

QT-Brightek Corporation

1.2" 5x7 Dot Matrix

Part No.: GMZ12XX75_series

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Introduction

Feature:

- Low power consumption
- Packed in foam
- AllInGaP technology for R/S/Y/O/AG
- InGaN technology for IG/IB
- Z=C: Anode Row, Cathode column or A: Anode Column, Cathode Row
- XX= Color

Description:

These 1.2" 5x7 dot matrix displays are made with white dots and a grey surface.

Application:

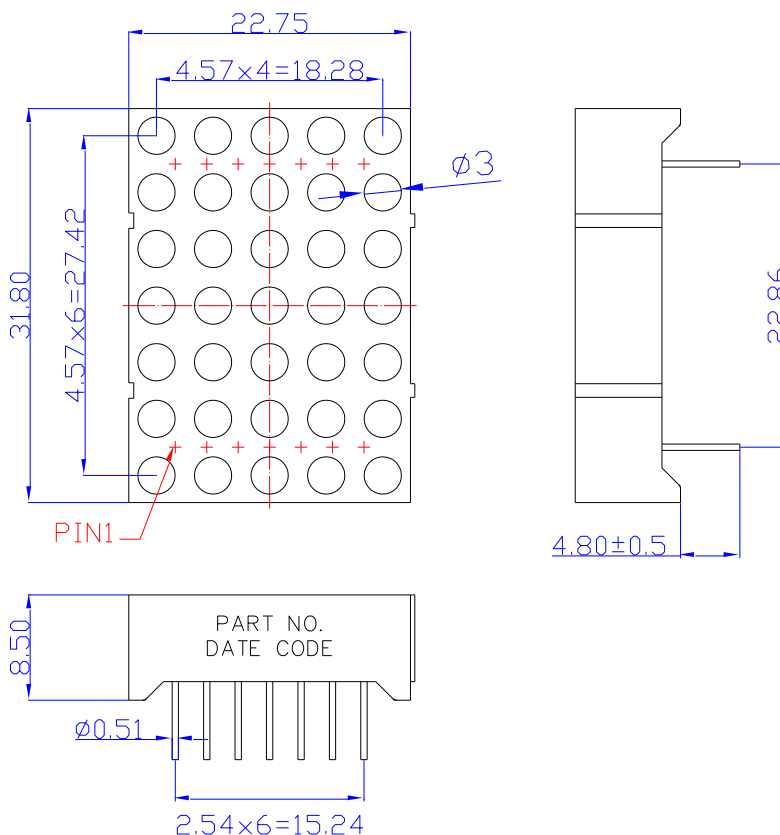
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

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)
Anode Row, Cathode Column	Anode Column, Cathode Row				Typ.	Max.	Min.	Typ.	Max.	Typ.
GMC12R75	GMA12R75	AllnGaP	Red	20	2.0	2.6	619	624	629	60
GMC12S75	GMA12S75	AllnGaP	Deep Red	20	2.0	2.6	636	639	647	35
GMC12Y75	GMA12Y75	AllnGaP	Yellow	20	2.0	2.6	585	590	595	130
GMC12O75	GMA12O75	AllnGaP	Orange	20	2.0	2.6	601	606	611	60
GMC12AG75	GMA12AG75	AllnGaP	Yellow Green	20	2.1	2.6	566	571	574	25
GMC12IG75	GMA12IG75	InGaN	True Green	20	3.2	4.0	500	525	535	200
GMC12IB75	GMA12IB75	InGaN	Blue	20	3.0	4.0	460	465	470	160

Absolute Maximum Rating

Material	P _d (mW)	Derating liner from 25 °C per dice (mA/°C)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)
AllnGaP	70	0.33	25	90	5	-25 to +85	-25 to +85
InGaN	120	0.4	30	100	5	-25 to +85	-25 to +85

*Duty 1/10 @ 1KHz

Luminous Intensity I_V for Red @ I_F=20mA

Bin	Min.	Max.	Unit
P	30	50	mcd
Q	50	70	
R	70	90	

Luminous Intensity I_V for Deep Red @ I_F=20mA

Bin	Min.	Max.	Unit
F	10	30	mcd
G	30	50	
H	50	70	

Luminous Intensity I_V for Yellow @ $I_F=20mA$

Bin	Min.	Max.	Unit
J	100	130	mcd
K	130	150	
L	150	170	

Luminous Intensity I_V for Orange @ $I_F=20mA$

Bin	Min.	Max.	Unit
G	30	50	mcd
H	50	70	
I	70	90	

Luminous Intensity I_V for Yellow Green @ $I_F =20mA$

Bin	Min.	Max.	Unit
F	10	30	mcd
G	30	50	
H	50	70	

Luminous Intensity I_V for True Green @ $I_F =20mA$

Bin	Min.	Max.	Unit
M	160	200	mcd
N	200	350	

Luminous Intensity I_V for Blue @ $I_F=20mA$

Bin	Min.	Max.	Unit
K	130	150	mcd
L	150	170	
M	170	200	

Dominant Wavelength λ_D for Red @ $I_F =20mA$

Bin	Min.	Max.	Unit
1	619	623	nm
2	623	629	

Dominant Wavelength λ_D for Deep Red @ $I_F =20mA$

Bin	Min.	Max.	Unit
1	636	640	nm
2	640	643	
3	643	647	

Dominant Wavelength λ_D for Yellow @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	585	588	nm
2	588	592	
3	592	595	

Dominant Wavelength λ_D for Orange @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	601	605	nm
2	605	611	

Dominant Wavelength λ_D for Yellow Green @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	566	569	nm
2	569	571	
3	571	574	

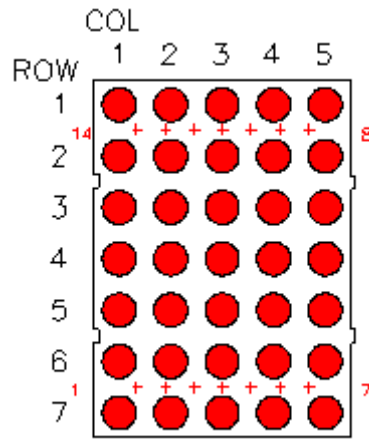
Dominant Wavelength λ_D for True Green @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	500	525	nm
2	525	530	
3	530	535	

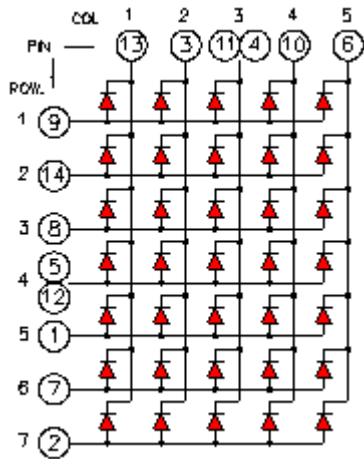
Dominant Wavelength λ_D for Blue @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	460	462	nm
2	462	465	
3	465	470	

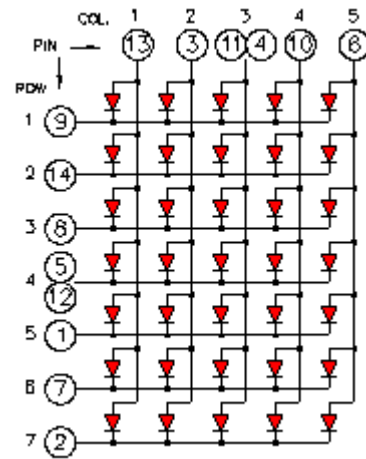
Pin Configuration



Anode Row, Cathode Column

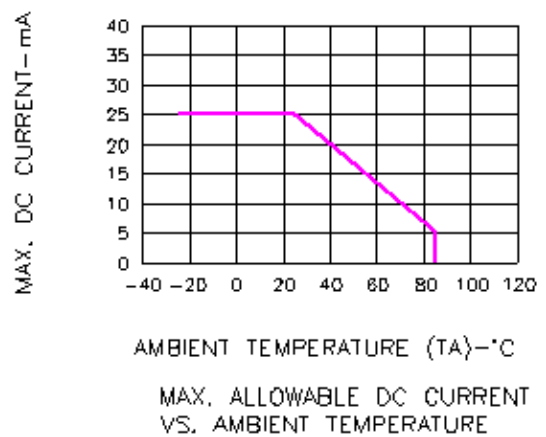
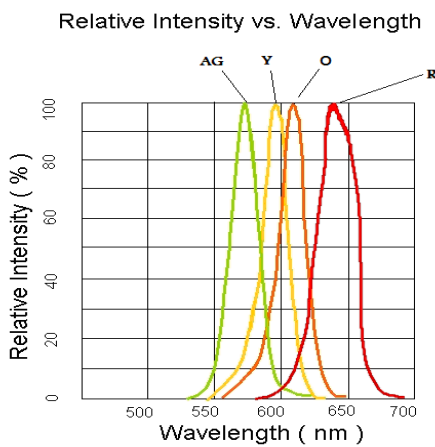
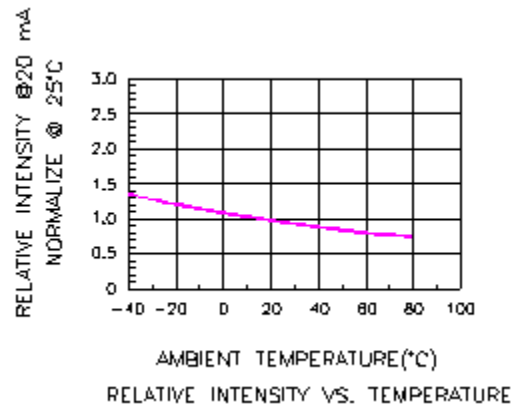
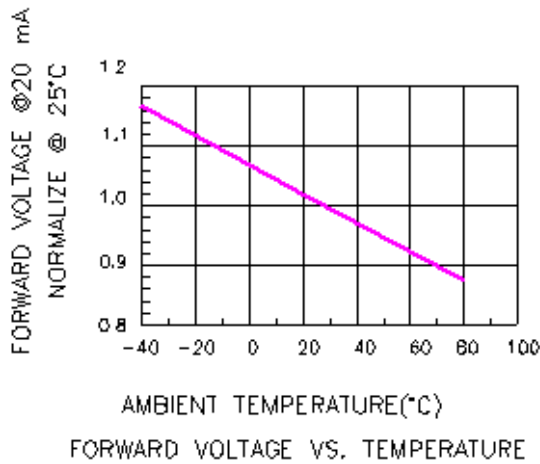
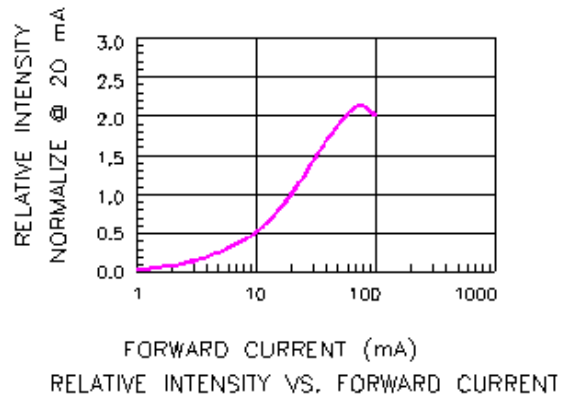
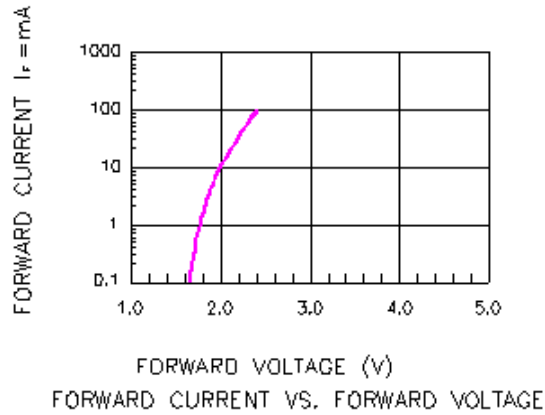


Anode Column, Cathode Row

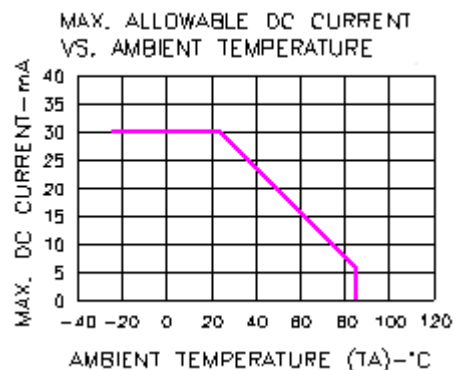
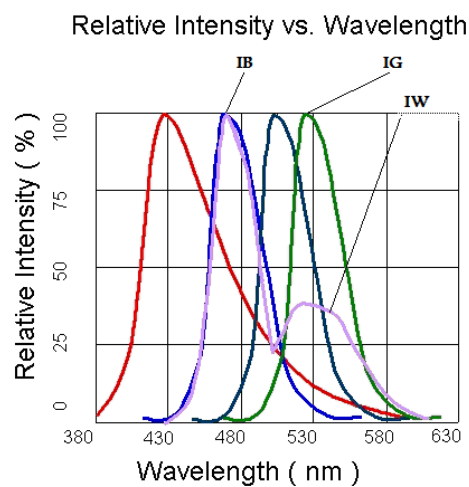
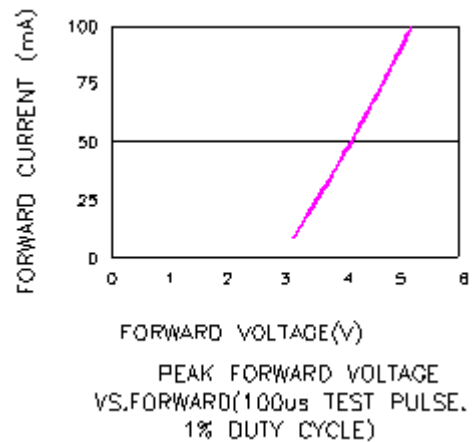
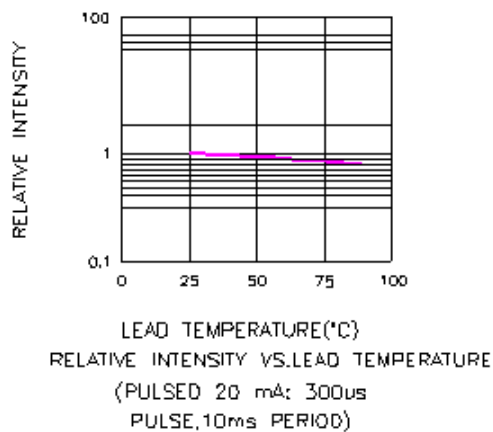
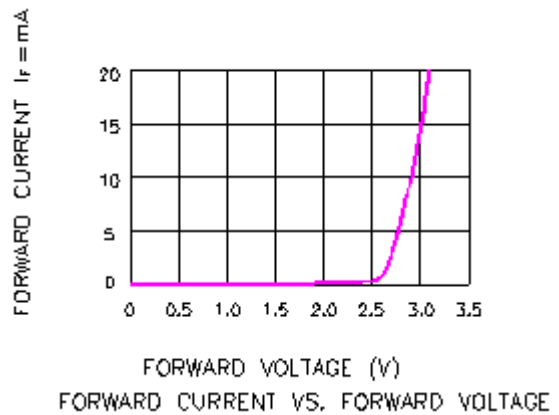
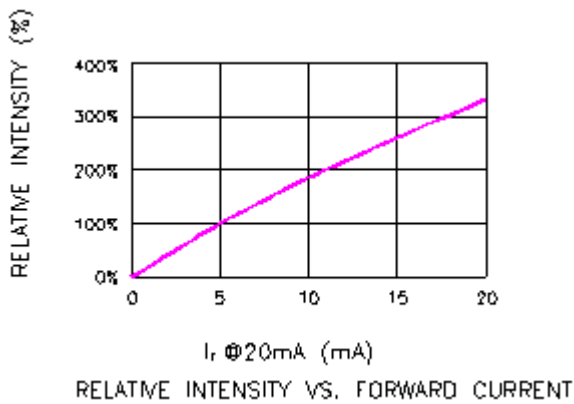


Characteristic Curves

AllnGaP

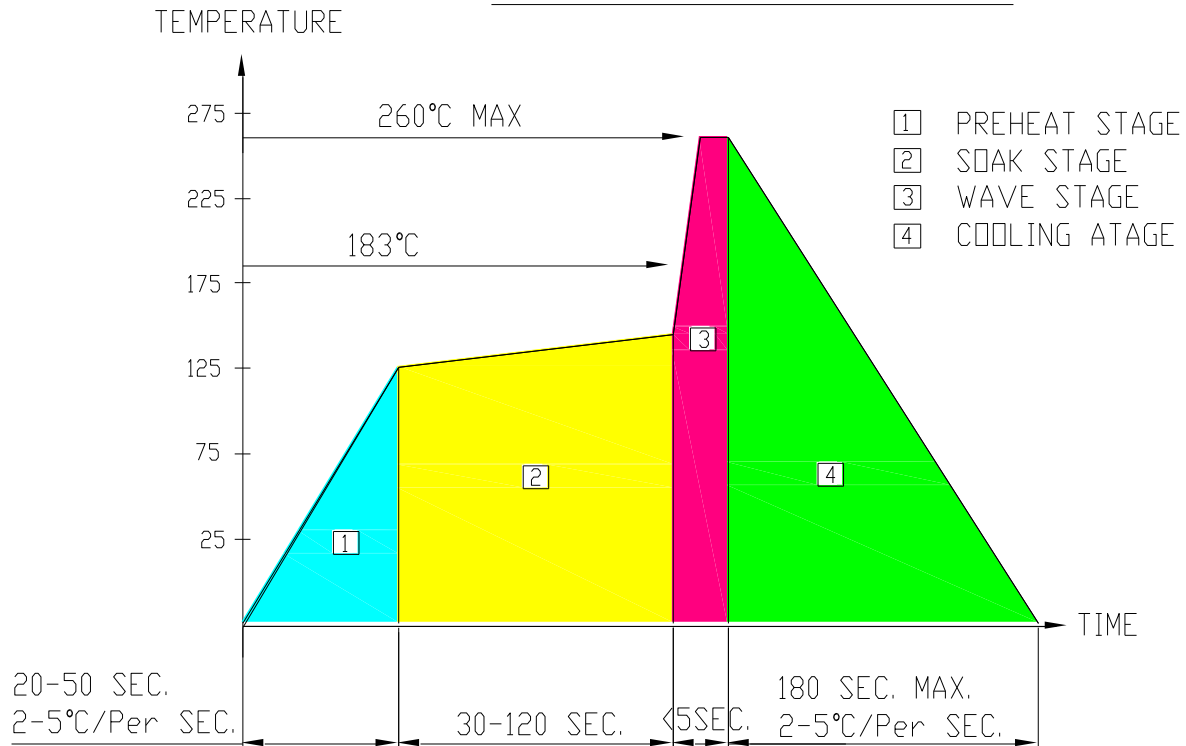


InGaN



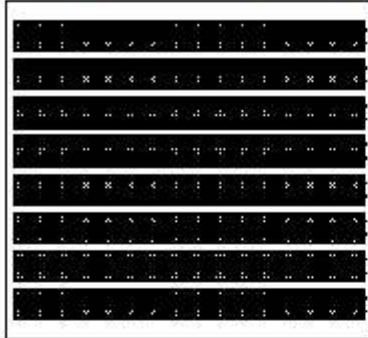
Solder Profile

WAVE SOLDER PROFILE



Package Dimensions

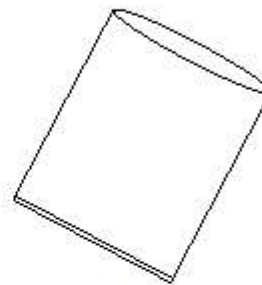
128 PCS / 1 White Polyform (16 X 8 PCS)



5 White Polyform / 1 BAG

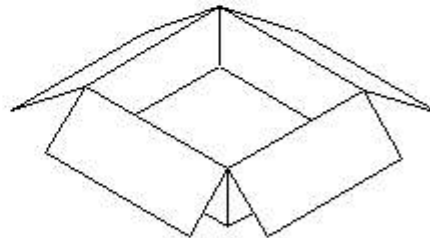


A reference for packing within bag.



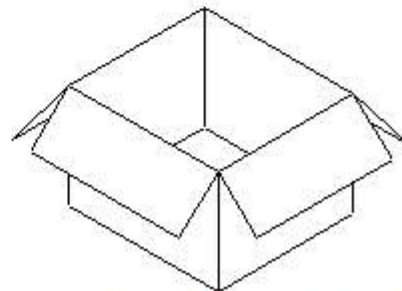
BAG SIZE : 450X410X560

640 PCS /1Inner Carton



INNER BOX SIZE : 394 x 370 x 138 mm

1280 PCS / 2 Inner Carton / 1 Outer Carton



OUTER BOX SIZE : 430 x 390 x 300 mm

Ordering Information

Product		Orderable Part#		Spec Range	Quantity per foam
Anode Row, Cathode Column	Anode Column, Cathode Row	Anode Row, Cathode Column	Anode Column, Cathode Row		
GMC12R75	GMA12R75	GMC12R75	GMA12R75	Iv=60mcd typ. @ I _F =20mA, λ _d =619nm to 629nm	128pcs
GMC12S75	GMA12S75	GMC12S75	GMA12S75	Iv=35mcd typ. @ I _F =20mA, λ _d =636nm to 647nm	128pcs
GMC12Y75	GMA12Y75	GMC12Y75	GMA12Y75	Iv=130mcd typ. @ I _F =20mA, λ _d =585nm to 595nm	128pcs
GMC12O75	GMA12O75	GMC12O75	GMA12O75	Iv=60mcd typ. @ I _F =20mA, λ _d =601nm to 611nm	128pcs
GMC12AG75	GMA12AG75	GMC12AG75	GMA12AG75	Iv=25mcd typ. @ I _F =20mA, λ _d =566nm to 574nm	128pcs
GMC12IG75	GMA12IG75	GMC12IG75	GMA12IG75	Iv=200mcd typ. @ I _F =20mA, λ _d =500nm to 535nm	128pcs
GMC12IB75	GMA12IB75	GMC12IB75	GMA12IB75	Iv=160mcd typ. @ I _F =20mA, λ _d =460nm to 470nm	128pcs

Revision History

Description:	Revision #	Revision Date
New Release of GMZ12XX75_series	V1.0	05/26/2011
Add Color Blue/ Green Spec.	V1.1	07/13/2011
Amend dimension	V1.2	07/28/2011
Added binning	V1.3	02/14/2012
Updated binning and packing specs	V1.4	03/08/2012
Update spec and binning	V1.5	06/22/2015

Disclaimer

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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.