PRODUCT SPECIFICATION

Part Number

PDC303SM-CAMW01

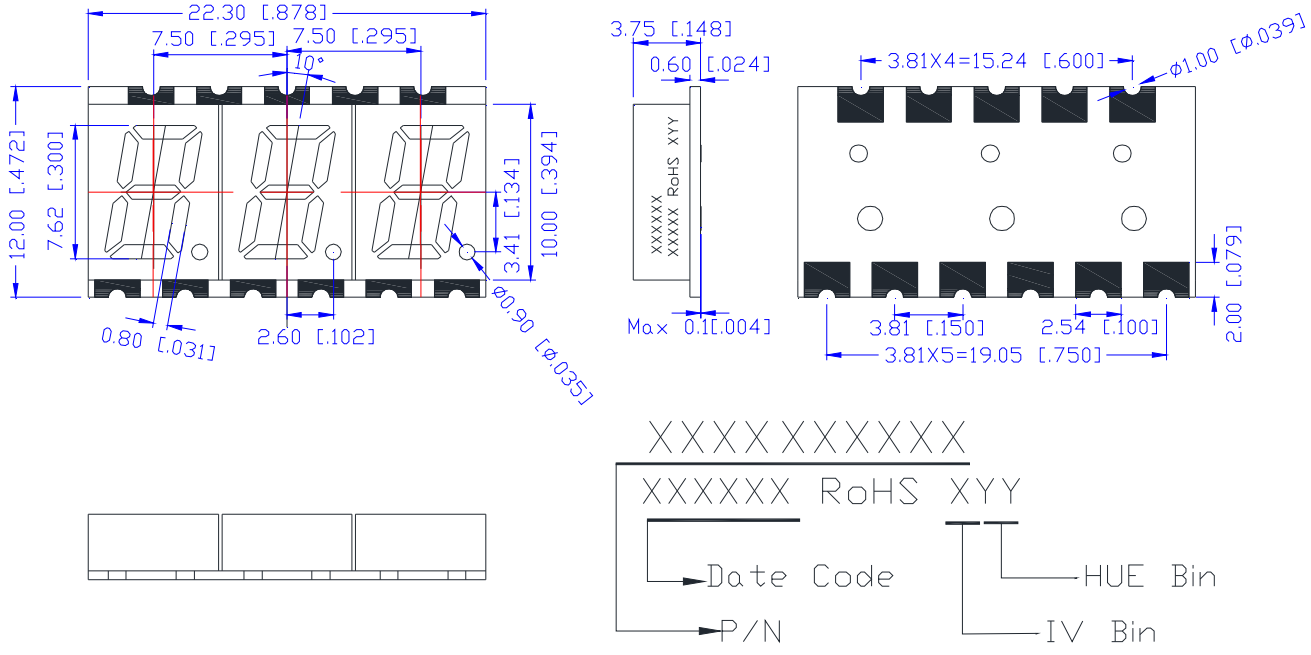
Details

- 0.30” Surface Mount LED Display
- 3 Digit, 7 Segment
- Common Anode
- InGaN Chip Material
- Emitting Color: White

Features

- Low power consumption
- RoHS Compliant
- Gray Face, White Segments
- Easy mounting on PCB
- JEDEC MSL 2a

Mechanical Dimensions



Notes:
1. Dimensions in millimeters [inch], and tolerance is ±0.25 [.010] unless otherwise noted.
2. Specifications subject to change without notice

Device Selection Guide

Model Number	Chip		Description	Note
	Material	Emitting Color		
PDC303SM-CAMW01	InGaN	White	Common Anode	Add "-BW" to end of part number for Black Face, White Segment version

Absolute Maximum Ratings at Ta=25℃

Parameter	Symbol	Rating	Unit
Power Dissipation per Dice	PAD	114	mW
Derating Liner from 25℃ per Dice	--	0.4	mA/℃
Continuous Forward Current Per Dice	IAF	30	mA
Peak Current Per Dice (duty cycle 1/10, 1KHz)	IPF	100	mA
Reverse Voltage Per Dice	VR	5	V
Electrostatic Discharge (HBM)	ESD	1000	V
Operating Temperature	Topr	-40~+105	℃
Storage Temperature	Tstg	-40~+105	℃
Soldering Temp	Tsol	350	℃

Electrical and Optical Characteristics at Ta=25℃

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage Per Segment	VF	--	2.7	3.1	V	IF=5mA
Luminous Intensity Per Segment	Iv	--	25	--	mcd	IF=5mA
Chromaticity Coordinates	X	--	0.27	--	--	IF=5mA
	Y	--	0.25	--	--	IF=5mA
Reverse Current	IR	--	--	50	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m	--	--	2:1	--	IF=5mA

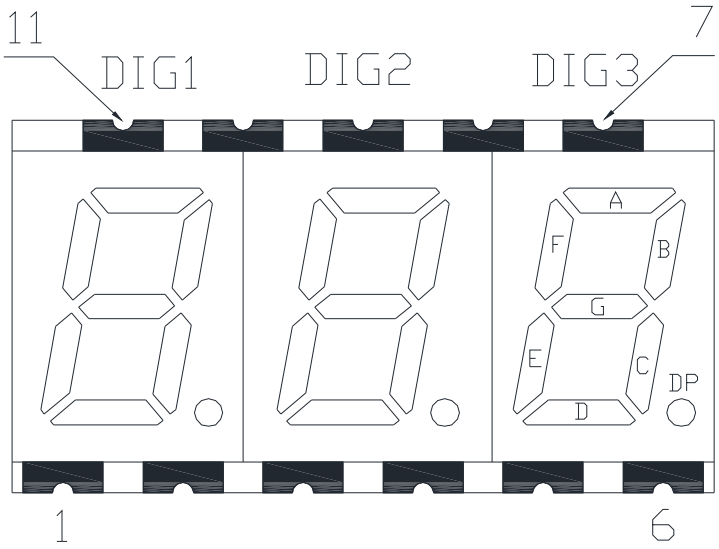
Luminous General Iv Bin Grade (IF=5mA)

A	B	C	D	E	F	G	H	J	K	L	M
0.15	0.24	0.39	0.64	1.02	1.64	2.62	4.20	6.72	10.76	17.22	27.55
5 (	9 (	9 (	0 (	5 (	1 (	7 (	4 (	7 (	4 (	4 (	9 (
0.24	0.39	0.63	1.02	1.64	2.62	4.20	6.72	10.76	17.22	27.55	44.09
8N	8P	9Q	4R	0S	6T	3U	6V	3W	3X	8Y	51
44.09	70.55	112.88	180.62	288.99	462.39	739.83	1183.73	1893.98	3030.37	4848.59	7757.75
6 (	5 (	9 (	2 (	7 (	7 (	6 (	8 (	2 (	2 (	7 (	6 (
70.55	112.88	180.62	288.99	462.39	739.83	1183.73	1893.98	3030.37	4848.59	7757.75	12412.40
4 2	8 3	2 4	6 5	6 6	5 7	7 8	1 9	1	6	5	9
4034.03	19859.85	31775.77	50841.23	81345.98	130153.57	208245.71	333193.14				
4 (	8 (	3 (	8 (	2 (	3 (	8 (	9 (				
19859.85	31775.77	50841.23	81345.98	130153.57	208245.71	333193.14	533109.03				
7	2	7	1	2	7	8	9				

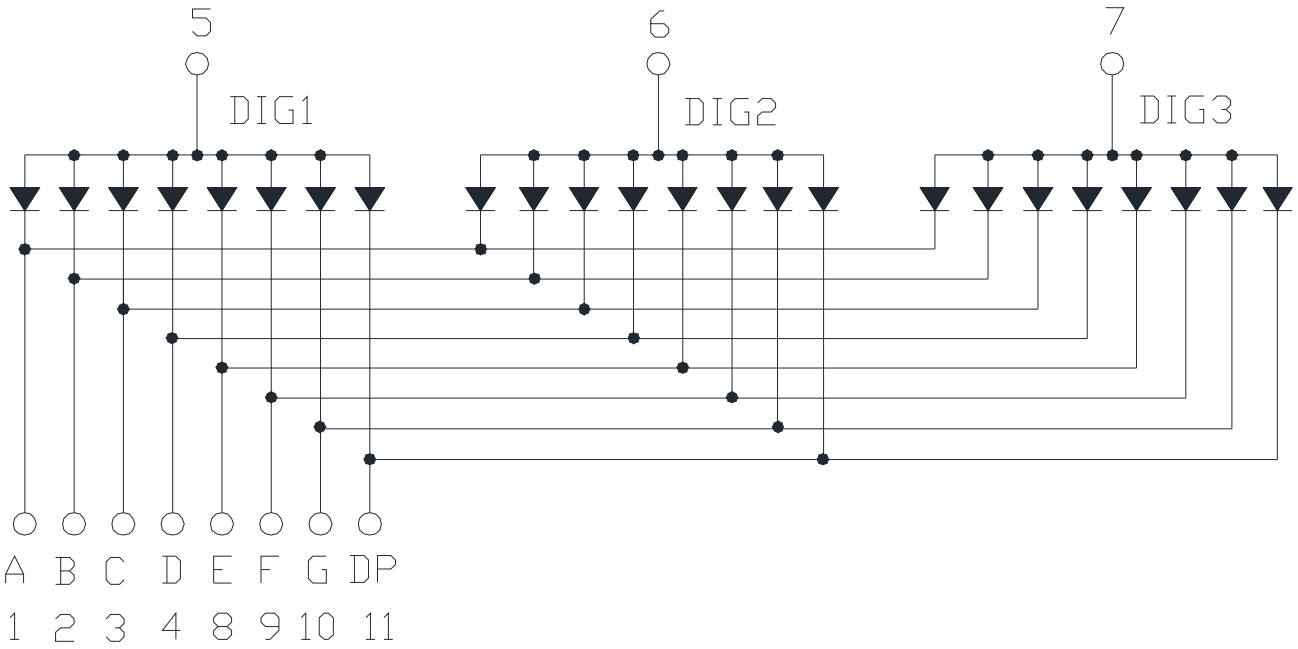
*Remark： Unit=mcd

*Tolerance: ±20%

All Light-On Segments Feature & Pad Position



Internal Circuit Diagram



Typical Electrical / Optical Characteristic Curves

- **(Ta = 25℃ Unless Otherwise Noted)**

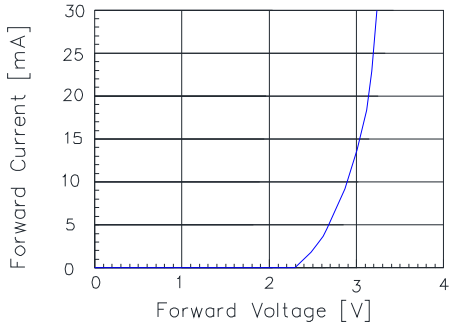


Fig 1. Forward Current vs. Forward Voltage

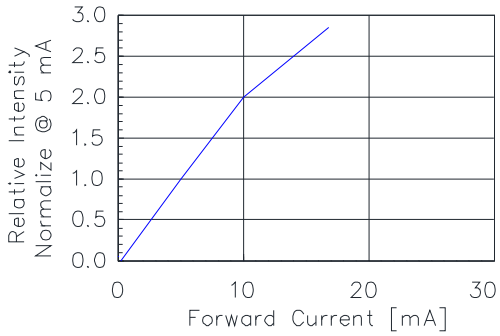


Fig 2. Relative Intensity vs. Forward Current

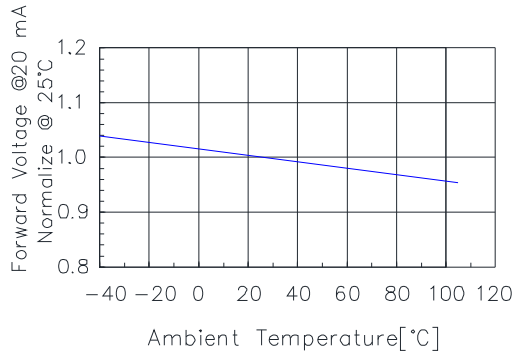


Fig 3. Forward Voltage vs. Temperature

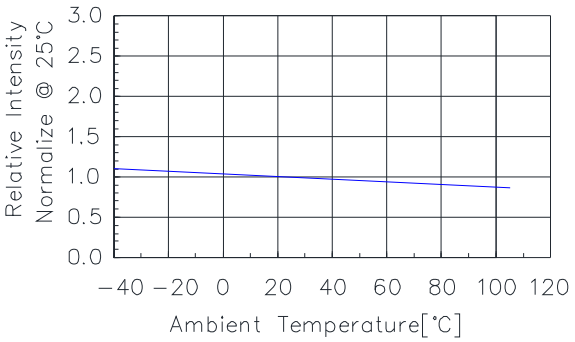


Fig 4. Relative Intensity vs. Temperature

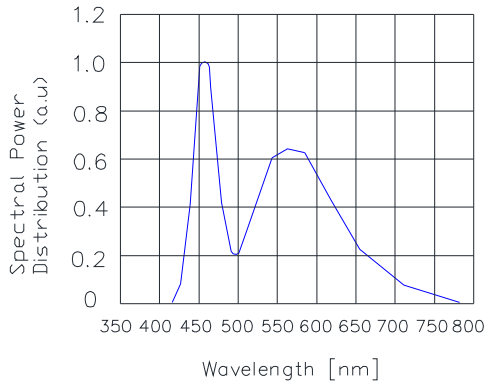


Fig 5. Spectral Power Distribution vs. Wavelength

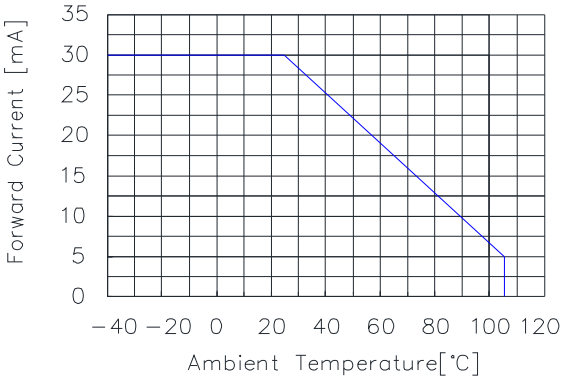
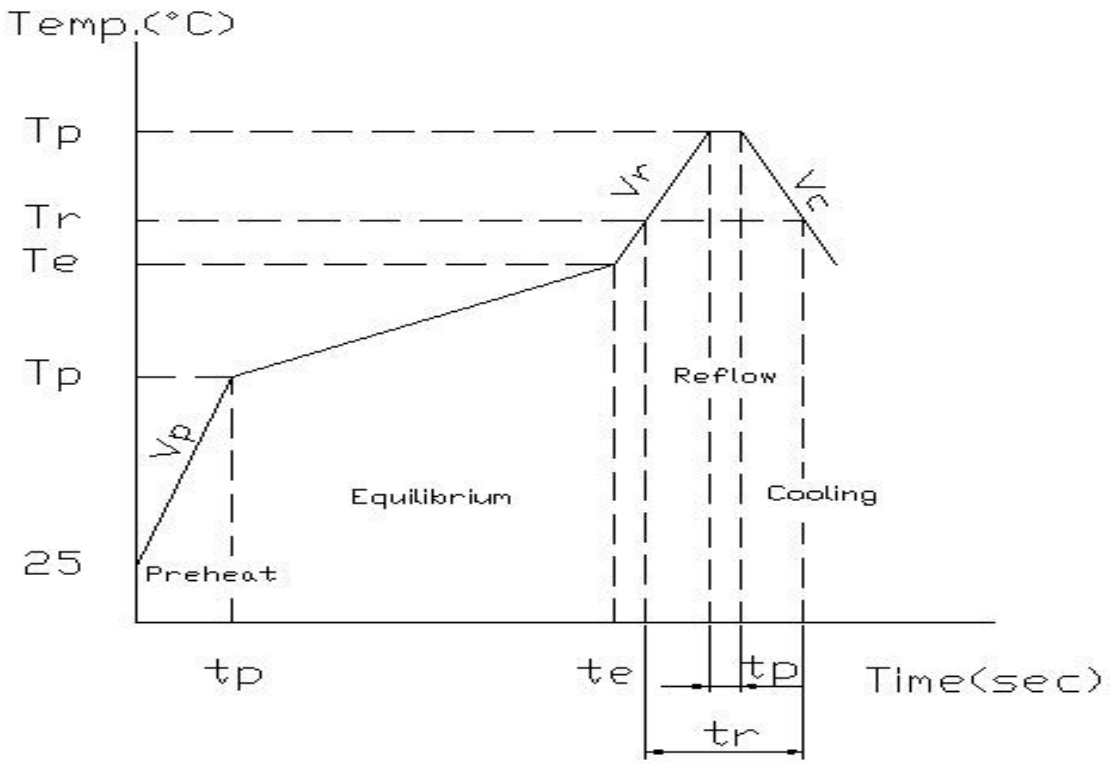


Fig 6. Forward current vs. Temperature

Soldering Characteristics

1. IR-Reflow Soldering Profile

Area	Title	Symbol	Min	Max	Unit
(1)Preheat	Ramp-up rate	Vp	1	5	℃/sec
	temperature	Tp	150	—	℃
	time	tp	—	—	sec
(2)Equilibrium	Ramp-up rate	Ve	—	—	℃/sec
	temperature	Te	150	200	℃
	Time	te	60	120	sec
(3)Reflow	Ramp-up rate	Vr	1	5	℃/sec
	temperature	Tr	220	—	℃
	Time	tr	—	60	sec
	Peak temperature	Trp	—	260	℃
	Peak time	trp	—	10	sec
(4)Cooling	Ramp-down rate	Vc	3	6	℃/sec



2. Hand Soldering (Iron Condition)

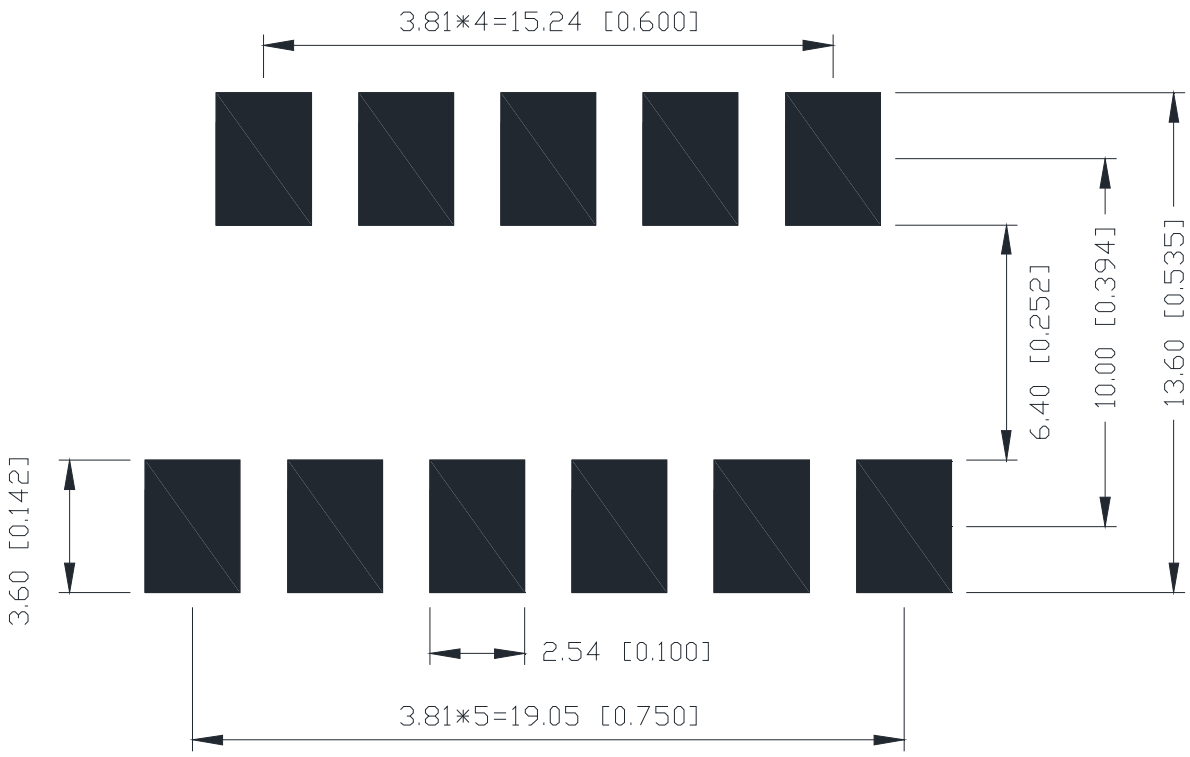
Soldering Iron:30W Max

Temperature 350℃ Max

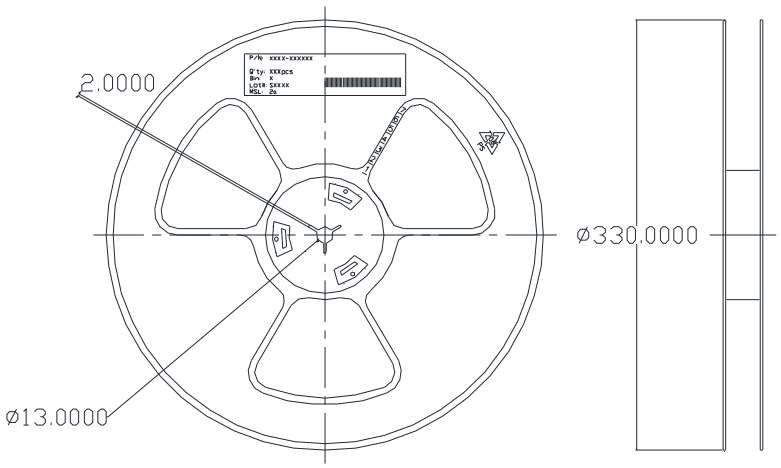
Soldering Time:3 Seconds Max(One Time)

Distance:1.6mm min(From seating plane)

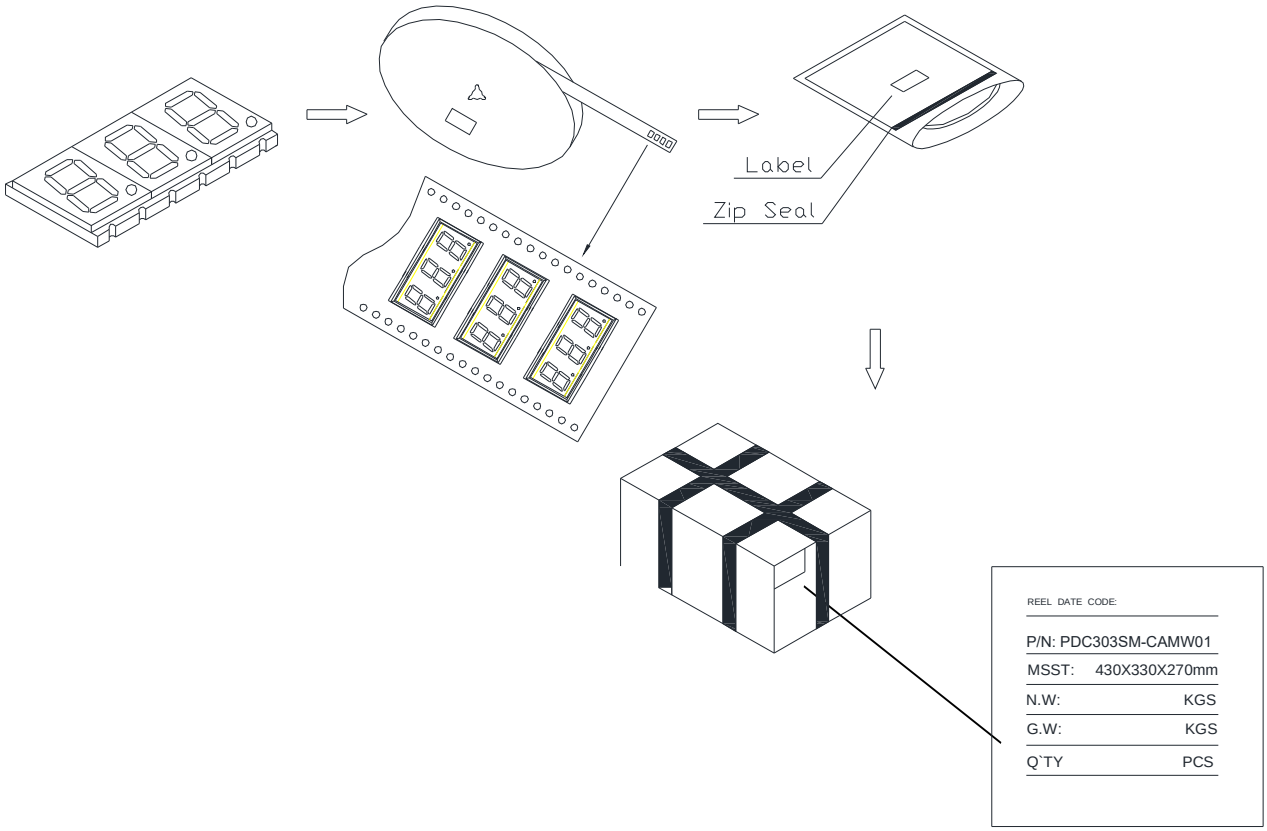
Soldering Pad Size



Reel Dimensions



Packing & Label Specifications



Package Name	Size	Unit	Amount	Unit	Amount	Unit	Note
Reel	Ø330	mm	1	Reel	750	pcs	/
Bag	L450 x W430	mm	1	Reel	750	pcs	/
Outer Box	L430 x W330 x H270	mm	5	Bag	3000	pcs	/

PDC303SM-CAMW01 Customer Approval Signatures	Approved By	Notes/Remarks

Record Of Revisions			
Rev.	**Comments**	**Page**	**Date**
0	Released Spec	--	04/23/19