASS40O0	Iv=35mcd typ. @ I_F =20mA, λ_D:606nm typ.	1000
QBASS40AG1	QBASS40AG0	QBASS40AG1	QBASS40AG0	Iv=15mcd typ. @ I_F =20mA, λ_D:571nm typ.	1000
QBASS40IG1	QBASS40IG0	QBASS40IG1	QBASS40IG0	Iv=120mcd typ. @ I_F =20mA, λ_D:525nm typ.	1000
QBASS40IB1	QBASS40IB0	QBASS40IB1	QBASS40IB0	Iv=40mcd typ. @ I_F =20mA, λ_D:465nm typ.	1000

Revision History

Description:	Revision #	Revision Date
New Release of QBASS40XXZ	V1.0	03/25/2014
Add more color options / update spec	V1.1	08/05/2015
Update the brightness for IG (True Green)	V1.2	08/14/2015

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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.