

PRODUCT SPECIFICATION

Part Number
PDC80-CADW01

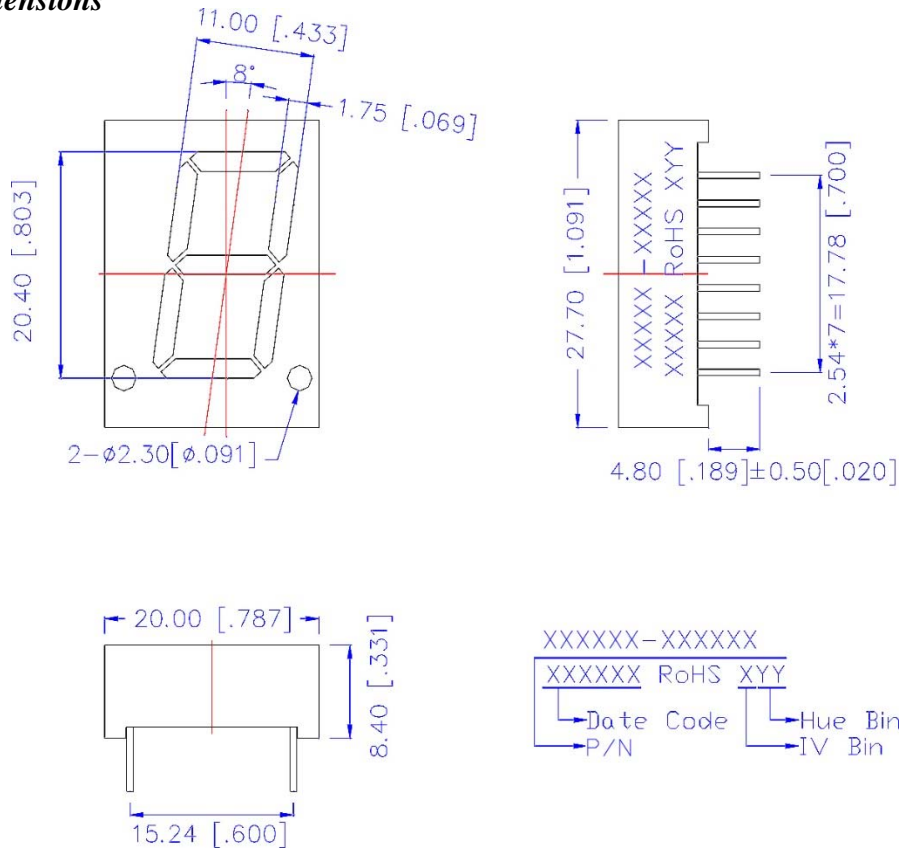
Details

- 0.80" (20.40mm) LED Display
- 1 Digit, 7 Segment
- Case Mold Type
- InGaN Dice Used
- Emitting Color: White

Features

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

Mechanical Dimensions



Notes:

1. Dimensions in millimeters [inch], and tolerance is ± 0.25 [.010] unless otherwise noted.
2. Bending \leq Length*1%
3. All pins are $\phi 0.51$ [.020] ± 0.1 [.004]
4. Specifications subject to change without notice





Device Selection Guide

Model Number	Chip		Description
	Material	Emitting Color	
PDC80-CADW01	InGaN	Super Bright White	Common Anode

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Rating	Unit
Power Dissipation per Dice	P _{AD}	114	mW
Derating Liner from 25°C per Dice	--	0.4	mA/°C
Continuous Forward Current Per Dice	I _{AF}	30	mA
Peak Current Per Dice (duty cycle 1/10, 1KHz)	I _{PF}	100	mA
Reverse Voltage Per Dice	V _R	5	V
Electrostatic Discharge (HBM)	ESD	1500	V
Operating Temperature	T _{opr}	-35~+85	°C
Storage Temperature	T _{stg}	-35~+85	°C

Solder Conditions: 1/16 inch below seating plane for 3 seconds at 260°C.

Electrical and Optical Characteristics at Ta=25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	V _F	--	3.2	3.8	V	IF=20mA
Luminous Intensity Per Segment	I _v	70	137	--	mcd	IF=10mA
Chromaticity Coordinates	X	--	0.27	--	--	
	Y	--	0.25	--	--	
Reverse Current	I _R	--	--	1000	μA	V _R =5V
Luminous Intensity Matching Ratio	I _{v-m}	--	--	2:1	--	IF=10mA

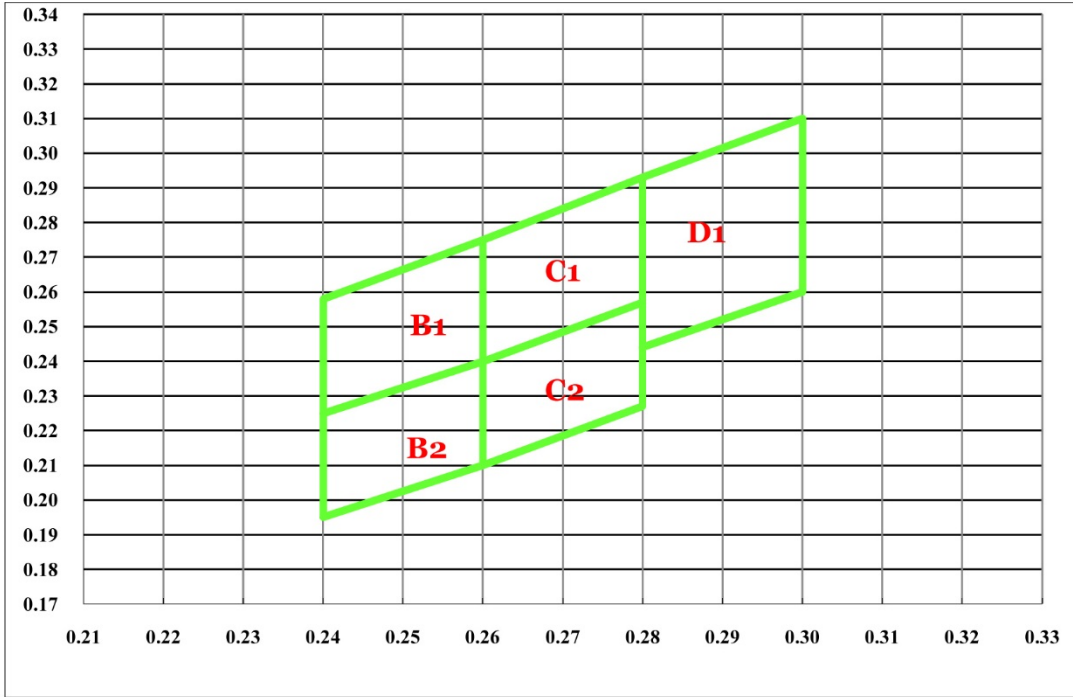
Note: Chromaticity Coordinate Tolerance: ±0.01

Luminous General I_v Bin Grade (IF=20mA)

U	V	W	X	Y
70.881	92.146	119.791	155.730	202.450
92.145	119.790	155.729	202.449	263.184

Note: Unit=mcd
Tolerance: ±20%

Color Rank Limits (IF=10mA)



B1				
X	0.240	0.240	0.260	0.260
Y	0.225	0.258	0.275	0.240

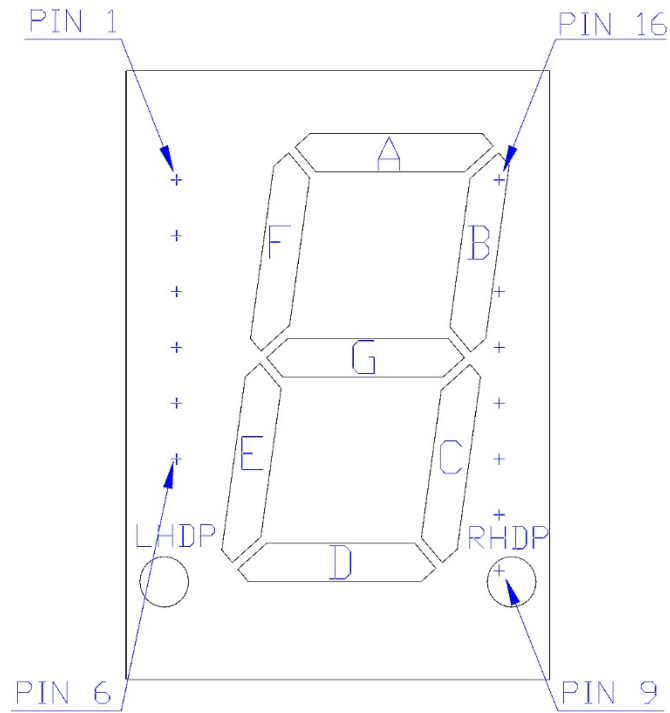
B2				
X	0.240	0.240	0.260	0.260
Y	0.195	0.225	0.240	0.210

C1				
X	0.260	0.260	0.280	0.280
Y	0.240	0.275	0.293	0.257

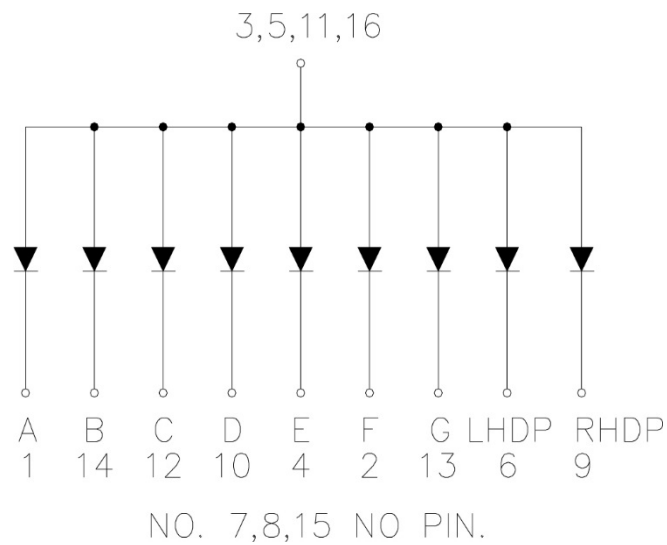
C2				
X	0.260	0.260	0.280	0.280
Y	0.210	0.240	0.257	0.227

D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

All Light-On Segments Feature & Pad Position



Internal Circuit Diagram



Typical Electrical / Optical Characteristic Curves

- (Ta = 25°C Unless Otherwise Noted)

Fig 1. Forward Current Vs. Ambient Temperature

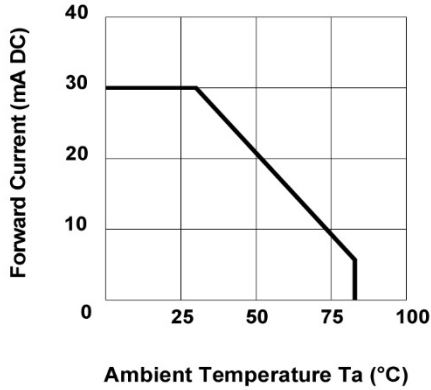


Fig 2. Forward Current Vs. Forward Voltage

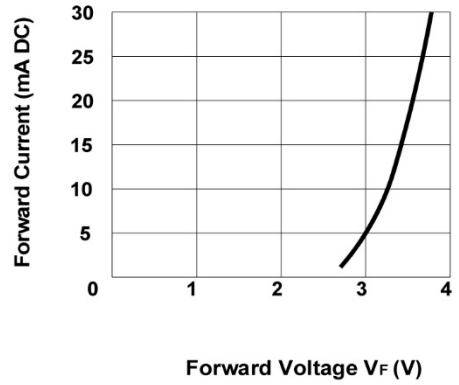


Fig 3. Relative Intensity Vs. Forward Current

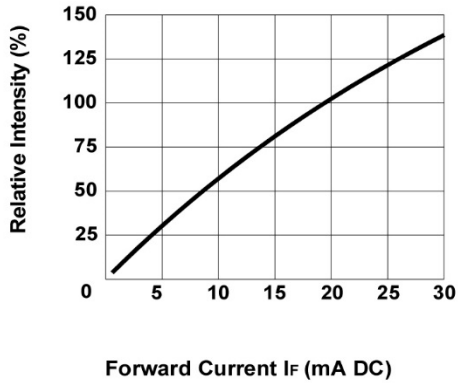


Fig 4. Peak Forward Voltage Vs. Forward Current (100us test pulse, 1% duty cycle)

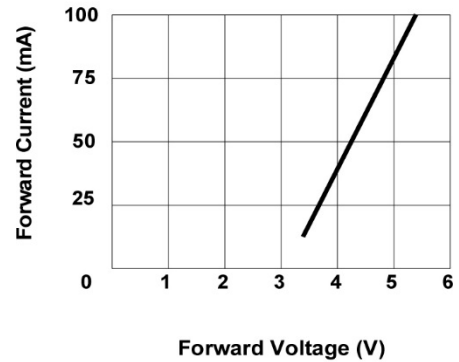
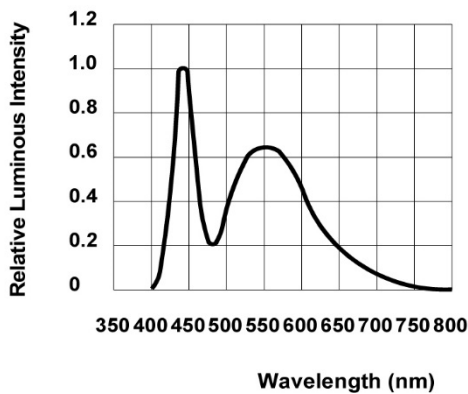
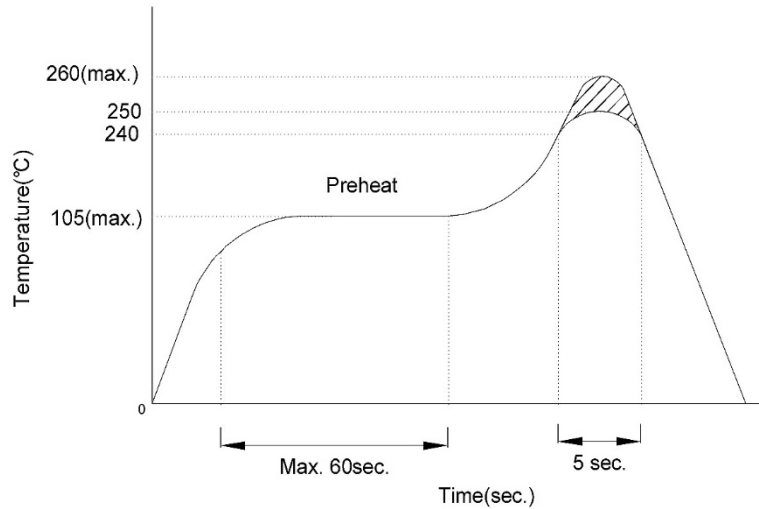


Fig 5. Relative Intensity Vs. Wavelength



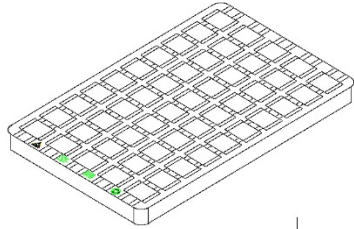
Precautions for Use

1. Recommended soldering conditions
 - a. Wave soldering

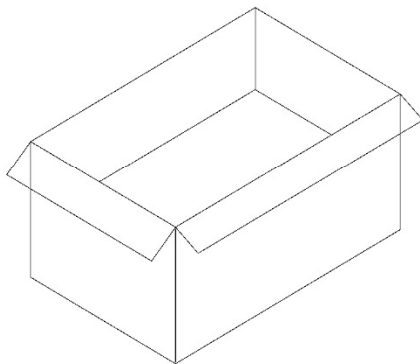
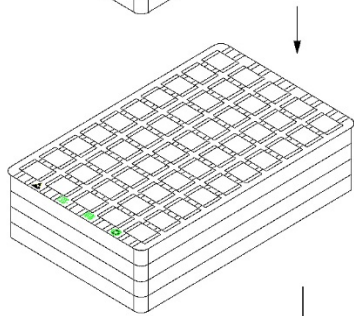


2. Soldering Iron:
 - a. Basic SPEC. is ≤ 5 sec. When 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1$ sec.). Power dissipation of iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C .

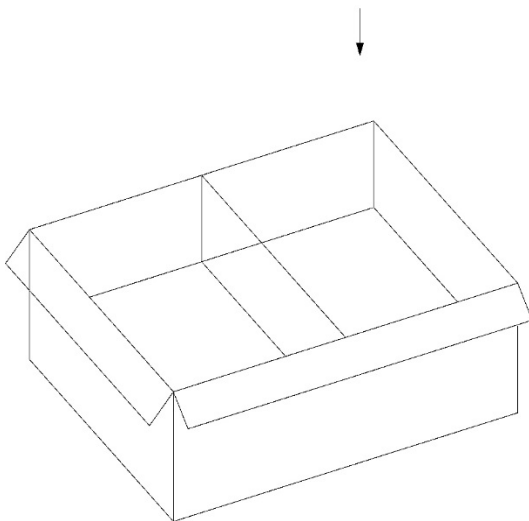
Packing Dimensions



1 Tray From Box = 50 PCS
Tray Size:
L300 x W190 x H18mm



12 Trays Per Inner Box
Q'TY: 600 PCS.
Box Size:
L300 x W205 x H240mm



2 Inner Boxes Per Carton.
Total Q'TY: 1200 Pcs
Carton Size:
L431 x W320 x H252mm

