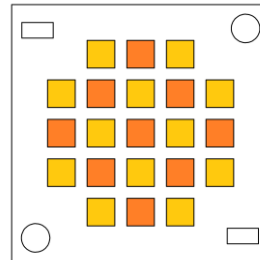
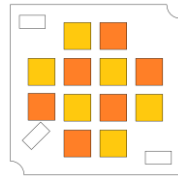


# LODA ARRAY

Preliminary

## Features:

- > Widest selection of COB-equivalent arrays using discrete component designs
- > Single color arrays available from 2000K to 6500K, 80 or 90 CRI available
- > Dual color arrays seamlessly integrate with APT-CC controller for CCT tuning or APT-DW for dim-to-warm
- > WAVE arrays integrate with APT-DW to offer dim-to-warm while enabling higher full intensity lumens
- > Patented designs for dual color and WAVE arrays enable smooth color mixing
- > Zhaga Book 12 compliant arrays available in C19x19 LES19 and C28x28 LES23



Part Number	COB Size [mm]	LES [mm]	Technology	Vf	Max Light Output [lm]
V19L19SA2-360350	C19x19	19	Single Color	34 – 40V	2,160
V19L19SA2-240500	C19x19	19	Single Color	22 – 27V	2,160
V28L23SA2-300700	C28x28	23	Single Color	26 – 33V	3,600
V19L19DAW-360180	C19x19	19	Dual Color	34 – 40V	1,080
V28L23DAW-300350	C28x28	23	Dual Color	26 – 33V	1,800
V19L19XAW-240350	C19x19	19	WAVE	22 – 27V	1,440
V28L23XAW-240500	C28x28	23	WAVE	22 – 27V	2,160

## Warranty Operation Range

Part Number	Maximum Current	Operating Temperature Range [°C]	Control Range <sup>1</sup>
V19L19SA2-360350	400mA	-40.0 to +95.0	100% to 1%
V19L19SA2-240500	600mA		
V28L23SA2-300700	800mA		
V19L19DAW-360180	200mA		
V28L23DAW-300350	400mA		
V19L19XAW-240350	400mA		
V28L23XAW-240500	600mA		

1. Control range is dependent on driver resolution.

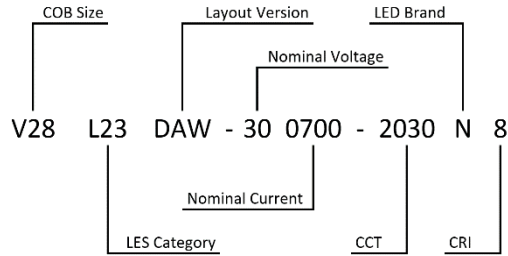
Arkalumen Products may be covered by patents in the US and elsewhere. Patent: [www.arkalumen.com/patents](http://www.arkalumen.com/patents)

Release: 2017-COB-0.1

# arkalumen

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## Order Code



Legend							
<b>COB Size</b>	V19: 1919	V28: 2828	<b>Layout Version</b>	<b>Technology</b> S, D, or X	<b>Internal Code</b> A - Z	<b># of Contacts</b> 2, 3, or W	
<b>LES Category</b>	L19	L23	<b>Nominal Voltage</b>	30: 30V	<b>Nominal Current</b>	0700: 700mA	
<b>CCT</b>	AM: Amber 30: 3000K	20: 2000K 35: 3000K	<b>LED Brand</b>	N: Nichia U: Luminus	P: Lumileds Z: Osram	S: Seoul	<b>CRI</b> 8: 80+ 9: 90+

## Junction Temperature (T<sub>j</sub>): Lumen Multiplication Factor

25°C	45°C	65°C	85°C
1.03	1.00	0.97	0.94

## CRI: Lumen Multiplication Factor

80+ 2000K – 6500K	2700K – 3500K	90+ 4000K – 5000K	6500K
1.0	0.83	0.85	0.87

## Single Color

### Electrical Characteristics (T<sub>j</sub> = 45 °C)

Part Number	CCT	Vf	350mA		500mA		700mA	
			Luminous Flux [lm]	Efficacy [lm/W]	Luminous Flux [lm]	Efficacy [lm/W]	Luminous Flux [lm]	Efficacy [lm/W]
V19L19SA2-360350-20	2000K	34 – 40V	1,160	88				
V19L19SA2-360350-27	2700K	34 – 40V	1,740	131				
V19L19SA2-360350-30	3000K	34 – 40V	1,810	137				
V19L19SA2-360350-35	3500K	34 – 40V	1,810	137				
V19L19SA2-360350-40	4000K	34 – 40V	1,835	139				
V19L19SA2-360350-50	5000K	34 – 40V	1,930	146				
V19L19SA2-360350-65	6500K	34 – 40V	1,870	141				
V19L19SA2-240500-20	2000K	22 – 27V	815	98	1,115	89		
V19L19SA2-240500-27	2700K	22 – 27V	1,210	146	1,665	133		
V19L19SA2-240500-30	3000K	22 – 27V	1,260	152	1,725	138		
V19L19SA2-240500-35	3500K	22 – 27V	1,260	152	1,725	138		
V19L19SA2-240500-40	4000K	22 – 27V	1,280	155	1,760	141		
V19L19SA2-240500-50	5000K	22 – 27V	1,355	163	1,845	148		
V19L19SA2-240500-65	6500K	22 – 27V	1,305	158	1,800	144		
V28L23SA2-300700-20	2000K	26 – 33V	1,040	104	1,440	96	1,940	88
V28L23SA2-300700-27	2700K	26 – 33V	1,560	156	2,160	144	2,900	131
V28L23SA2-300700-30	3000K	26 – 33V	1,620	162	2,240	150	3,020	137
V28L23SA2-300700-35	3500K	26 – 33V	1,620	162	2,240	150	3,020	137
V28L23SA2-300700-40	4000K	26 – 33V	1,640	164	2,280	152	3,060	139
V28L23SA2-300700-50	5000K	26 – 33V	1,720	172	2,400	160	3,220	146
V28L23SA2-300700-65	6500K	26 – 33V	1,680	168	2,320	155	3,120	141

## Single Color

### Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts
V19L19SA2	C19x19	19	Single Color	2
V28L23SA2	C28x28	23	Single Color	2

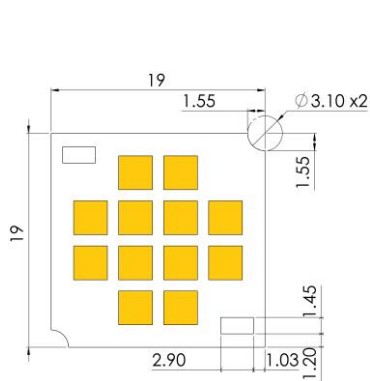


Figure 1 – V19L19SA2 Mechanical Drawing

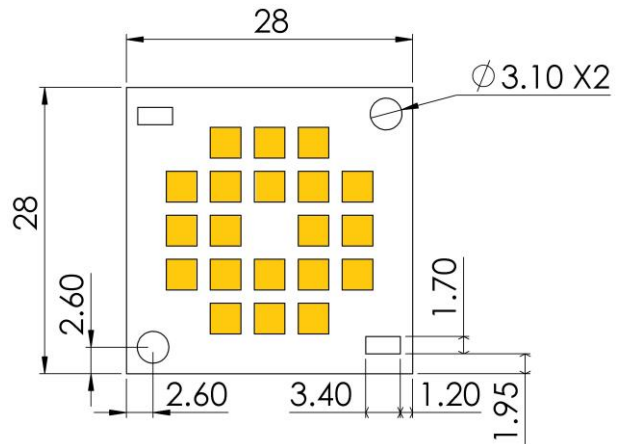


Figure 2 – V28L23SA2 Mechanical Drawing

## Dual Color

### Electrical Characteristics (T<sub>j</sub> = 45 °C)

Part Number	Min CCT	Max CCT	V <sub>f</sub>	180mA		350mA	
				Luminous Flux [lm]	Efficacy [lm/W]	Luminous Flux [lm]	Efficacy [lm/W]
V19L19DAW-360180-2030	2000K	3000K	34 – 40V	920	135		
V19L19DAW-360180-2035	2000K	3500K	34 – 40V	920	135		
V19L19DAW-360180-2040	2000K	4000K	34 – 40V	940	138		
V19L19DAW-360180-2050	2000K	5000K	34 – 40V	990	145		
V19L19DAW-360180-2065	2000K	6500K	34 – 40V	960	140		
V19L19DAW-360180-2740	2700K	4000K	34 – 40V	940	138		
V19L19DAW-360180-2750	2700K	5000K	34 – 40V	990	145		
V19L19DAW-360180-2765	2700K	6500K	34 – 40V	960	140		
V19L19DAW-360180-3040	3000K	4000K	34 – 40V	940	138		
V19L19DAW-360180-3050	3000K	5000K	34 – 40V	990	145		
V19L19DAW-360180-3065	3000K	6500K	34 – 40V	960	140		
V28L23DAW-300350-2030	2000K	3000K	26 – 33V	830	161	1,510	137
V28L23DAW-300350-2035	2000K	3500K	26 – 33V	830	161	1,510	137
V28L23DAW-300350-2040	2000K	4000K	26 – 33V	840	163	1,530	139
V28L23DAW-300350-2050	2000K	5000K	26 – 33V	890	172	1,610	146
V28L23DAW-300350-2065	2000K	6500K	26 – 33V	860	166	1,560	141
V28L23DAW-300350-2740	2700K	4000K	26 – 33V	840	163	1,530	139
V28L23DAW-300350-2750	2700K	5000K	26 – 33V	890	172	1,610	146
V28L23DAW-300350-2765	2700K	6500K	26 – 33V	860	166	1,560	141
V28L23DAW-300350-3040	3000K	4000K	26 – 33V	840	163	1,530	139
V28L23DAW-300350-3050	3000K	5000K	26 – 33V	890	172	1,610	146
V28L23DAW-300350-3065	3000K	6500K	26 – 33V	860	166	1,560	141

## Dual Color

### Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts
V19L19DAW	C19x19	19	Dual Color	2 + 1 wire
V28L23DAW	C28x28	23	Dual Color	2 + 1 wire

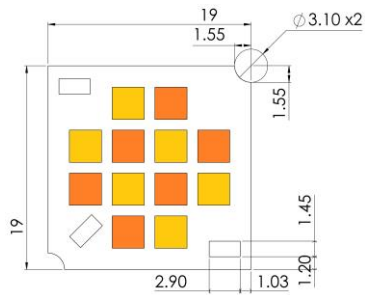


Figure 3 – V19L19DAW Mechanical Drawing

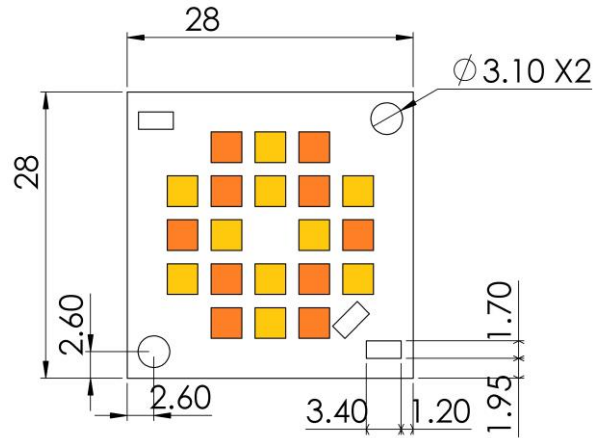


Figure 4 – V28L23DAW Mechanical Drawing

### Electrical Characteristics (T<sub>j</sub> = 45 °C)

Part Number	Min CCT	Max CCT	V <sub>f</sub>	350mA		500mA	
				Luminous Flux [lm]	Efficacy [lm/W]	Luminous Flux [lm]	Efficacy [lm/W]
V19L19XAW-240350-AM27	1800	2700K	22 – 27V	1,160	131		
V19L19XAW-240350-AM30	1900	3000K	22 – 27V	1,205	137		
V19L19XAW-240350-AM35	2000	3500K	22 – 27V	1,205	137		
V19L19XAW-240350-AM40	2300	4000K	22 – 27V	1,220	139		
V19L19XAW-240350-RR27	2000	2700K	22 – 27V	1,160	131		
V19L19XAW-240350-RR30	2100	3000K	22 – 27V	1,205	137		
V19L19XAW-240350-RR35	2400	3500K	22 – 27V	1,205	137		
V19L19XAW-240350-RR40	2600	4000K	22 – 27V	1,220	139		
V28L23XAW-240500-AM27	1600	2700K	22 – 27V	1,210	146	1,665	133
V28L23XAW-240500-AM30	1600	3000K	22 – 27V	1,260	152	1,725	138
V28L23XAW-240500-AM35	1600	3500K	22 – 27V	1,260	152	1,725	138
V28L23XAW-240500-AM40	1600	4000K	22 – 27V	1,280	155	1,760	141
V28L23XAW-240500-RR27	1600	2700K	22 – 27V	1,210	146	1,665	133
V28L23XAW-240500-RR30	1600	3000K	22 – 27V	1,260	152	1,725	138
V28L23XAW-240500-RR35	1700	3500K	22 – 27V	1,260	152	1,725	138
V28L23XAW-240500-RR40	1800	4000K	22 – 27V	1,280	155	1,760	141

### Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts
V19L19XAW	C19x19	19	WAVE	2 + 1 wire
V28L23XAW	C28x28	23	WAVE	2 + 1 wire

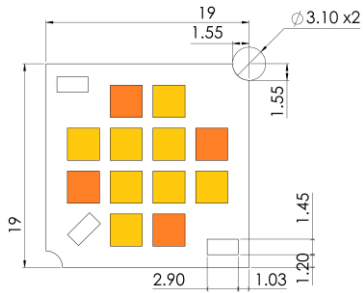


Figure 5 – V19L19XAW Mechanical Drawing

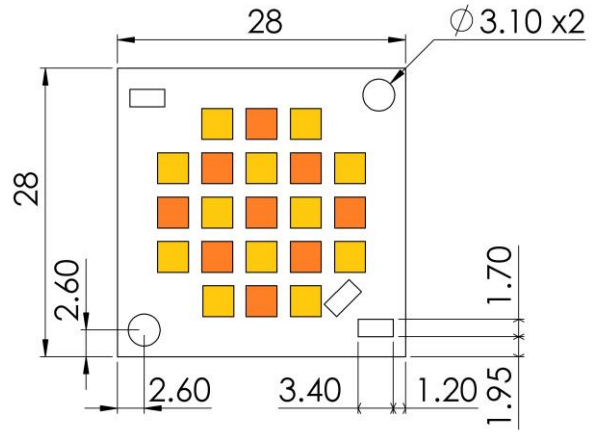


Figure 6 – V28L23XAW Mechanical Drawing