

Feature:

- 0.28" Four digit seven segments display
- Low power consumption
- Packed in tube
- AlInGaP Technology R/Y/AG
- InGaN Technology IB/IG
- XX= color; Z= 1:Common Cathode or 0:Common Anode

Description:

These 0.28" Four digit seven segments displays are made with white segment and grey surface. The viewing distance is up to seven meters.

Application:

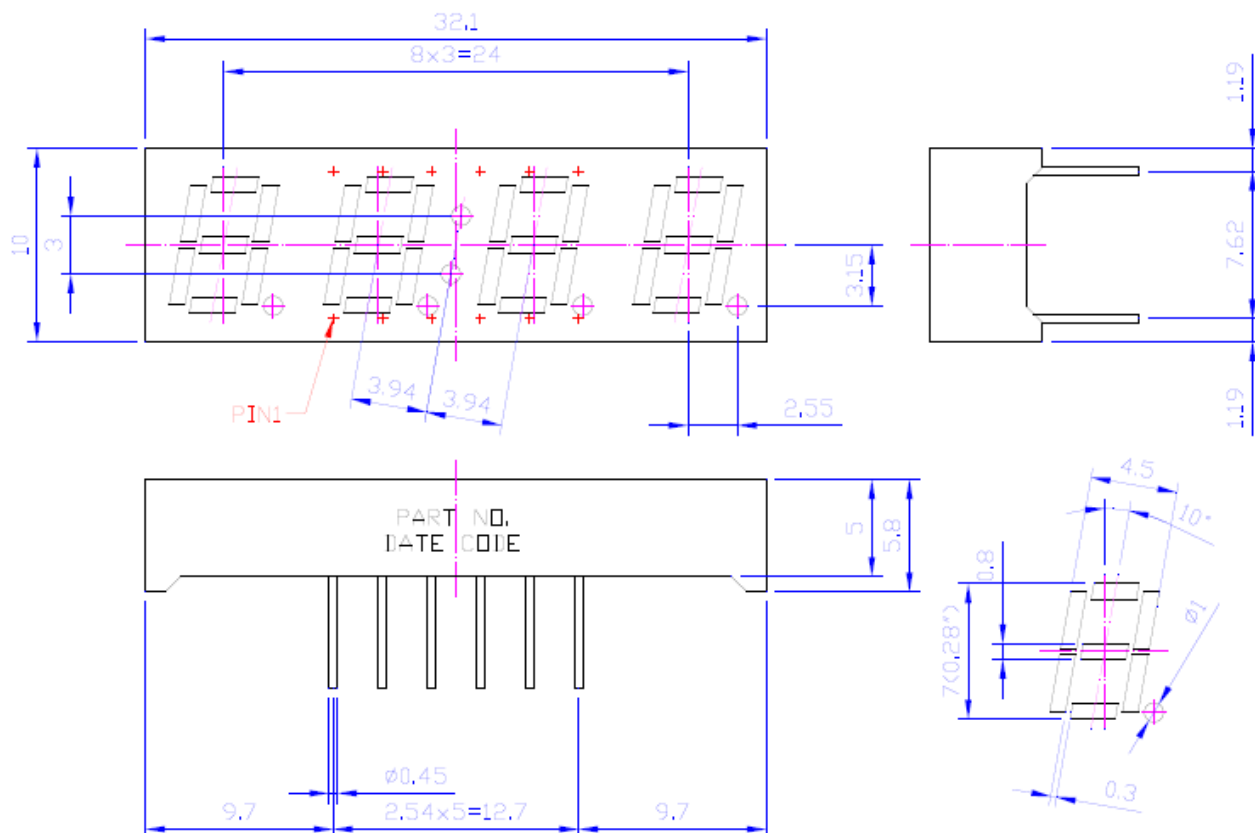
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

Electrical / Optical Characteristic (T=25 °C)

Product		Material	Color	I _F (mA)	V _F (V)	λ _D (nm)		I _V (mcd)
CC	CA				Typ.	Min.	Max.	typ.
QBQ28IB1	QBQ28IB0	InGaN	Blue	20	3.2	460	470	160
QBQ28IG1	QBQ28IG0	InGaN	Green	20	3.2	500	535	200
QBQ28R1	QBQ28R0	AlInGaP	Red	20	2.0	619	629	60
QBQ28Y1	QBQ28Y0	AlInGaP	Yellow	20	2.0	585	595	35
QBQ28AG1	QBQ28AG0	AlInGaP	Yellow Green	20	2.0	565	575	25

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)
InGaN	120	0.4	30	120	5	-40 to + 85	-40 to +100
AlInGaP	70	0.33	25	90	5	-40 to + 85	-40 to +100

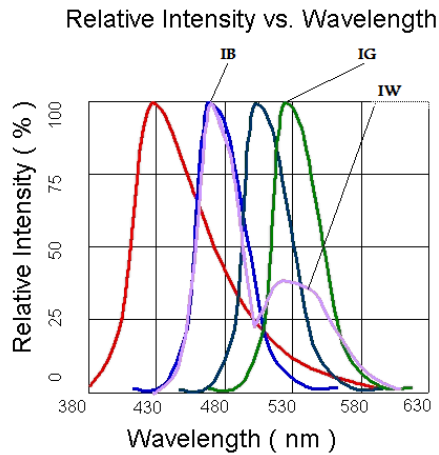
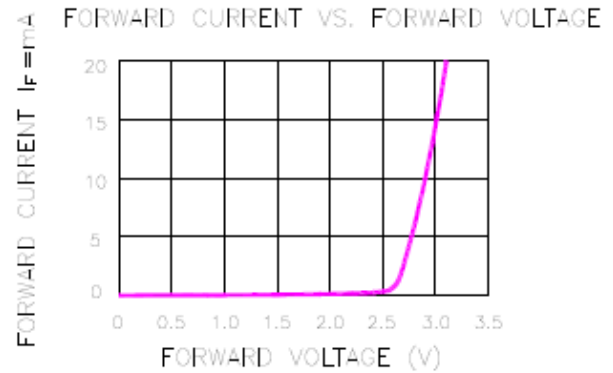
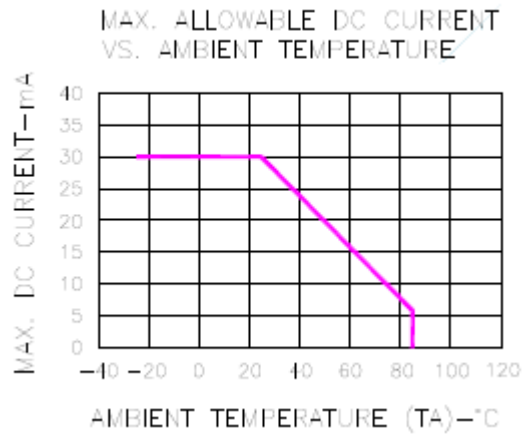
*Duty 1/10 @ 1KHz

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

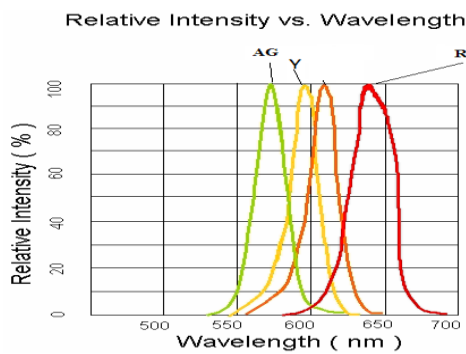
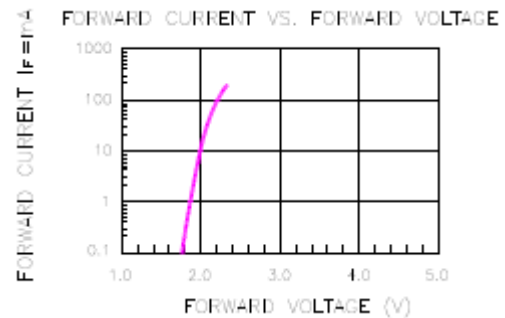
Pin Configuration

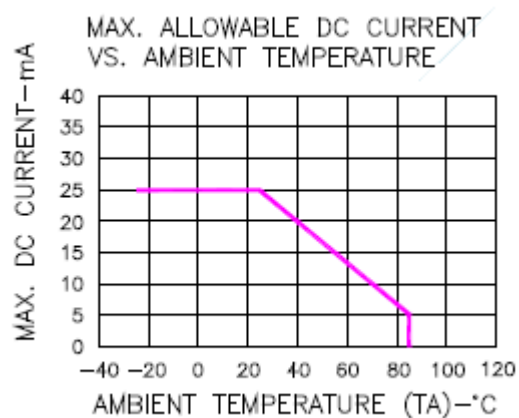
CC	
CA	

Characteristic Curves: (InGaN)



Characteristic Curves: (AlInGaP)





Ordering Information:

Product		Orderable Part #		Spec Range	Quantity per tube
CC	CA	CC	CA		
QBQ28IB1	QBQ28IB0	QBQ28IB1	QBQ28IB0	Iv= 40 mcd typ.	TBD
QBQ28IG1	QBQ28IG0	QBQ28IG1	QBQ28IG0	Iv= 200 mcd typ.	TBD
QBQ28R1	QBQ28R0	QBQ28R1	QBQ28R0	Iv= 60 mcd typ.	TBD
QBQ28Y1	QBQ28Y0	QBQ28Y1	QBQ28Y0	Iv= 35 mcd typ.	TBD
QBQ28AG1	QBQ28AG0	QBQ28AG1	QBQ28AG0	Iv= 25 mcd typ.	TBD

Revision History:

Description:	Revision #	Revision Date
New Release of QBQ28XXX_series	V1.0	09/20/2010
Amend Part number to QBQ28XXZ/ add color spec: blue and true green	V2.0	06/24/2011