PRODUCT SPECIFICATION

Part Number

PDM88230 Series

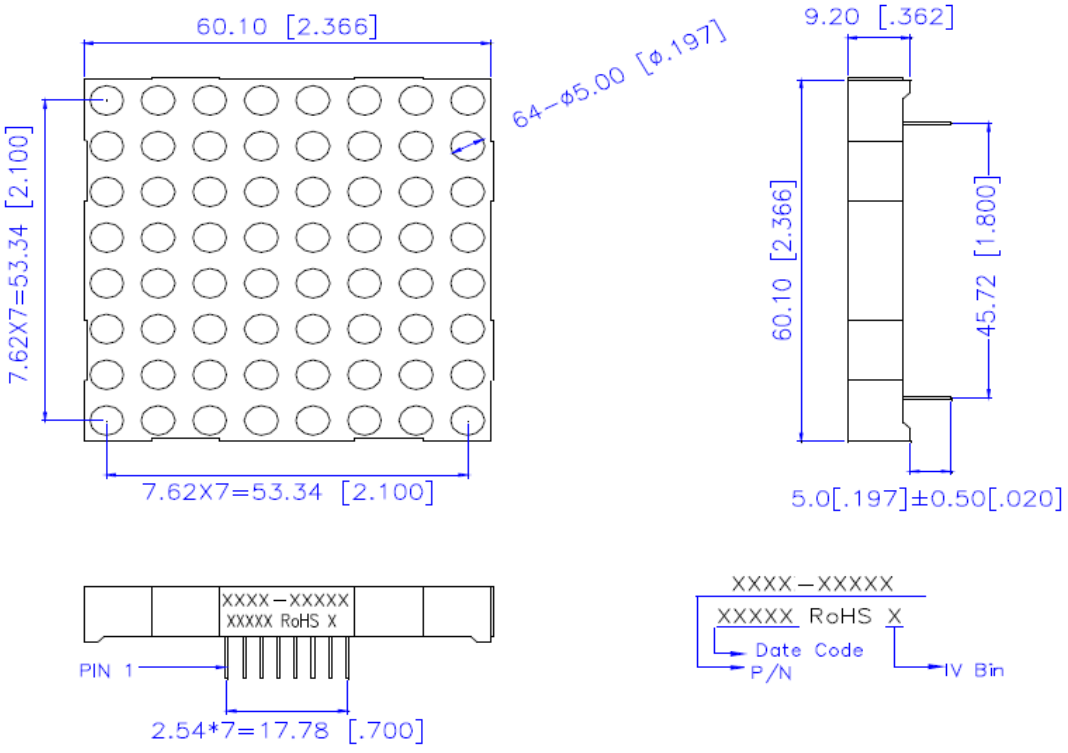
Details

- 2.3” (37.02mm) Dot Matrix Display
- 8x8 Array
- Available in Common Anode or Cathode
- Emitting Color: Pure Green, Yellow Green, Yellow, Amber, Orange-Red, Red or Deep Red

Features

- Low power consumption
- RoHS Compliant
- Gray or Black Face, White Segment
- Easy mounting on PCB or socket

Mechanical Dimensions



Notes:
1. Dimensions in millimeters [inch], and tolerance is ±0.25 [.010] and angle is ±1° unless otherwise noted.
2. Bending ≤ Length*1%
3. All pins are ⍰0.50.[020]±0.1[.004]
4. Specifications subject to change without notice

Device Selection Guide

Model Number		Chip	
Common Column Anode	**Common Column Cathode**	**Material**	**Emitting Color**
PDM88230A-G05	PDM88230C-G05	InGaN	True Green
PDM88230A-G17	PDM88230C-G17	AlInGaP	Yellow Green
PDM88230A-Y04	PDM88230C-Y04		Yellow
PDM88230A-A11	PDM88230C-A11		Amber
PDM88230A-R02	PDM88230C-R02		Orange-Red
PDM88230A-R11	PDM88230C-R11		Red
PDM88230A-R21	PDM88230C-R21		Deep Red

Absolute Maximum Ratings at Ta=25°C

Parameter	**Symbol**	**Rating**		**Unit**
		G17/Y04/A11/R02/R11/R21	G05	
Power Dissipation per Dice	P_{AD}	70	114	mW
Derating Liner from 25°C per Dice	--	0.33	0.4	mA/°C
Continuous Forward Current Per Dice	I_{AF}	25	30	mA
Peak Current Per Dice (duty cycle 1/10, 1KHz)	I_{PF}	90	100	mA
Reverse Voltage Per Dice	VR	5	5	V
Electrostatic Discharge (HBM)	ESD	/	1000	V
Operating Temperature	Topr	-35~+85		°C
Storage Temperature	Tstg	-35~+85		°C
Solder Conditions: 1/16 inch below seating plane for 3 -5 seconds at 260°C.				

Electrical and Optical Characteristics at Ta=25℃

Parameter	Symbol	Chip	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	VF	G05	--	3.2	3.8	V	IF=20mA
		G17/Y04/A11 /R02/R11/R21	--	2	2.8		
Luminous Intensity Per Segment	Iv	G05	--	489	--	mcd	IF=10mA
		G17	--	28	--		
		Y04	--	81	--		
		A11	--	106	--		
		R02	--	62	--		
		R11	--	58			
		R21	--	27	--		
Peak Emission Wavelength / Dominant Wavelength	λP/λd	G05	--	*/525	--	nm	IF=20mA
		G17	--	572/570	--		
		Y04	--	592/590	--		
		A11	--	612/605	--		
		R02	--	632/625	--		
		R11	--	644/630	--		
		R21	--	660/645	--		
Reverse Current	IR		--	--	100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m		--	--	2:1	--	IF=10mA

Typical Electrical/Optical Characteristic Curves

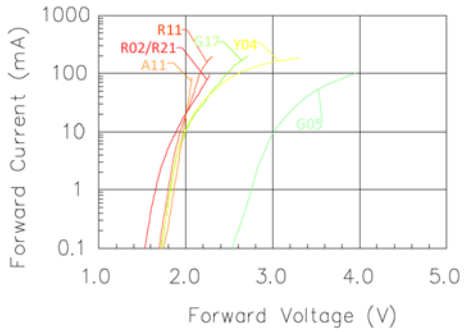


Fig 1. Forward Current vs. Forward Voltage

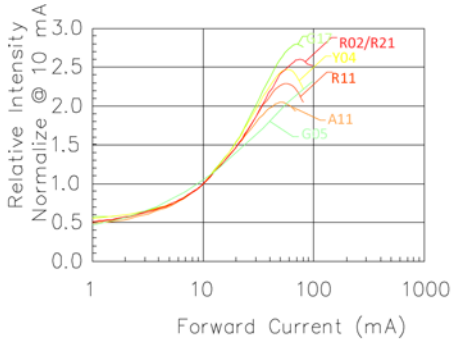


Fig 2. Relative Intensity vs. Forward Current

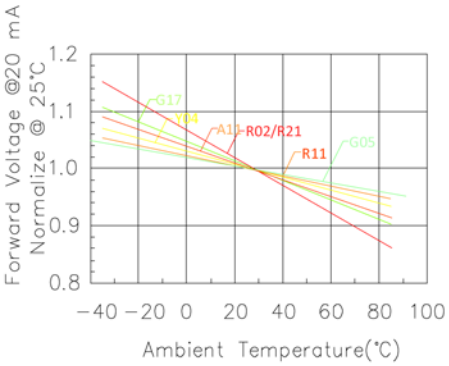


Fig 3. Forward Voltage vs. Temperature

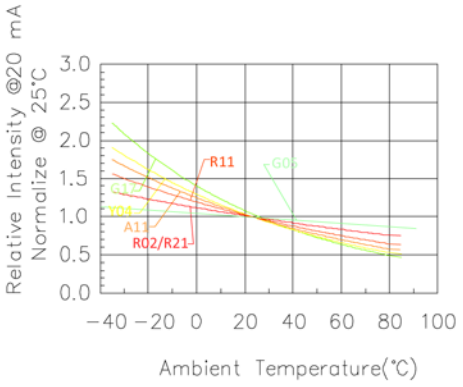


Fig 4. Relative Intensity vs. Temperature

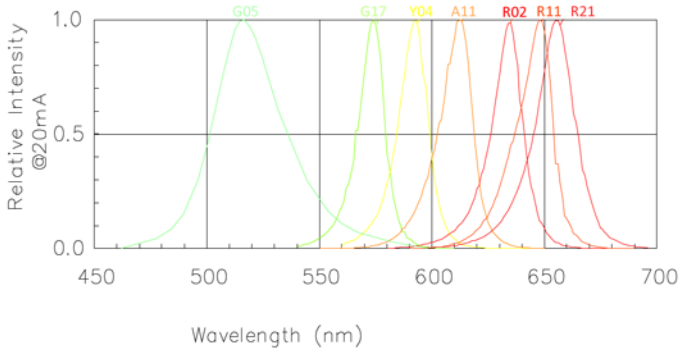


Fig 5. Relative Intensity vs. Wavelength

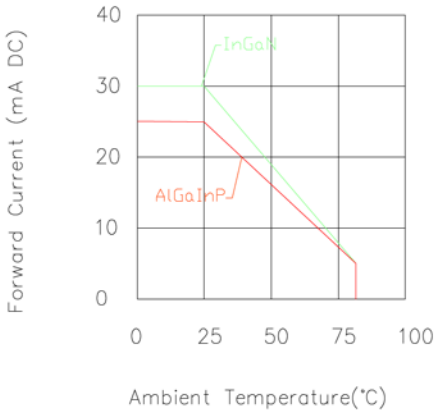


Fig 3. Forward Current vs. Ambient Temperature

Luminous General Iv Bin Grade (I_F = 10mA)

Remark： Unit=mcd
*Tolerance: ±20%

●Pure Green(G05)

1	2	3	4	5
263.185	342.142	444.786	578.222	751.690
I	I	I	I	I
342.141	444.785	578.221	751.689	977.197

●Yellow Green(G17)

N	P	Q	R	S
14.682	19.088	24.815	32.261	41.940
I	I	I	I	I
19.087	24.814	32.260	41.939	54.522

●Yellow (Y04)

S	T	U	V	W
41.940	54.523	70.881	92.146	119.791
I	I	I	I	I
54.522	70.880	92.145	119.790	155.729

●Amber（A11）

T	U	V	W	X
54.523	70.881	92.146	119.791	155.730
I	I	I	I	I
70.880	92.145	119.790	155.729	202.449

●Orange（R02）

R	S	T	U	V
32.261	41.940	54.523	70.881	92.146
I	I	I	I	I
41.939	54.522	70.880	92.145	119.790

●Red（R11）

R	S	T	U	V
32.261	41.940	54.523	70.881	92.146
I	I	I	I	I
41.939	54.522	70.880	92.145	119.790

●Deep Red(R21)

N	P	Q	R	S
14.682	19.088	24.815	32.261	41.940
I	I	I	I	I
19.087	24.814	32.260	41.939	54.522

Color Rank Limits (IF=20mA)

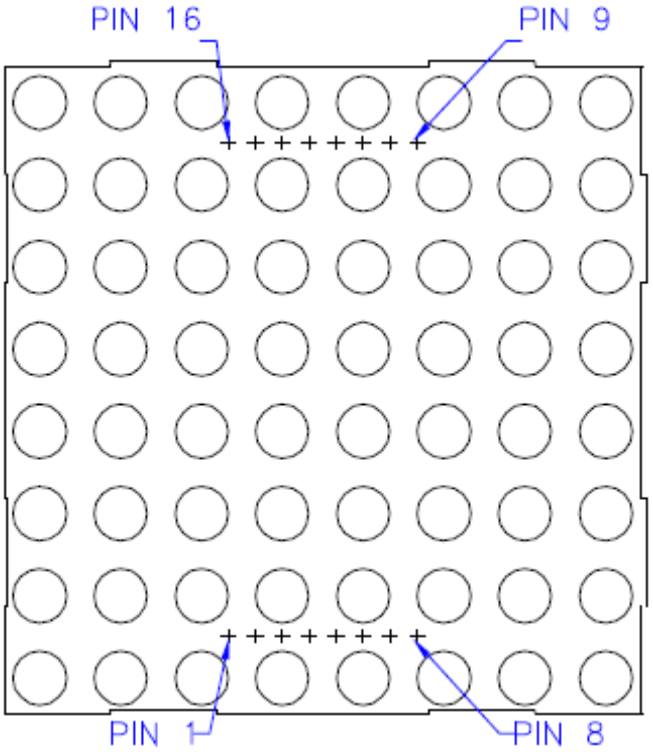
Remark： Unit=nm
*Tolerance: ±1

1	2	3	4	5
515.0	518.0	520.0	522.0	524.0
I	I	I	I	I
518.0	520.0	522.0	524.0	527.0

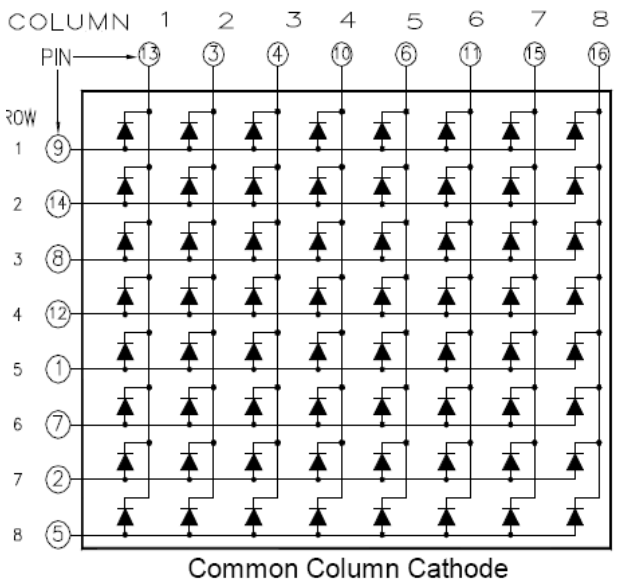
0	1	2	3	4
567.5	569.5	570.5	571.5	573.0
I	I	I	I	I
569.4	570.4	571.4	572.9	575.0

1	2	3	4	5
583.0	585.0	587.0	589.0	591.0
I	I	I	I	I
585.0	587.0	589.0	591.0	593.0

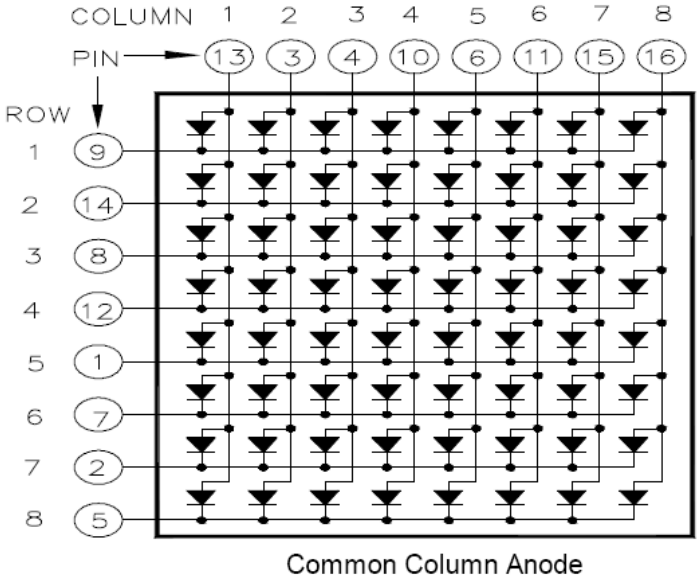
All Light-On Segments Feature & Pad Position



Internal Circuit Diagram



Common Column Cathode

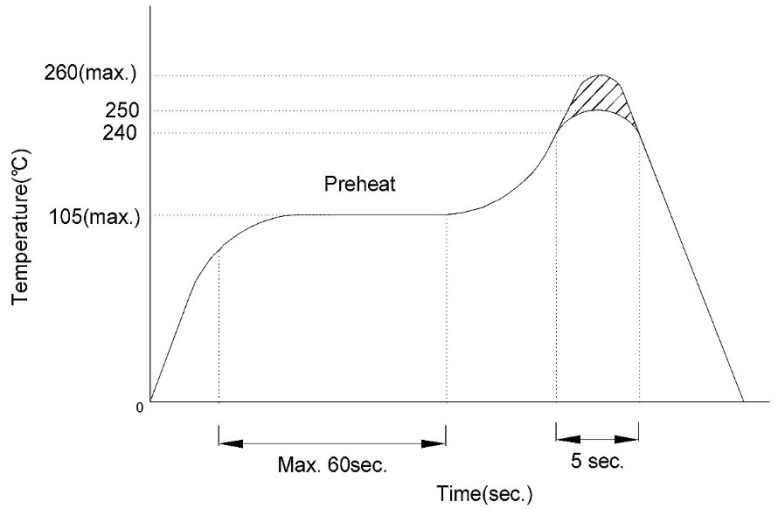


Common Column Anode

Precautions for Use

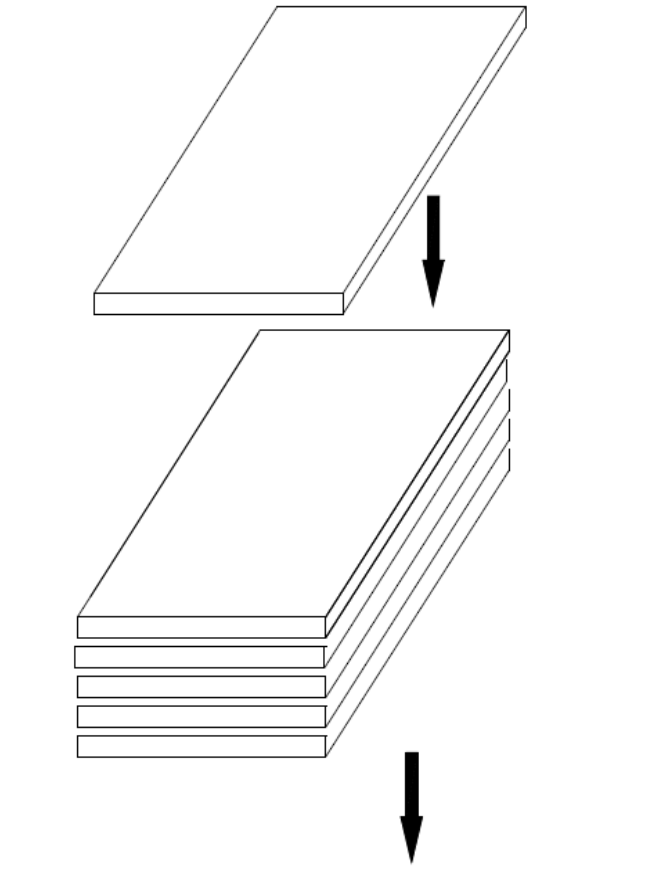
1. Recommended soldering conditions
   1.1. Wave soldering

   Basic SPEC is ≤ 5sec. When 260°C. If temperature is higher, time should be shorter (+10°C→ -1sec.).



   1.2. Soldering Iron:
   Power dissipation of iron should be smaller than 15W and temp should be controllable. Soldering temperature should be under 260°C, time ≤ 3sec.

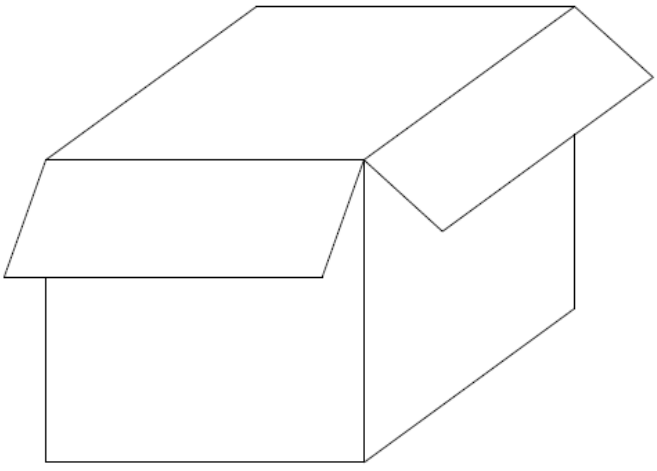
Packing Dimensions



8 Pcs Per PE.foam

PE.foam Size:

L295xW195xH15mm



9 PE.foam Per Box

Q'TY: 72 PCS

Box Size:

L300*W205*H240mm

Note: 1. Specifications subject to change without notice.