PRODUCT SPECIFICATION

Part Number

PDC394-CxMxxx

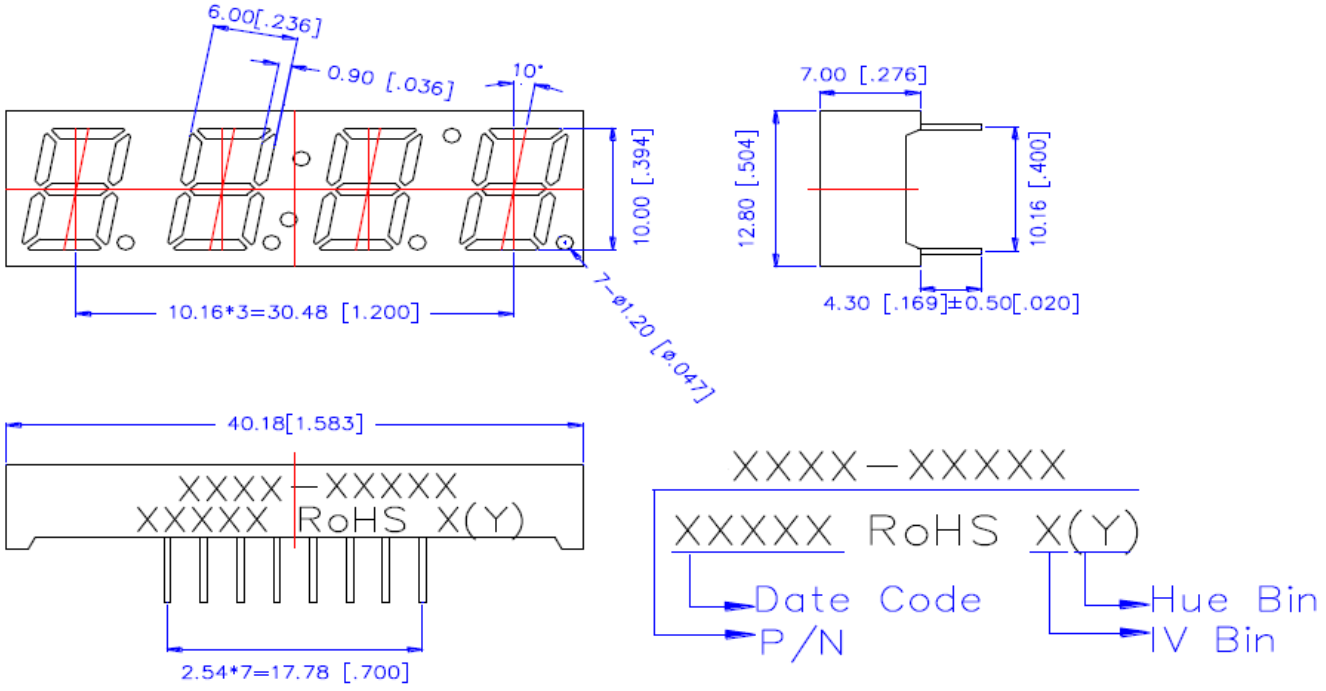
Details

- 0.39”(10.00mm) Display
- 2 Digit, 7 Segment
- Common Anode or Cathode
- AlInGaP or InGaN dice used

Features

- Low power consumption
- RoHS Compliant
- Gray Face, White Segments or Black Face, White Segments
- 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 Ø0 50[.020]±0.1[.004]
4. Specifications subject to change without notice

Device Selection Guide

Model Number	Chip		Description	Note
	Material	Emitting Color		
PDC394-CxMG05	InGaN	True Green	Common Cathode x=C / Common Anode x=A	Add "BFWS" to end of part number for Black Face, White Segment version
PDC394-CxMG17	AlInGaP	Yellow Green		
PDC394-CxMY04		Yellow		
PDC394-CxMA11		Amber		
PDC394-CxMR02		Orange-Red		
PDC394-CxMR11		Red		
PDC394-CxMR21		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°C

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	--	150	--	mcd	IF=10mA
		G17	--	8	--		
		Y04	--	38	--		
		A11	--	47	--		
		R02	--	23	--		
		R11	--	16			
		R21	--	14	--		
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

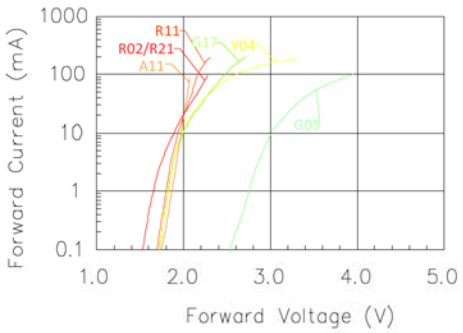


Fig 1. Forward Current vs. Forward Voltage

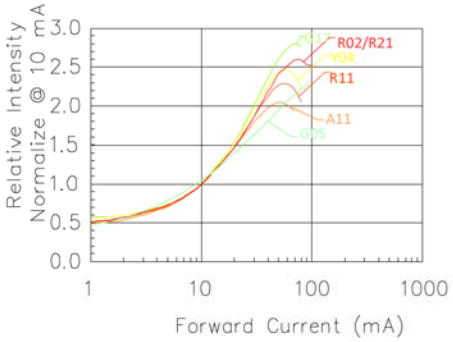


Fig 2. Relative Intensity vs. Forward Current

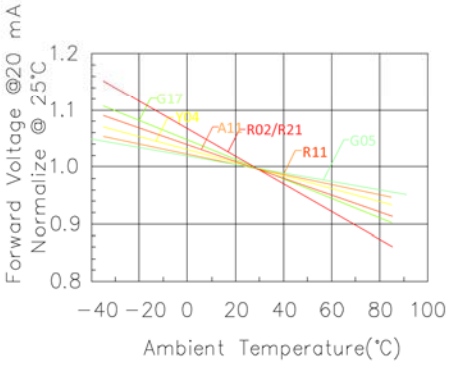


Fig 3. Forward Voltage vs. Temperature

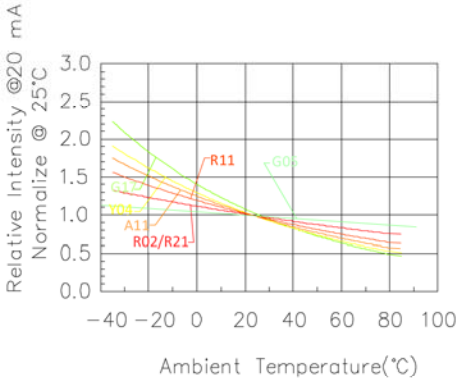


Fig 4. Relative Intensity vs. Temperature

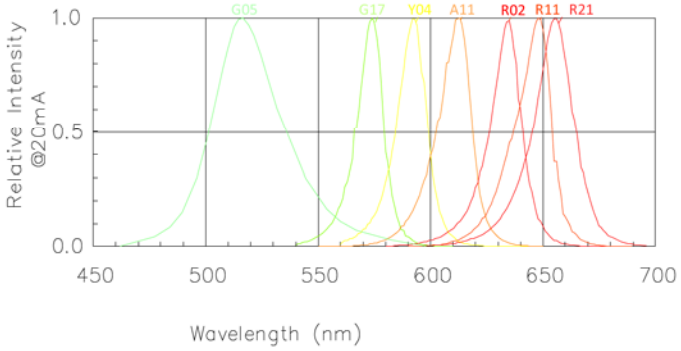


Fig 5. Relative Intensity vs. Wavelength

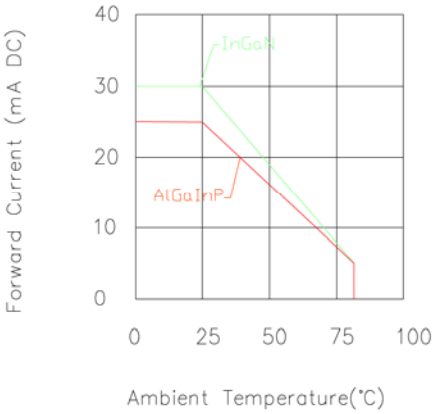


Fig 3. Forward Current vs. Ambient Temperature

Luminous General Iv Bin Grade (IF = 10mA)

Remark： Unit=mcd
*Tolerance: ±20%

●Pure Green(G05)

P	Q	R
70.555	112.889	180.623
I	I	I
112.888	180.622	288.996

●Yellow Green(G17)

H	J	K
4.204	6.727	10.764
I	I	I
6.726	10.763	17.223

●Yellow (Y04)

L	M	N
17.224	27.559	44.096
I	I	I
27.558	44.095	70.554

●Amber（A11）

M	N	P
27.559	44.096	70.555
I	I	I
44.095	70.554	112.888

●Orange（R02）

K	L	M
10.764	17.224	27.559
I	I	I
17.223	27.558	44.095

●Red（R11）

J	K	L
6.727	10.764	17.224
I	I	I
10.763	17.223	27.558

●Deep Red(R21)

J	K	L
6.727	10.764	17.224
I	I	I
10.763	17.223	27.558

Color Rank Limits (IF=20mA)

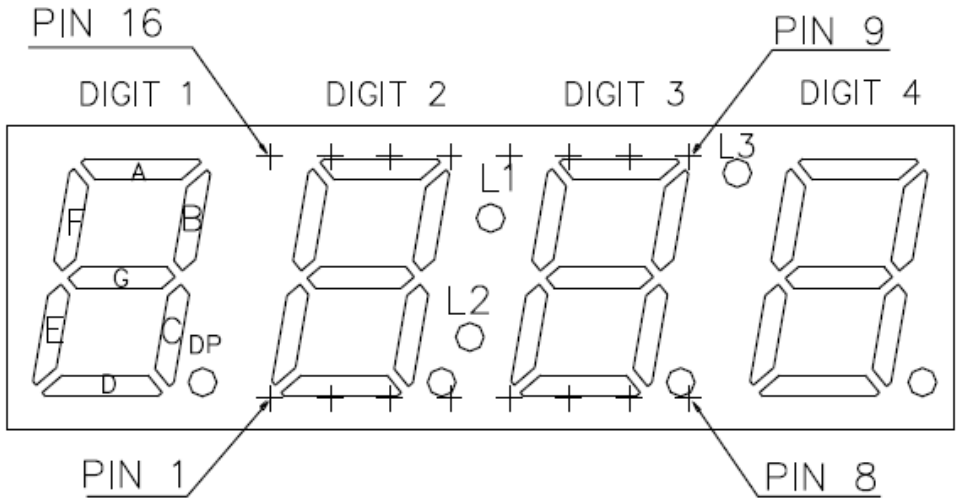
Remark： Unit=nm
*Tolerance: ±1

1	2	3	4	5
515.0	517.0	519.0	521.0	523.0
I	I	I	I	I
517.0	519.0	521.0	523.0	525.0

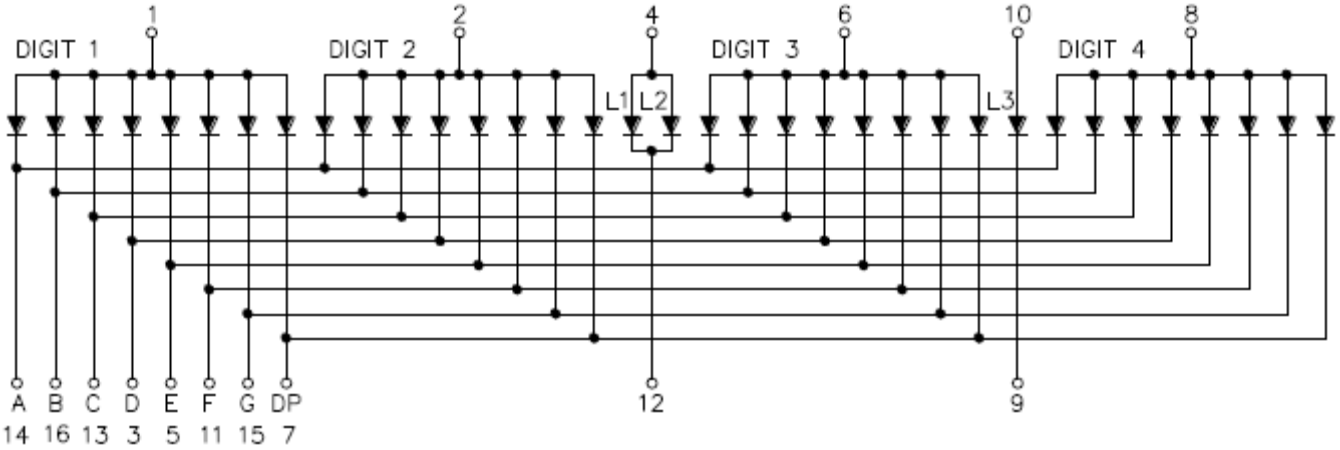
0	1	2	3	4
567.5	569.5	570.5	571.5	573.0
I	I	I	I	I
569.4	570.4	571.4	572.9	575.0

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

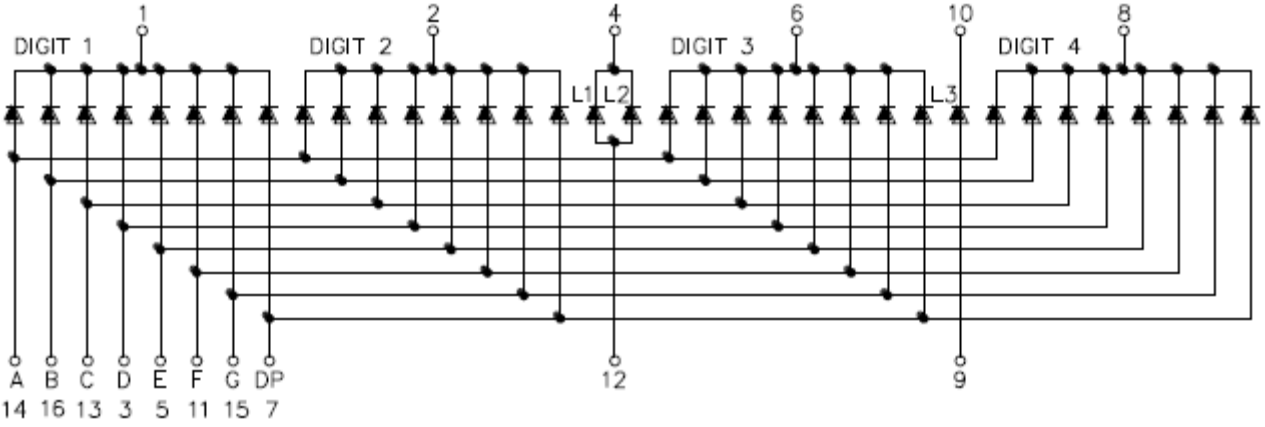
All Light-On Segments Feature & Pad Position



Internal Circuit Diagram



Common Anode

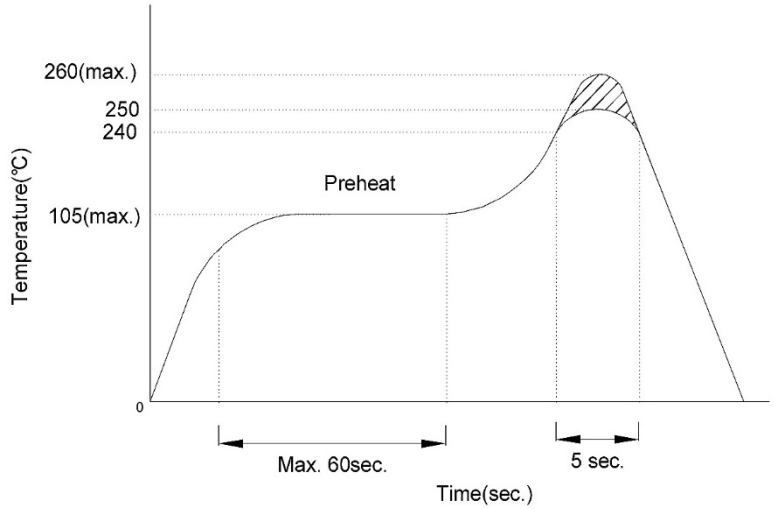


Common Cathode

Precautions for Use

1. Recommended soldering conditions
   1.1. Wave soldering

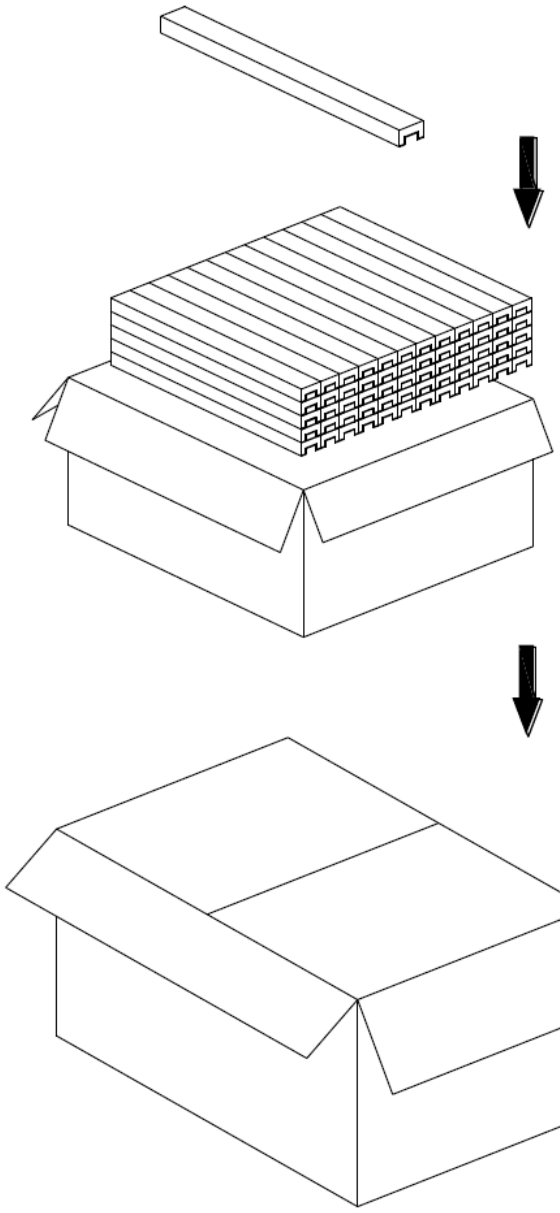
Basic SPEC is ≤ 5sec. When 260°C. If temperature is higher, time should be shorter (+10°C→ -1sec.).



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



12 PCS Per Tube
Tube Size:
L520*W18.2*H18.8 mm

98 Tubes Per Inner Box
Total Q'TY: 1176 Pcs
Box Size:
L530*W265*H155 mm

2 Inner Boxes Per Carton.
Total Q'TY: 2352 Pcs
Box Size:
L530*W345*H290 mm

Note: 1. Specifications subject to change without notice.

	Approved By	Checked By	Prepared By
Customer Approval Signatures			

Record Of Revisions			
Rev.	**Comments**	**Page**	**Date**
0	Released Spec	--	11/12/13
1	Logo Update	All	04/08/15