

QT-Brightek Display Series

0.56" Dual Digit Display

Part No.: QBD56XXZ

XX= Color

Z= 1: Common Cathode

Z = 0: Common Anode

Product: QBD56XXZ_series	Date: October 26, 2022	Page 1 of 13
	Version# 2.4	

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Electrical / Optical Characteristic (Ta=25 °C)

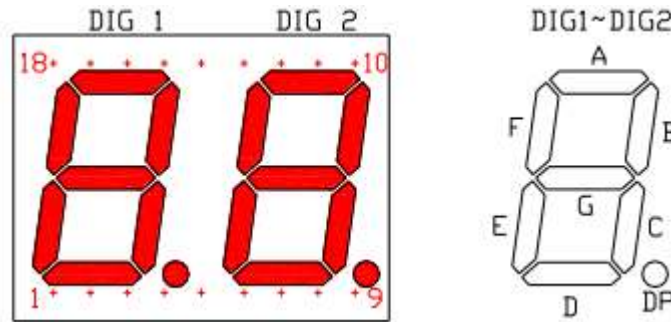
Product		Material	Color	I _F (mA)	V _F (V)		λ _D (nm)			λ _P (nm)	I _V (mcd)
CC	CA				Typ.	Max.	Min.	Typ.	Max.	Typ.	Typ.
QBD56R1	QBD56R0	AllnGaP	Red	20	2.1	2.4	619	624	629	632	60
QBD56S1	QBD56S0	AllnGaP	Deep Red	20	2.1	2.4	635	639	648	650	20
QBD56Y1	QBD56Y0	AllnGaP	Yellow	20	2.0	2.4	585	590	595	593	60
QBD56O1	QBD56O0	AllnGaP	Orange	20	2.0	2.6	600	606	610	612	60
QBD56AG1	QBD56AG0	AllnGaP	Green	20	2.1	2.6	567	571	576	573	20
QBD56IG1	QBD56IG0	InGaN	True Green	20	2.8	3.2	515	525	530	-	160
QBD56IB1	QBD56IB0	InGaN	Blue	20	3.0	3.4	460	465	475	-	60

Absolute Maximum Rating

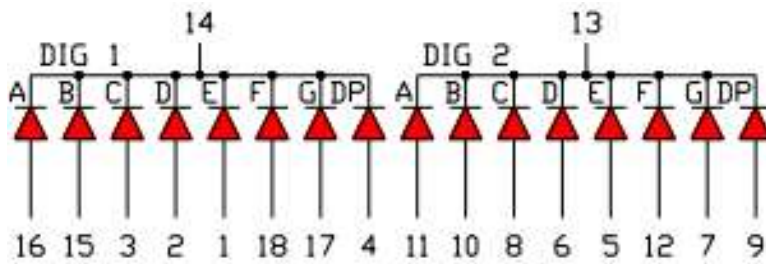
Material	P _d (mW)	I _F (mA)	I _{PF} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
AllnGaP	48	20	40	5	-40 to +85	-40 to +85
InGaN	120	30	100	5	-40 to +85	-40 to +85

*Duty 1/10 @ 1KHz

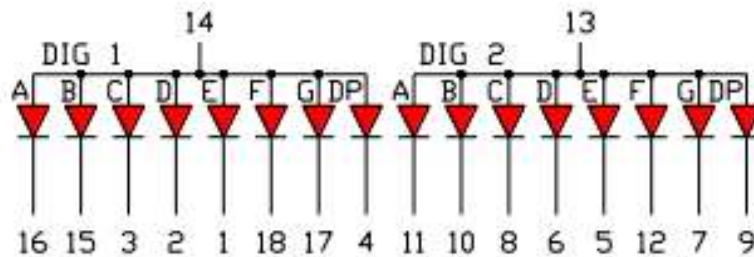
Pin Configuration



Common Cathode (QBD56XX1)

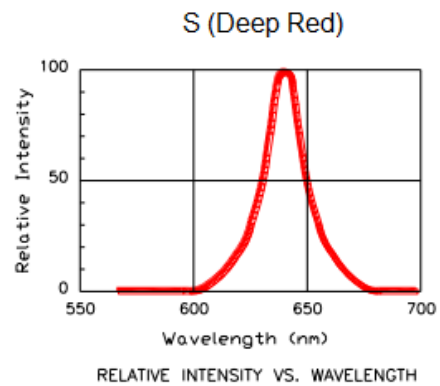
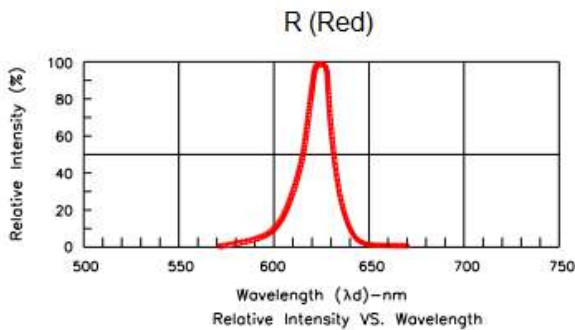
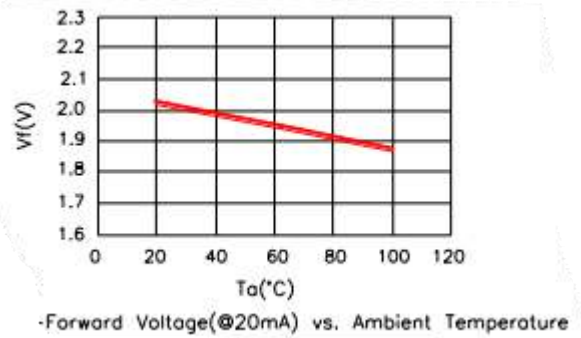
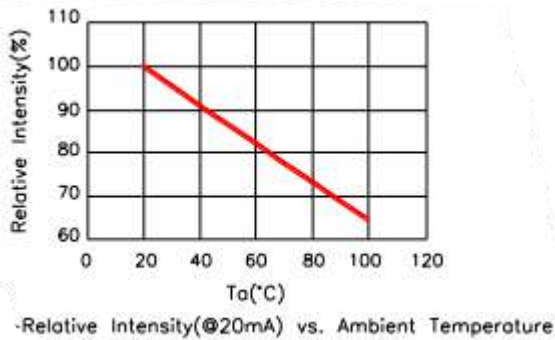
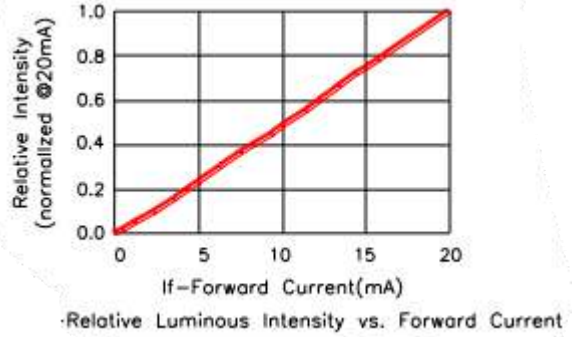
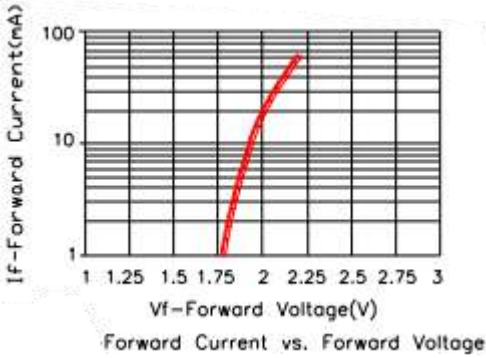


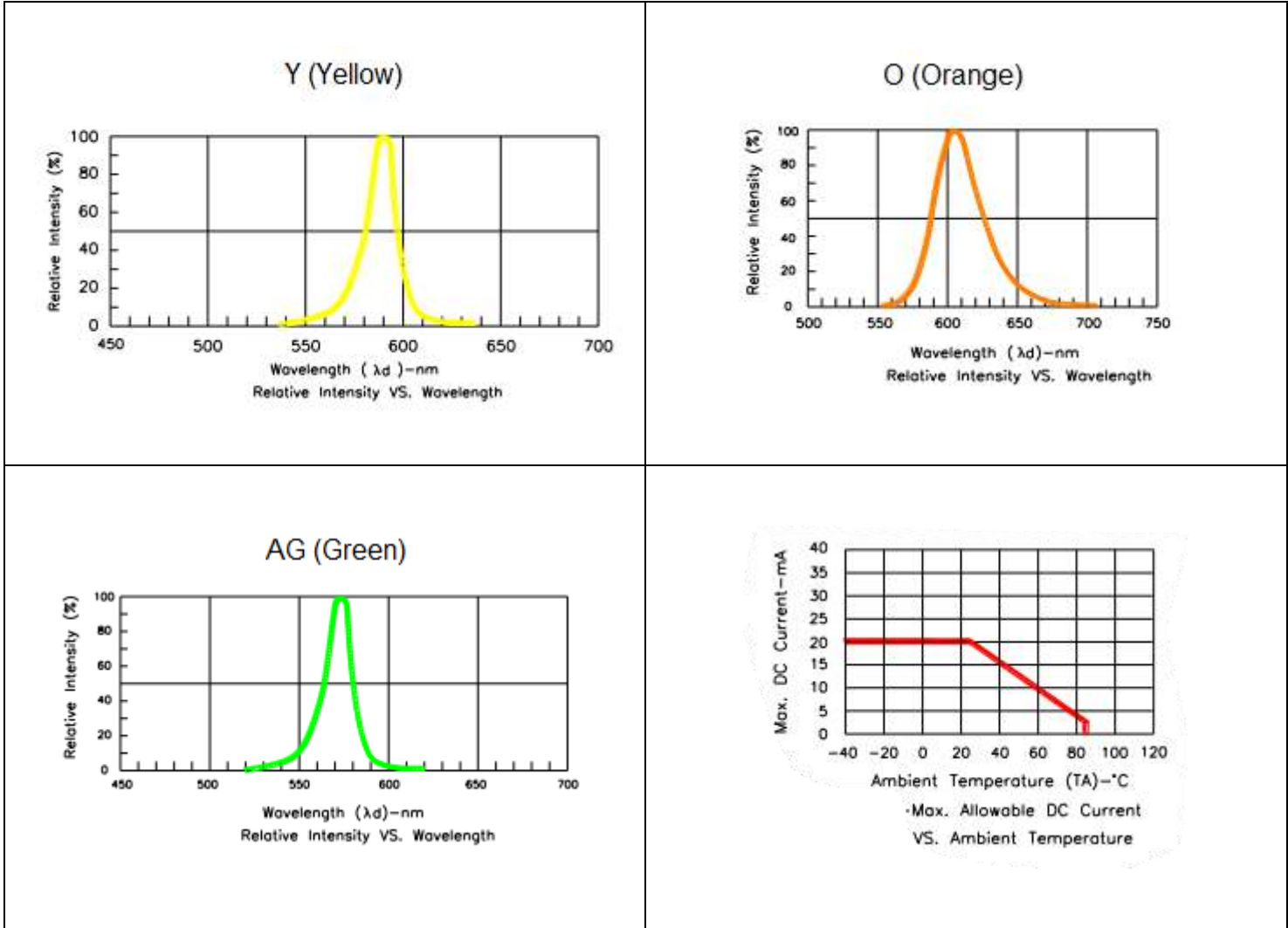
Common Anode (QBD56XX0)



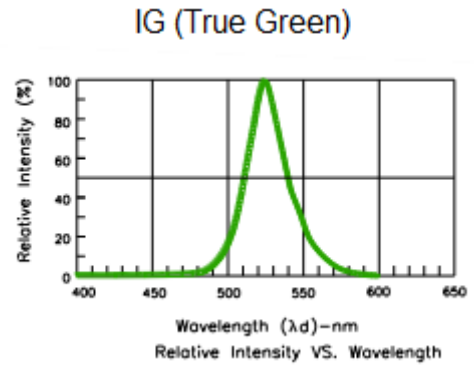
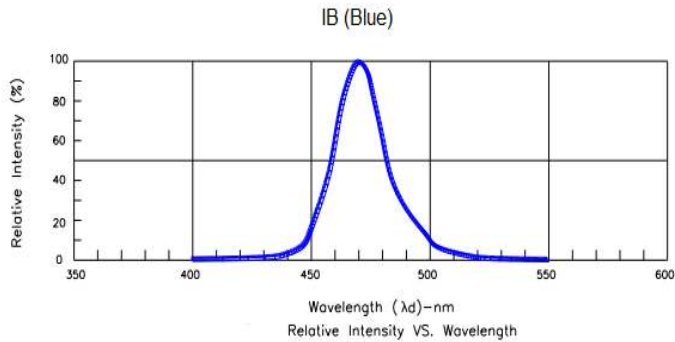
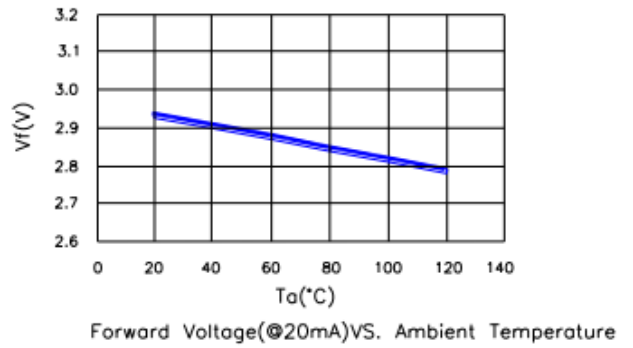
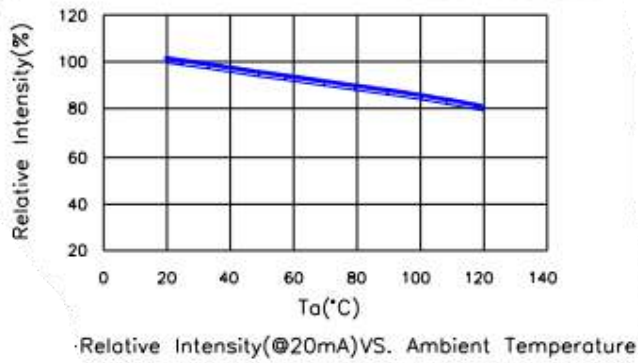
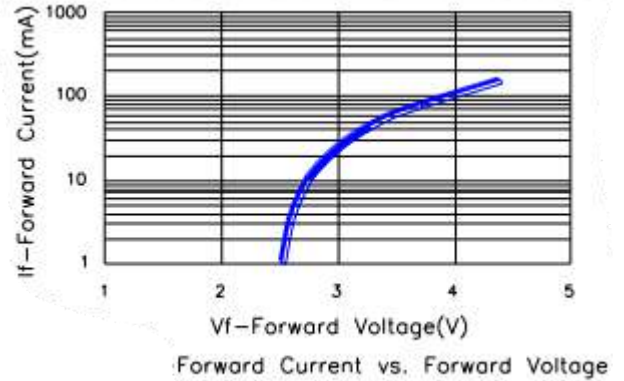
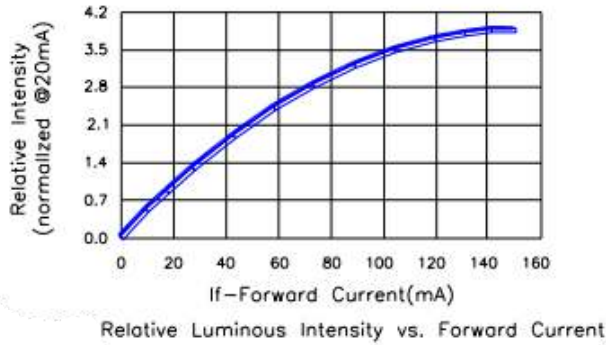
Characteristic Curves

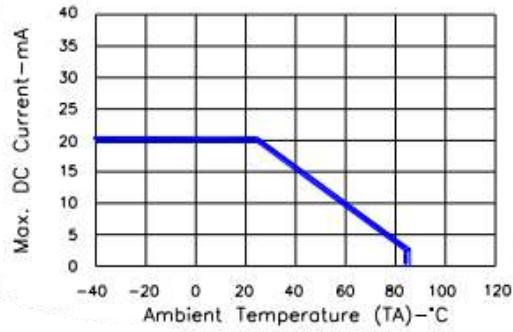
AllnGaP (R/S/Y/O/AG)





InGaN (IG/IB)

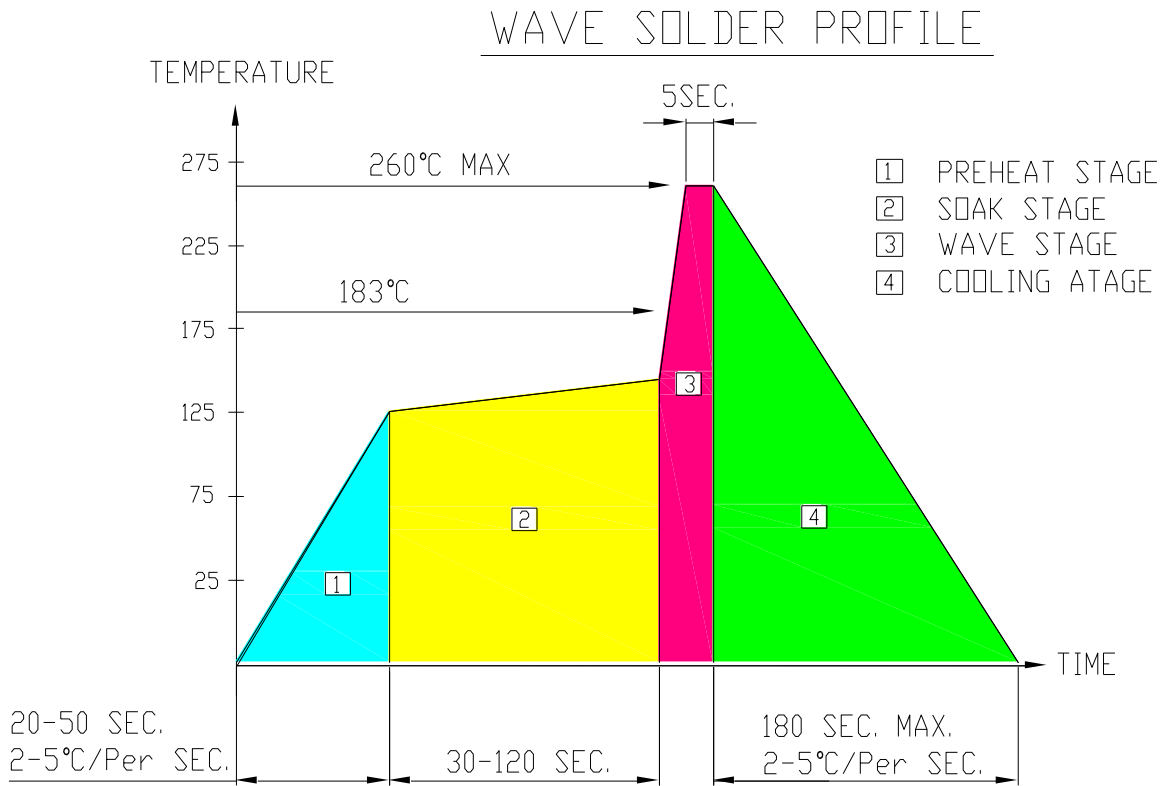




Max. Allowable DC Current
VS. Ambient Temperature

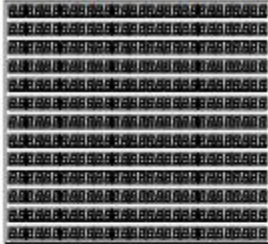
Solder Profile

Recommended Solder Profile



Packing

195 PCS (15X 13) / 1 White Polyform

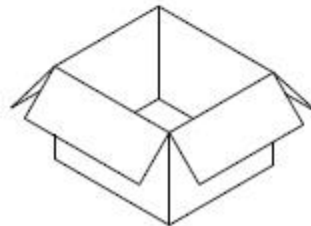


12 White Polyform / 1BAG



BAG SIZE : 450x410x580

2340 PCS / 1 Outer Carton



OUTER BOX SIZE : 430 x 390 x 300 mm

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Ordering Information

Product		Orderable Part #		Spec Range	Quantity per foam
CC	CA	CC	CA		
QBD56R1	QBD56R0	QBD56R1	QBD56R0	I _v =60mcd typ. @ I _F =20mA, λ _D =624nm typ.	195pcs
QBD56S1	QBD56S0	QBD56S1	QBD56S0	I _v =20mcd typ. @ I _F =20mA, λ _D =639nm typ.	195pcs
QBD56Y1	QBD56Y0	QBD56Y1	QBD56Y0	I _v =60mcd typ. @ I _F =20mA, λ _D =590nm typ.	195pcs
QBD56O1	QBD56O0	QBD56O1	QBD56O0	I _v =60mcd typ. @ I _F =20mA, λ _D =606nm typ.	195pcs
QBD56AG1	QBD56AG0	QBD56AG1	QBD56AG0	I _v =20mcd typ. @ I _F =20mA, λ _D =571nm typ.	195pcs
QBD56IG1	QD56IG0	QBD56IG1	QBD56IG0	I _v =160mcd typ. @ I _F =20mA, λ _D =525nm typ.	195pcs
QBD56IB1	QBD56IB0	QBD56IB1	QBD56IB0	I _v =60mcd typ. @ I _F =20mA, λ _D =465nm typ.	195pcs

Revision History

Description:	Revision #	Revision Date
New Release of QBD56XXZ_series	V1.0	09/20/2010
Amend part number to QBD56XXZ / add color spec: blue and true green	V2.0	06/24/2011
Amend to the new format/ add color spec: Deep Red	V2.1	10/21/2013
Add packing spec / minor format update	V2.2	09/15/2015
Update QTY per outer box	V2.3	05/24/2021
Update spec / add λ_P	V2.4	10/26/2022

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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.