

QT-Brightek SMD Display Series

0.40" Four Digit SMD Display

Part No.: QBQS40ZXX

XX= Color

Z= 1: Common Cathode

Z = 0: Common Anode

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Introduction

Feature:

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

Description:

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

Application:

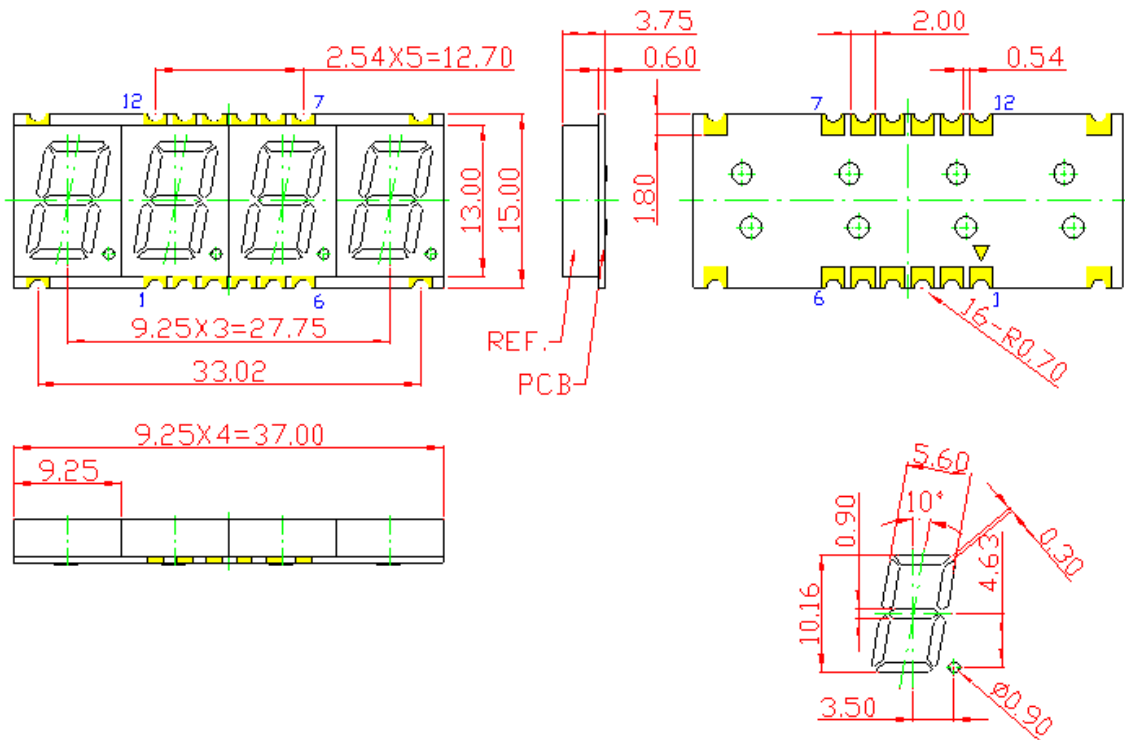
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

Certification & Compliance:

- TS16949
- ISO9001
- RoHS Compliant



Dimension:



Units: mm / tolerance = +/-0.25mm

Electrical / Optical Characteristic: (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.
QBQS401R	QBQS400R	AllnGaP	Red	20	2.0	2.6	619	625	629	40
QBQS401S	QBQS400S	AllnGaP	Deep Red	20	2.0	2.6	635	640	645	10
QBQS401Y	QBQS400Y	AllnGaP	Yellow	20	2.0	2.6	585	590	595	20
QBQS401O	QBQS400O	AllnGaP	Orange	20	2.0	2.6	604	610	614	20
QBQS401AG	QBQS400AG	AllnGaP	Yellow Green	20	2.1	2.6	566	571	576	16
QBQS401IG	QBQS400IG	InGaN	True Green	20	2.8	3.8	515	520	530	150
QBQS401IB	QBQS400IB	InGaN	Blue	20	3.1	4.0	464	470	474	60

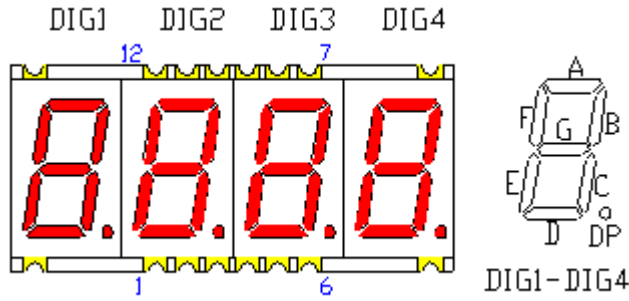
Absolute Maximum Rating

Material	P _d (mW)	Derating linear from 25°C per dice (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

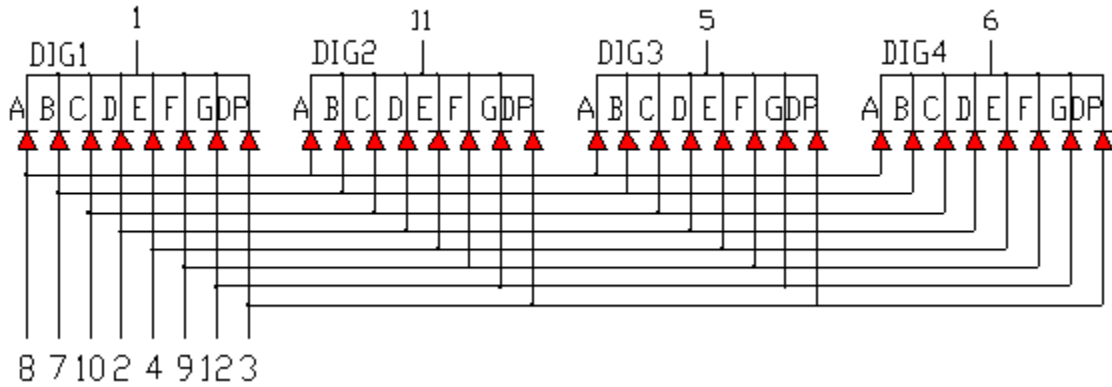
*Duty 1/10 @ 1KHz

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

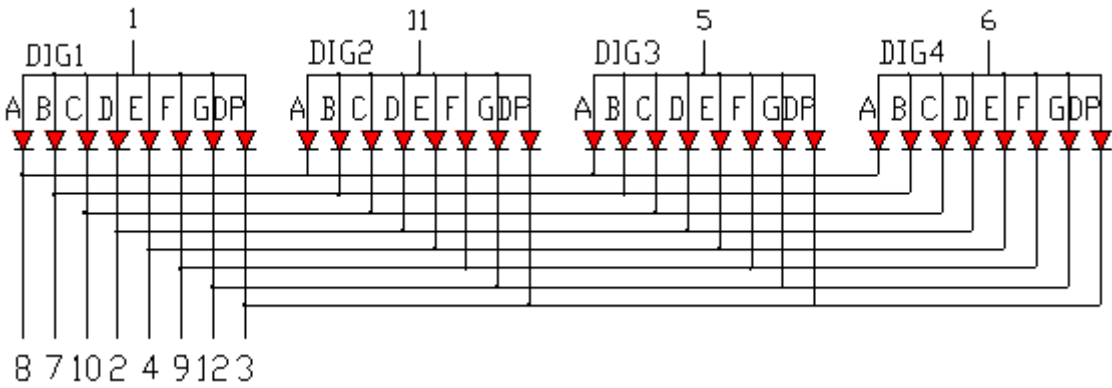
Pin Configuration



CC

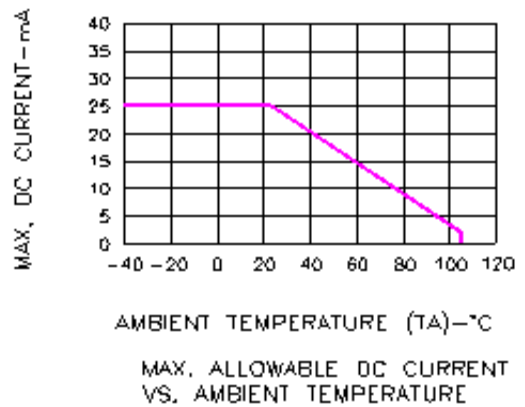
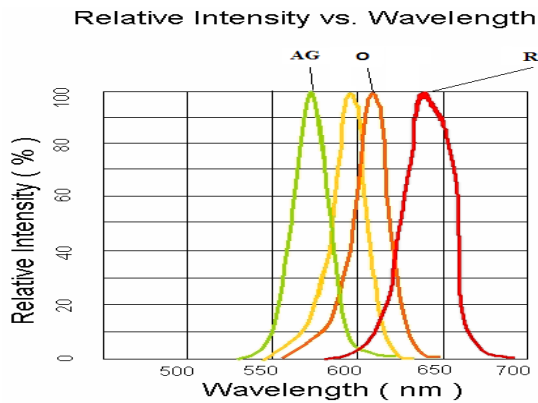
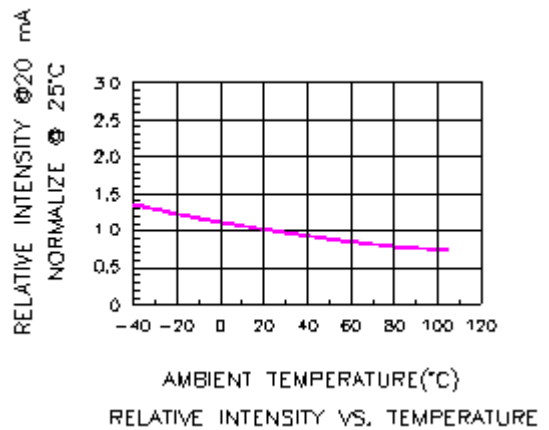
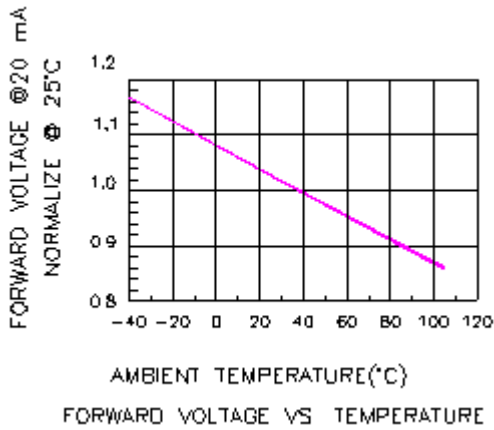
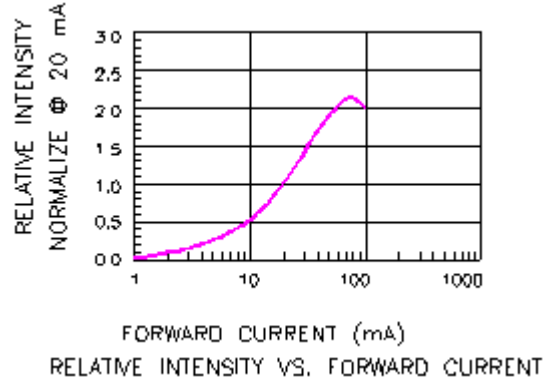
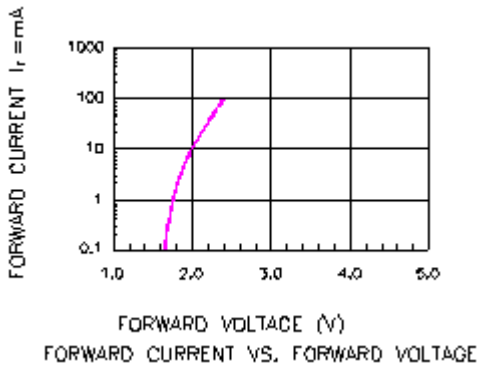


CA

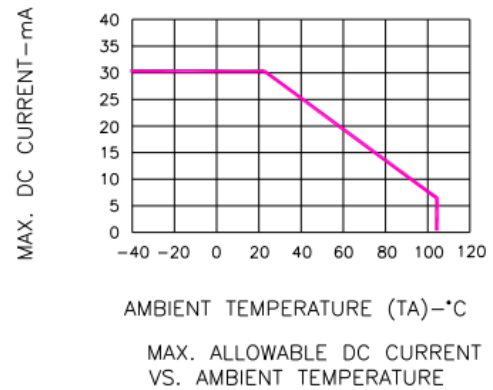
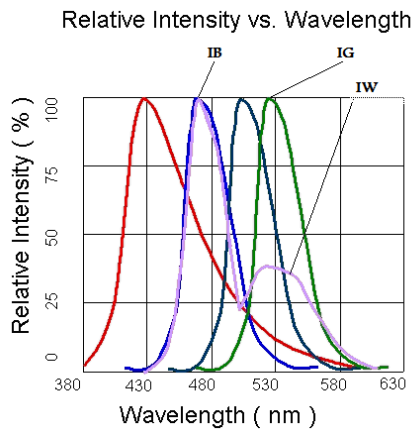
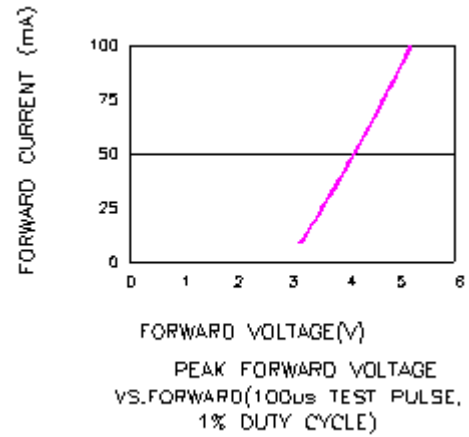
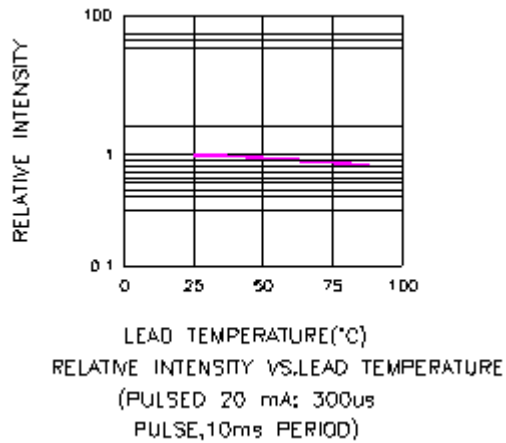
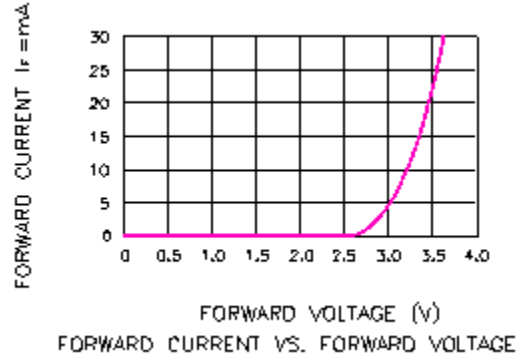
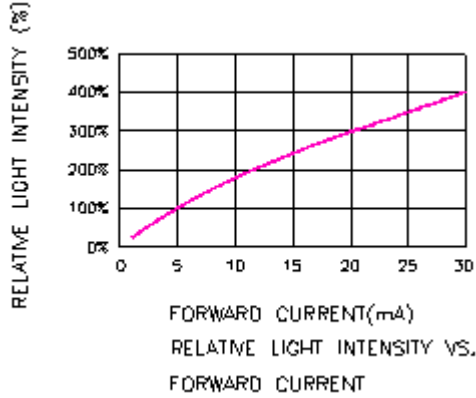


Characteristic Curves

AllnGaP



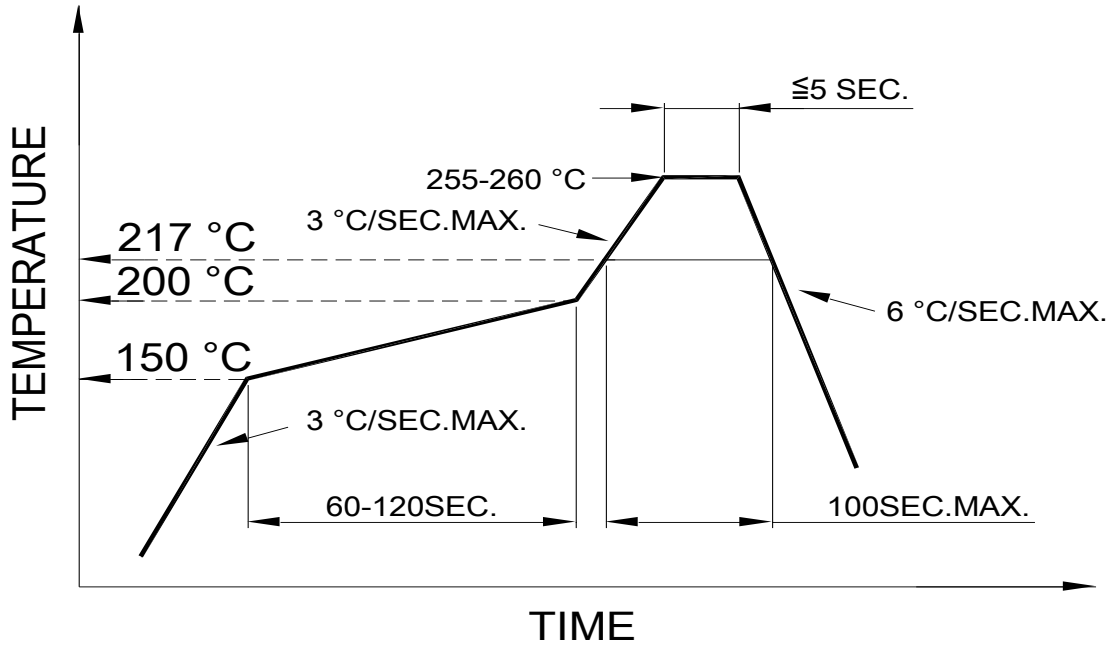
InGaN



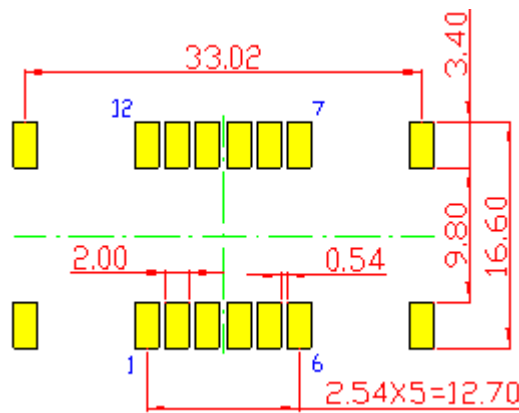
Solder Profile & Footprint

Lead-free Solder Profile:

Pb free reflow soldering Profile



Recommended Pad Layout

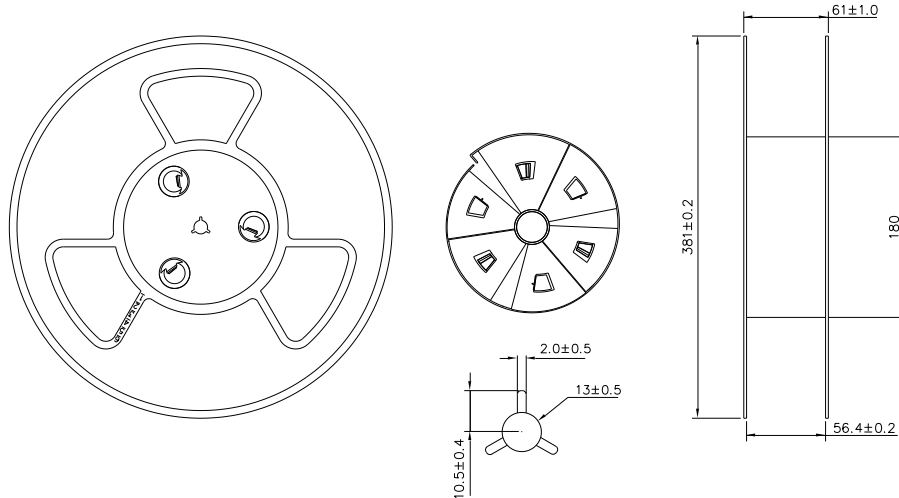


Units: mm

Tolerance: $\pm 0.25\text{mm}$

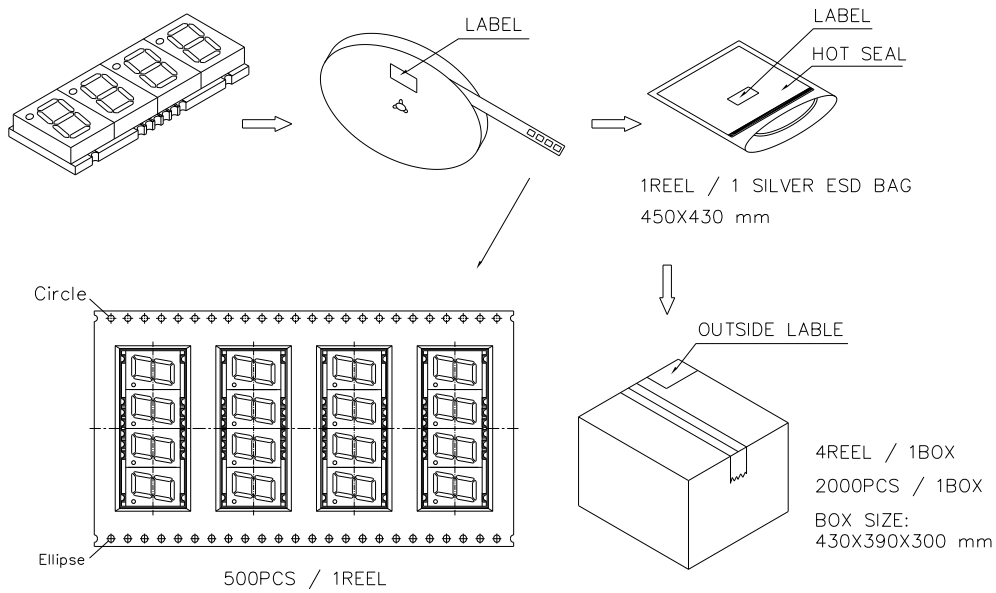
Packing & Labeling

Reel Dimension:



Unit: mm

Packing and Label Specification:



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Ordering Information

Product		Orderable Part #		Spec Range	Quantity per Reel
CC	CA	CC	CA		
QBQS401R	QBQS400R	QBQS401R	QBQS400R	I _v =40mcd typ. @ I _F =20mA, λ _D : 625nm typ.	500
QBQS401S	QBQS400S	QBQS401S	QBQS400S	I _v =10mcd typ. @ I _F =20mA, λ _D : 640nm typ.	500
QBQS401Y	QBQS400Y	QBQS401Y	QBQS400Y	I _v =20mcd typ. @ I _F =20mA, λ _D : 590nm typ.	500
QBQS401O	QBQS400O	QBQS401O	QBQS400O	I _v =20mcd typ. @ I _F =20mA, λ _D : 610nm typ.	500
QBQS401AG	QBQS400AG	QBQS401AG	QBQS400AG	I _v =16mcd typ. @ I _F =20mA, λ _D : 571nm typ.	500
QBQS401IG	QBQS400IG	QBQS401IG	QBQS400IG	I _v =150mcd typ. @ I _F =20mA, λ _D : 520nm typ.	500
QBQS401IB	QBQS400IB	QBQS401IB	QBQS400IB	I _v =60mcd typ. @ I _F =20mA, λ _D : 470nm typ.	500

Revision History

Description:	Revision #	Revision Date
New Release of QBQS40ZXX	V1.0	03/25/2014
Update spec, add more color options	V1.1	11/20/2015

Disclaimer

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

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