

QT-Brightek Corporation

2.4" 8x8 Dot Matrix

Part No.: GMZ24XX88_series

Product: GMZ24XX88_series	Date: October 1, 2015	Page 1 of 13
	Version# 1.3	

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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 2.4" 8x8 dot matrix displays are made with white dots and a grey surface.

Application:

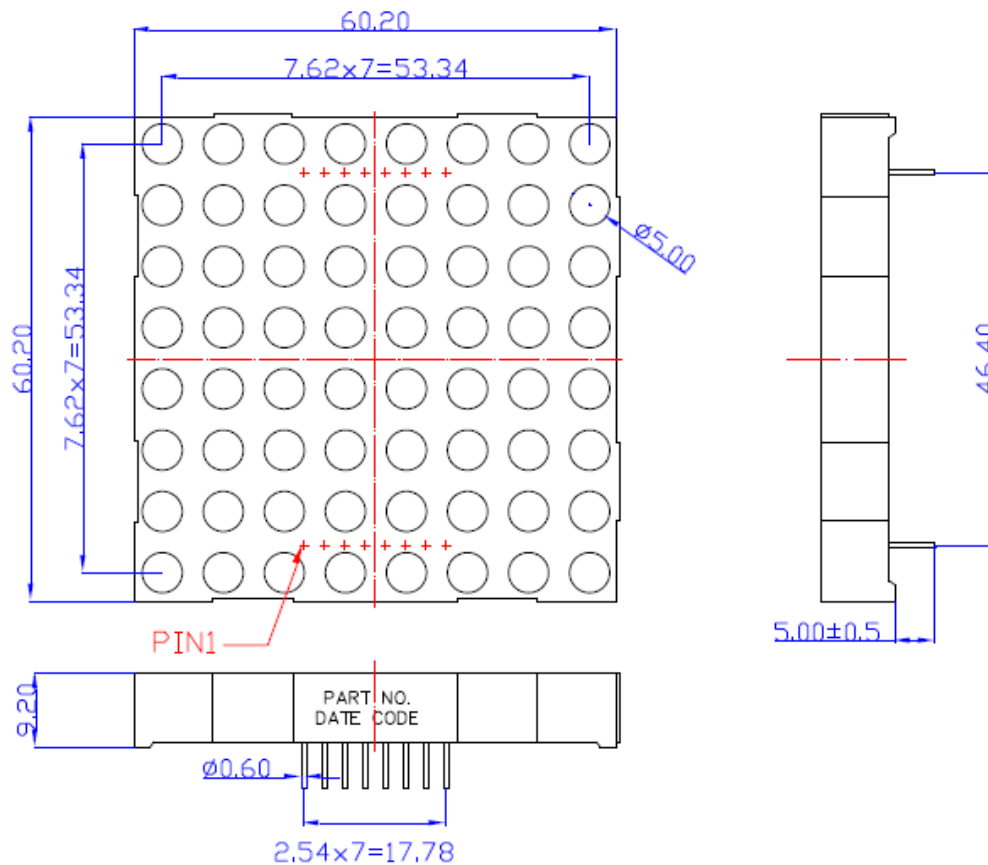
- Instrument panels
- Indoor/Outdoor display board
- Audio equipment

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.
GMC24R88	GMA24R88	AllnGaP	Red	20	2.0	2.6	619	624	629	90
GMC24S88	GMA24S88	AllnGaP	Deep Red	20	2.0	2.6	636	639	647	35
GMC24Y88	GMA24Y88	AllnGaP	Yellow	20	2.0	2.6	585	590	595	90
GMC24O88	GMA24O88	AllnGaP	Orange	20	2.0	2.6	601	606	611	90
GMC24AG88	GMA24AG88	AllnGaP	Yellow Green	20	2.1	2.6	566	571	574	30
GMC24IG88	GMA24IG88	InGaN	True Green	20	3.2	4.0	515	525	530	200
GMC24IB88	GMA24IB88	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
R	60	90	mcd
S	90	120	
T	120	150	
U	150	180	

Luminous Intensity I_V for Deep Red @ I_F=20mA

Bin	Min.	Max.	Unit
P	17	35	mcd
Q	35	53	
R	55	72	

Luminous Intensity I_V for Yellow @ $I_F=20\text{mA}$

Bin	Min.	Max.	Unit
R	60	90	mcd
S	90	120	
T	120	150	
U	150	180	

Luminous Intensity I_V for Orange @ $I_F=20\text{mA}$

Bin	Min.	Max.	Unit
R	60	90	mcd
S	90	120	
T	120	150	
U	150	180	

Luminous Intensity I_V for Yellow Green @ $I_F =20\text{mA}$

Bin	Min.	Max.	Unit
M	10	20	mcd
N	20	30	
O	30	40	

Luminous Intensity I_V for True Green @ $I_F =20\text{mA}$

Bin	Min.	Max.	Unit
R	120	190	mcd
S	190	260	
T	260	330	
U	330	400	

Luminous Intensity I_V for Blue @ $I_F=20\text{mA}$

Bin	Min.	Max.	Unit
T	120	150	mcd
U	150	180	
V	180	210	

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

Bin	Min.	Max.	Unit
1	619	623	nm
2	623	626	
3	626	629	

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

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	

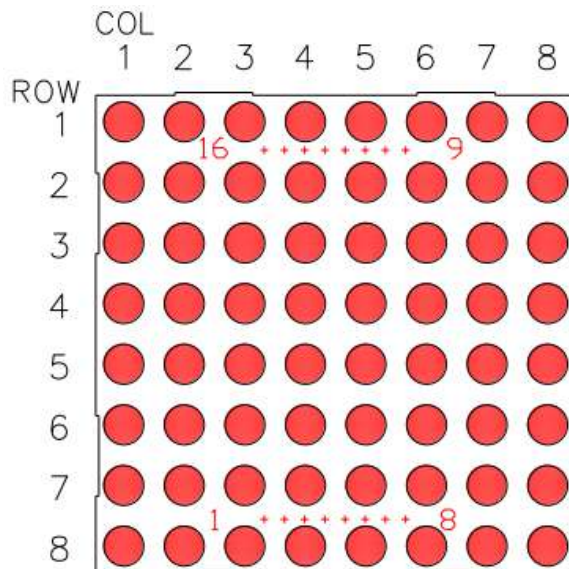
Dominant Wavelength λ_D for True Green @ $I_F = 20\text{mA}$

Bin	Min.	Max.	Unit
1	515	520	nm
2	520	525	
3	525	530	

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

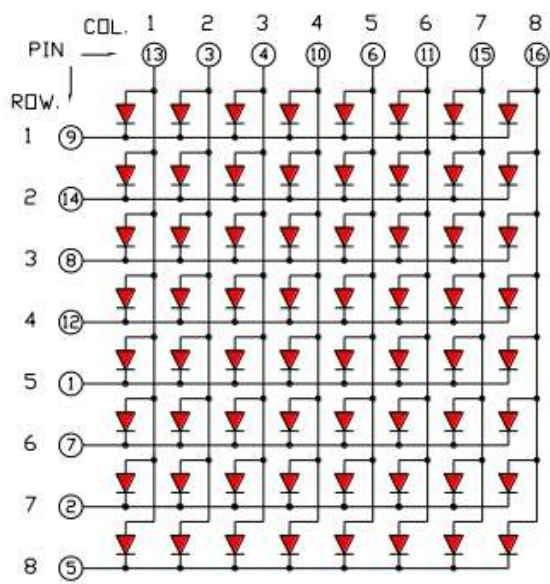
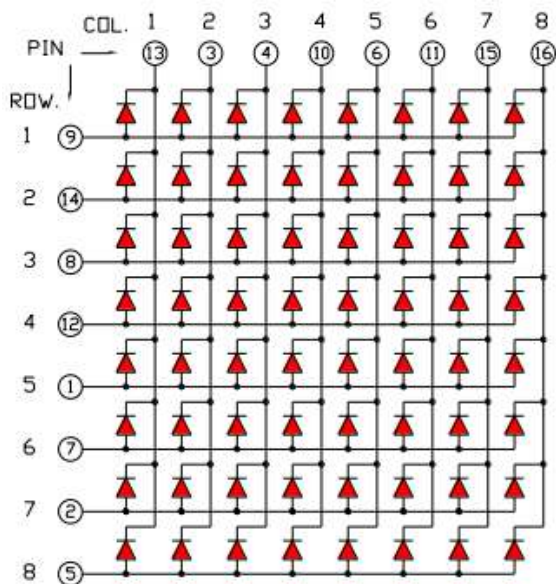
Bin	Min.	Max.	Unit
1	460	462.5	nm
2	462.5	465	
3	465	467.5	
4	467.5	470	

Pin Configuration



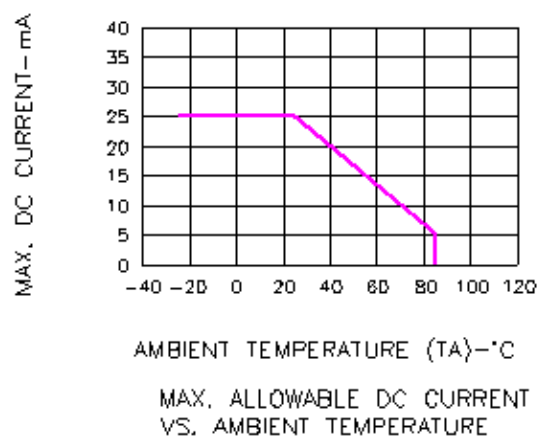
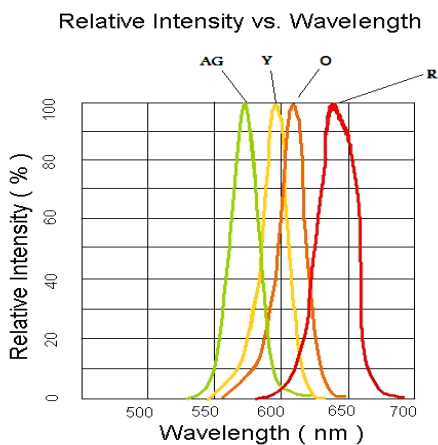
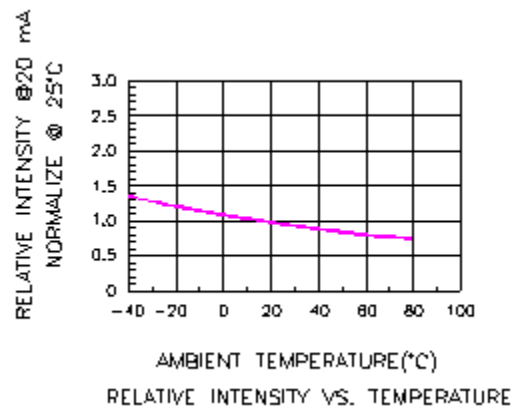
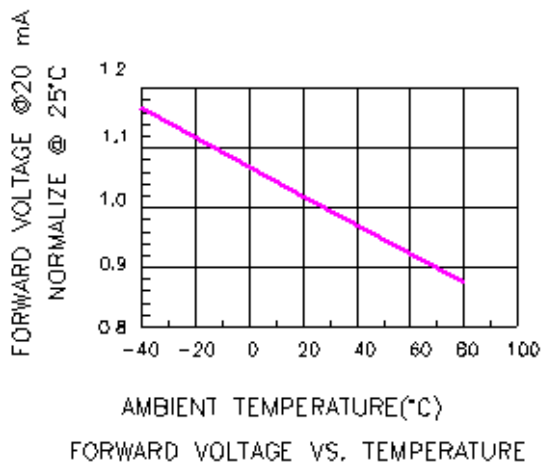
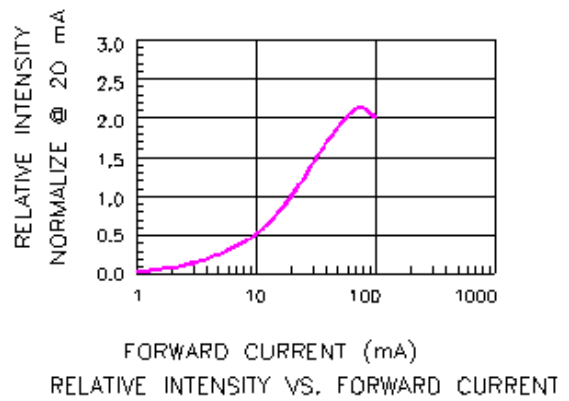
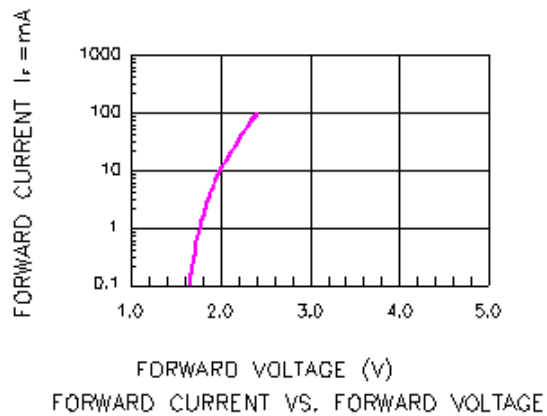
Anode Row, Cathode Column

Anode Column, Cathode Row

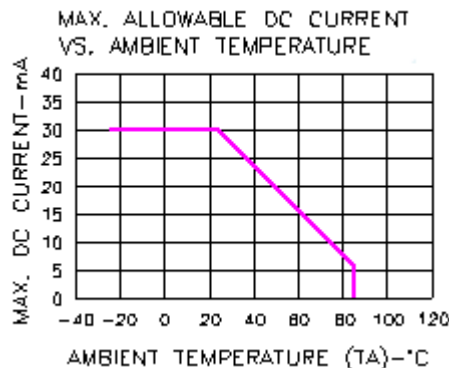
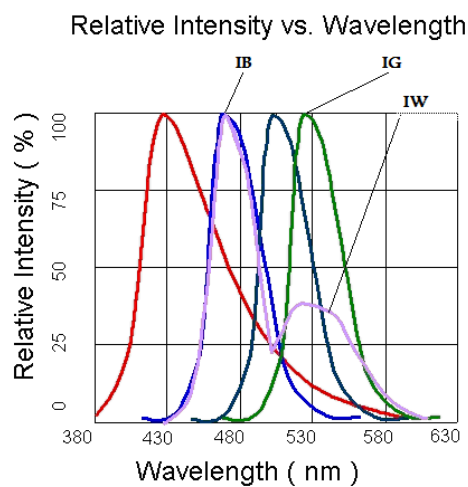
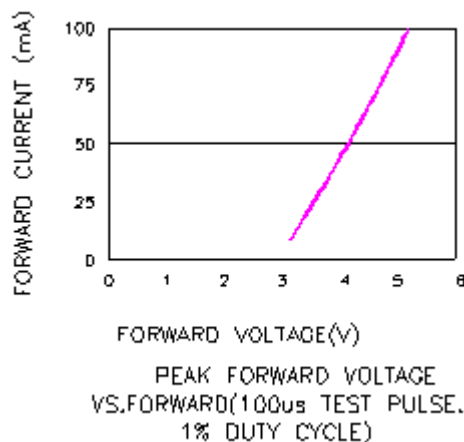
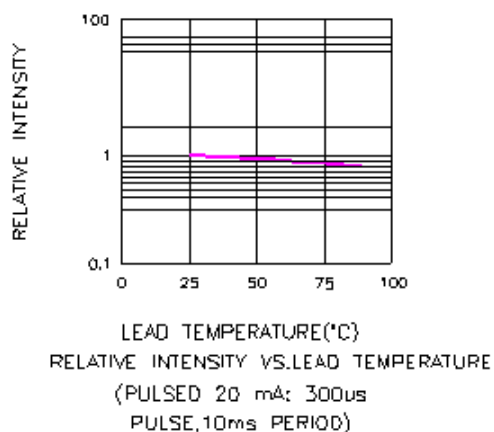
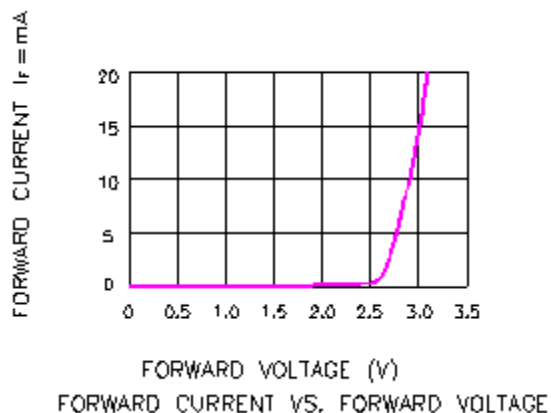
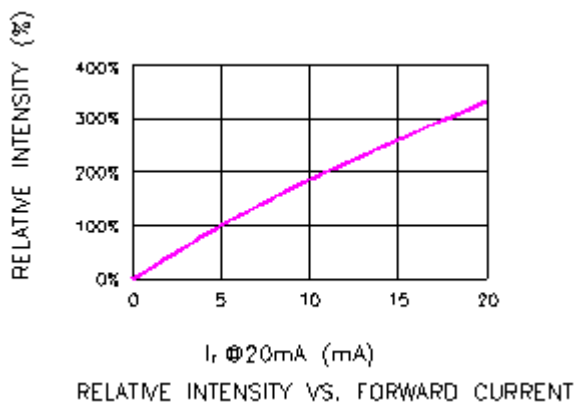


Characteristic Curves

AllnGaP

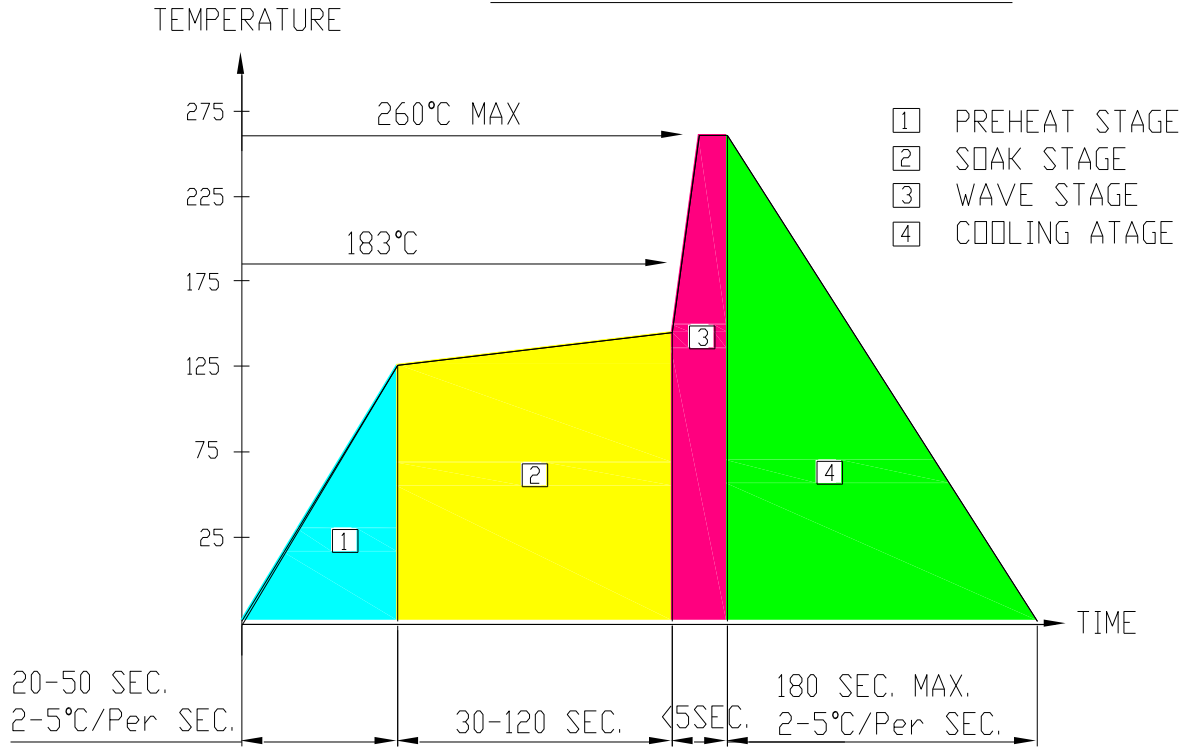


InGaN



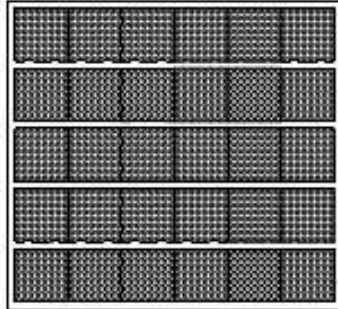
Solder Profile

WAVE SOLDER PROFILE



Package Dimensions

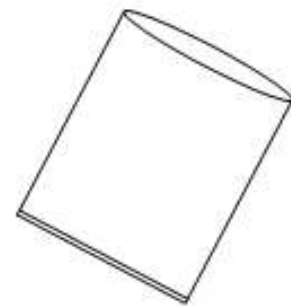
30 PCS / 1 Polyform (6 X 5 PCS)



5 Polyform / 1 BAG
150PCS /Inner Carton

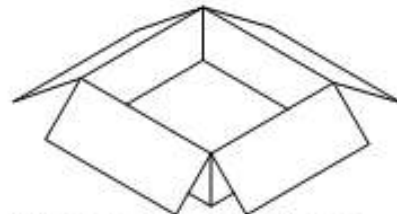


A reference for packing within bag.

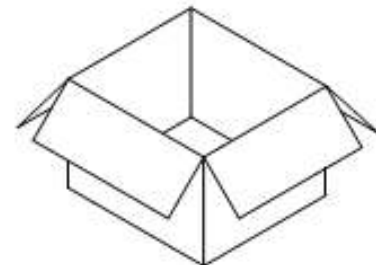


BAG SIZE :450X410X560

300 PCS / 2 INNER CARTON / 1 OUTER CARTON



INNER BOX SIZE : 394 x 370 x 138 mm



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		
GMC24R88	GMA24R88	GMC24R88	GMA24R88	I _v =90mcd typ. @ I _F =20mA, λ _d =619nm to 629nm	30pcs
GMC24S88	GMA24S88	GMC24S88	GMA24S88	I _v =35mcd typ. @ I _F =20mA, λ _d =636nm to 647nm	30pcs
GMC24Y88	GMA24Y88	GMC24Y88	GMA24Y88	I _v =90mcd typ. @ I _F =20mA, λ _d =585nm to 595nm	30pcs
GMC24O88	GMA24O88	GMC24O88	GMA24O88	I _v =90mcd typ. @ I _F =20mA, λ _d =601nm to 611nm	30pcs
GMC24AG88	GMA24A88	GMC24AG88	GMA24AG88	I _v =30mcd typ. @ I _F =20mA, λ _d =566nm to 574nm	30pcs
GMC24IG88	GMA24IG88	GMC24IG88	GMA24IG88	I _v =200mcd typ. @ I _F =20mA, λ _d =515nm to 530nm	30pcs
GMC24IB88	GMA24IB88	GMC24IB88	GMA24IB88	I _v =160mcd typ. @ I _F =20mA, λ _d =460nm to 470nm	30pcs

Revision History

Description:	Revision #	Revision Date
New Release of GMA24XX88_series	V1.0	11/22/2013
Amend brightness and update labeling information/ Amend Part number to GMZ24XX88	V1.1	06/23/2011
Add Blue and Green Color Spec.	V1.2	07/18/2011
Add colors/ bins/ typo fixed	V1.3	10/01/2015

Disclaimer

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