

PRODUCT SPECIFICATION

Part Number
PAC50A-CxDxxx

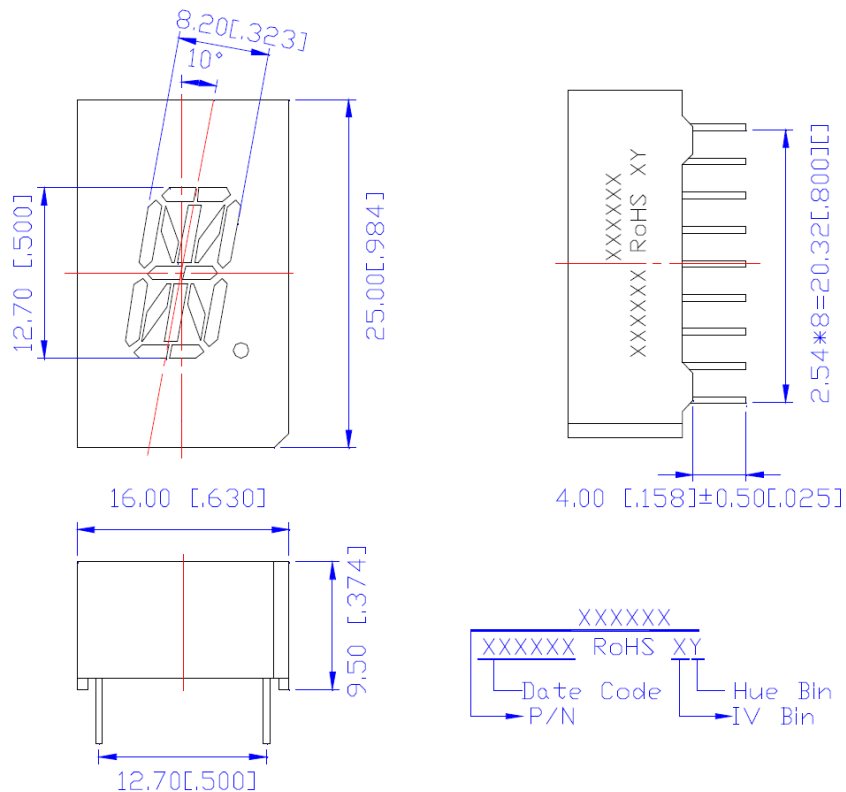
Details

- 0.50" Alphanumeric LED Display
- 1 Digit, 16 Segments
- Common Anode or Common Cathode
- AlInGaP or InGaN chip material

Features

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

Mechanical Dimensions



Notes:

1. Dimensions in millimeters [inch], and tolerance is ± 0.25 [0.010] unless otherwise noted.
2. Bending $\leq$ Length * 1%
3. All pins are $\varnothing 0.51$ [0.020] ± 0.1 [0.004]
4. Specifications subject to change without notice



Device Selection Guide

Model Number		Chip		Description	Note
Common Anode	Common Cathode	Material	Emitting Color	Common Anode or Common Cathode	Add "BW" to end of part number for Black Face, White Segment version
PAC50A-CADG05	PAC50A-CCDG05	InGaN	Pure Green		
PAC50A-CADG17	PAC50A-CCDG17	AlInGaP	Yellow Green		
PAC50A-CADY04	PAC50A-CCDY04		Yellow		
PAC50A-CADA11	PAC50A-CCDA11		Amber		
PAC50A-CADR02	PAC50A-CCDR02		Orange-Red		
PAC50A-CADR11	PAC50A-CCDR11		Red		
PAC50A-CADR21	PAC50A-CCDR21		Deep Red		

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Rating		Unit
		G17/Y04/A11/R02/R11/R21	G05	
Power Dissipation per Dice	PAD	70	114	mW
Derating Liner from 25°C per Dice	--	0.33	0.4	mA/°C
Continuous Forward Current Per Dice	IAF	25	30	mA
Peak Current Per Dice (duty cycle 1/10, 1KHz)	IPF	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	--	218	--	mcd	IF=10mA
		G17	--	10	--		
		Y04	--	43	--		
		A11	--	59	--		
		R02	--	30	--		
		R11	--	20	--		
		R21	--	15	--		
Peak Emission Wavelength / Dominant Wavelength	$\lambda P/\lambda d$	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

**Luminous General Iv Bin Grade (IF = 10mA)****Color Rank Limits (IF=20mA)**

Remark: Unit=mcd

*Tolerance: ±20%

Remark: Unit=nm

*Tolerance: ±1

● Pure Green(G05)

Q	R	S
112.889	180.623	288.997
I	I	I
180.622	288.996	462.396

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

● Yellow Green(G17)

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

0	1	2	3	4
567.5	569.5	570.5	571.5	573.0
I	I	I	I	I
569.5	570.5	571.5	573.0	575.0

● Yellow (Y04)

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

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

● Amber (A11)

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

● Orange-Red (R02)

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

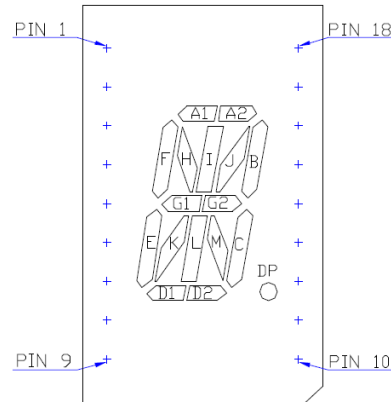
● Red (R11)

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

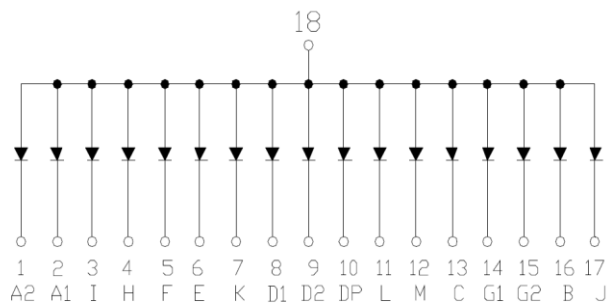
● Deep Red(R21)

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

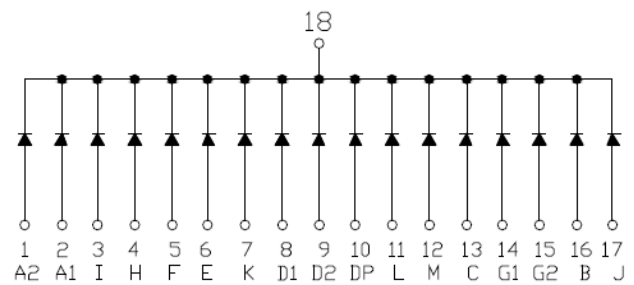
All Light-On Segments Feature & Pad Position



Internal Circuit Diagram



Common Anode



Common Cathode

Typical Electrical / Optical Characteristic Curves

- (Ta = 25°C Unless Otherwise Noted)

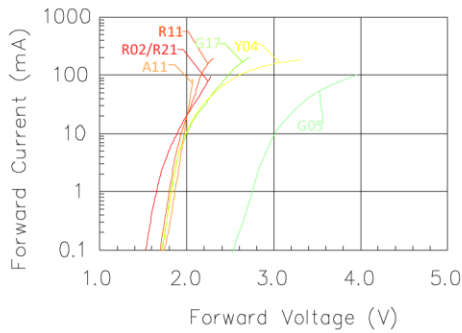


Fig 1. Forward Current vs. Forward Voltage

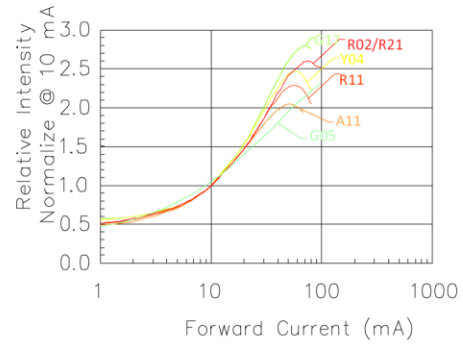


Fig 2. Relative Intensity vs. Forward Current

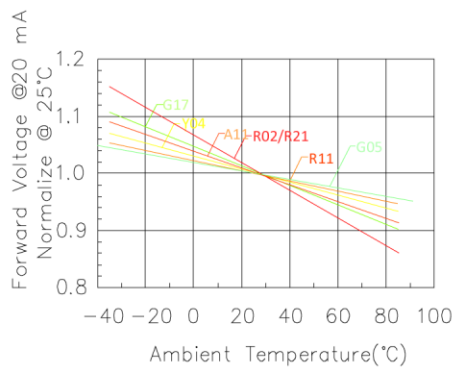


Fig 3. Forward Voltage vs. Temperature

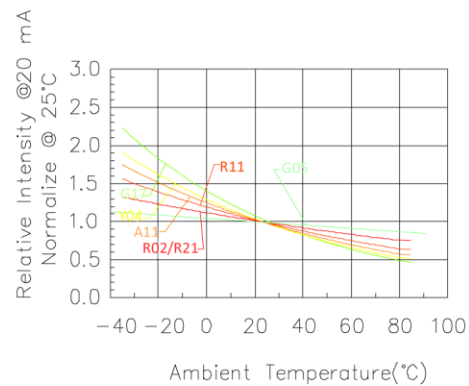


Fig 4. Relative Intensity vs. Temperature

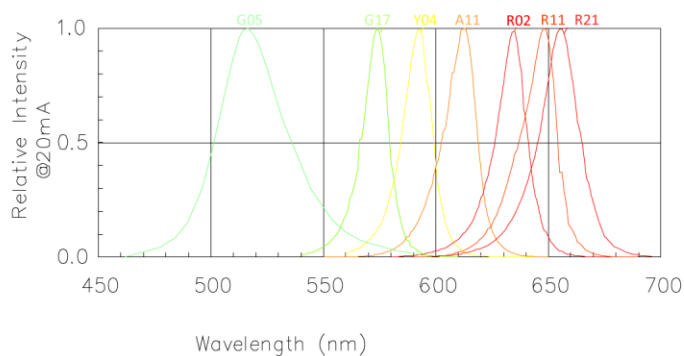


Fig 5. Relative Intensity vs. Wavelength

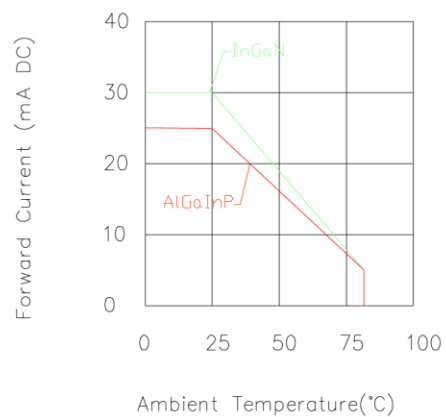


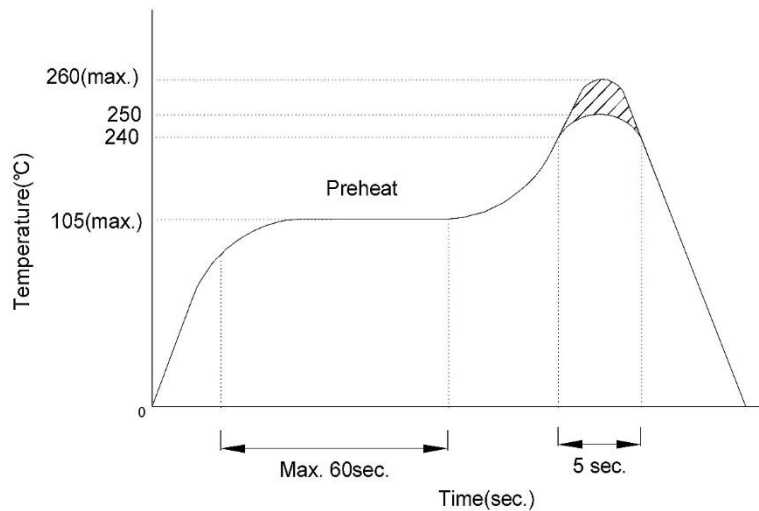
Fig 3. Forward Current vs. Ambient Temperature

Precautions for Use

1. Recommended soldering conditions

a. Wave soldering

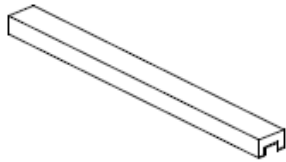
- i. Basic SPEC is $\leq 5\text{sec.}$ When 260°C. If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec.}$).



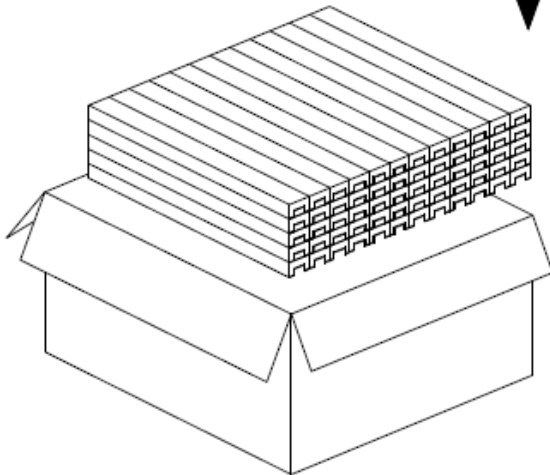
2. Soldering Iron:

- a. Power dissipation of iron should be smaller than 15W and temp should be controllable. Soldering temperature should be under 260°C , time $\leq 3\text{sec.}$

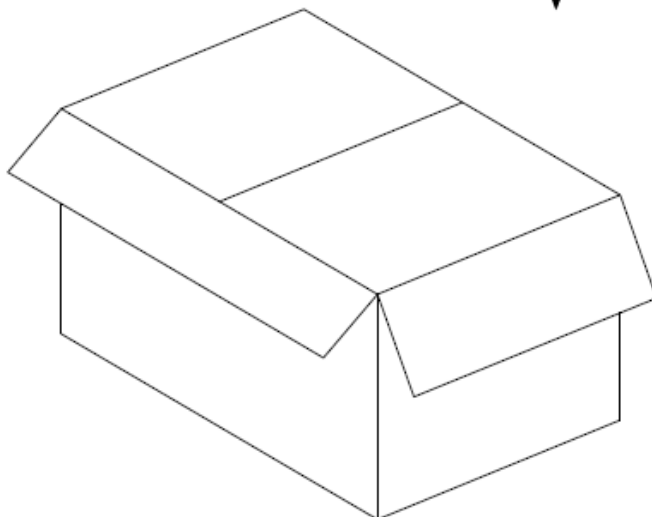
Packing Dimensions



20 PCS Per Tube
Tube Size:
L520*W23*H21 mm



60 Tubes Per Inner Box
Total Q'TY: 1200 Pcs
Box Size:
L530*W265*H155 mm



2 Inner Boxes Per Carton.
Total Q'TY: 2400 Pcs
Box Size:
L530*W345*H290 mm

[illegible]