

## TUNABLE WHITE LED ARRAYS

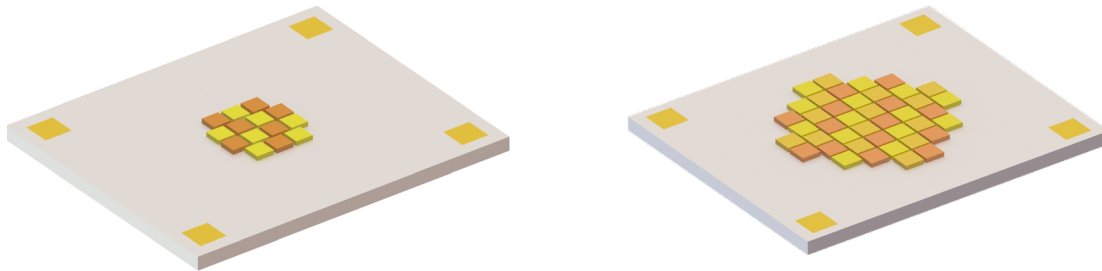


### Features

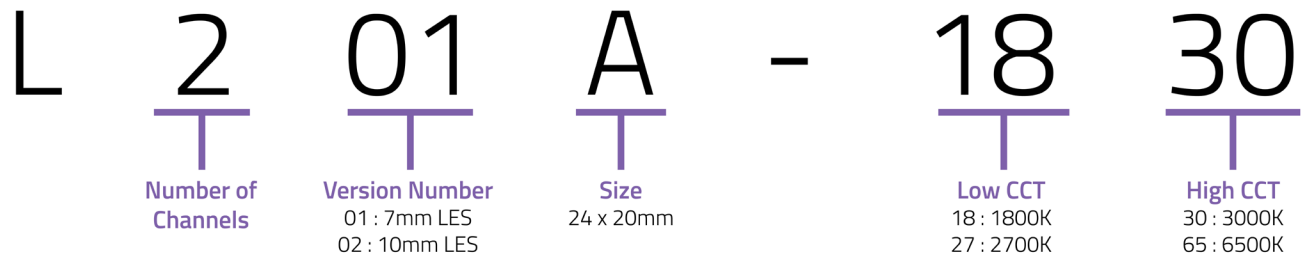
- > Wide selection of COB-equivalent arrays using discrete component designs
- > Patented design enables smooth white tuning
- > Compatible with off-the-shelf COB holders and associated optics
- > Designed to provide a calibrated tunable white lighting system when combined with the Arkalumen ORB3 and a simple dim-to-warm lighting solution when combined with the Arkalumen ORB2.

### Applications

- > Tunable White
- > Dim-to-Warm
- > Circadian Rhythm



### Product Nomenclature



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

## Warranty Operation Range

Part Number	Maximum Current	Max Power [W]	Maximum TC Point Temperature [°C]
L201A-xyyy	W: 700mA C: 700mA	15	85
L202A-xyyy	W:1,000mA C:1,000mA	21	
L301A-xyyyzz	W: 700mA N: 700mA C: 700mA	13	
L302A-xyyyzz	W: 1,000mA N: 1,000mA C: 1,000mA	21	

1. See thermal management for more information

## Thermal Management

Arkalumen LED modules are designed to be thermally managed to maintain a Tc point temperature equal to or less than the maximum specified temperature. When selecting materials for thermal management consider using a thermal interface material and a heat sink. It is recommended to source products with low thermal resistance (C/W). Heat sinks may be specified with a power limit. Look for heat sinks with a power limit at least as high as the maximum power of the selected LED module. Testing within likely applications of the finished assembly is necessary to ensure that the Tc point temperature limit is not being exceeded. For further assistance with selecting thermal management products, please contact Arkalumen at [support@arkalumen.com](mailto:support@arkalumen.com).

# WW L201A-xyyy 7mm LES

Electrical Characteristics ( $T_j = 85^\circ\text{C}$ )

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L201A-1830	1800K, 90 CRI	500	10.6	21	585
		700	15.4	22	775
	3000K, 90 CRI	500	10.6	21	995
		700	15.4	22	1285

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L201A-2765	2700K, 90 CRI	500	10.6	21	925
		700	15.4	22	1185
	6500K, 90 CRI	500	10.6	21	1065
		700	15.4	22	1365

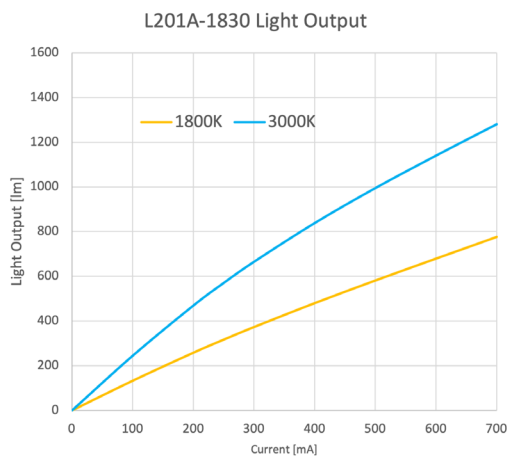


Figure 1

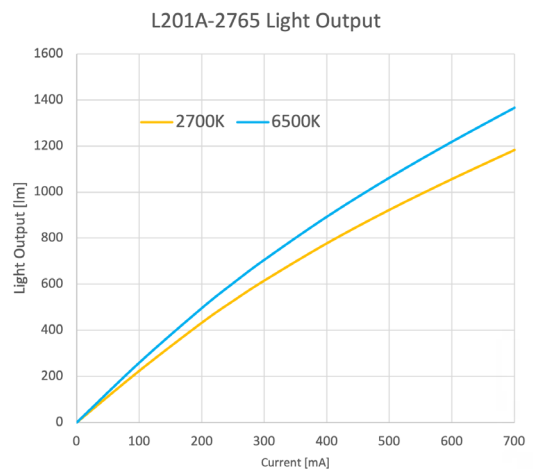


Figure 2

## WW L202A-xyyy 10mm LES

Electrical Characteristics ( $T_j = 85^\circ\text{C}$ )

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L202A-1830	1800K, 90 CRI	700	14.2	20	855
		1000	21.1	21	1165
	3000K, 90 CRI	700	14.2	20	1510
		1000	21.1	21	1990

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L202A-2765	2700K, 90 CRI	700	14.2	20	1400
		1000	21.1	21	1845
	6500K, 90 CRI	700	14.2	20	1605
		1000	21.1	21	2125

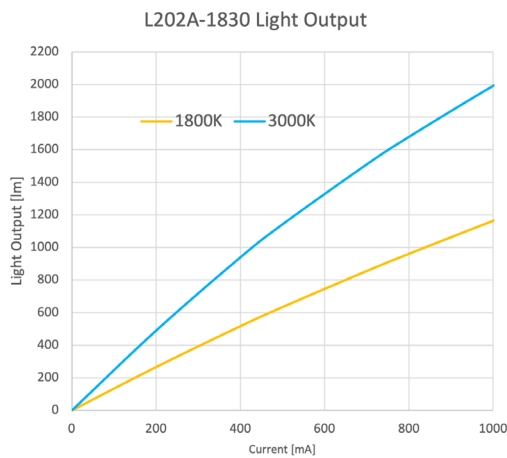


Figure 3

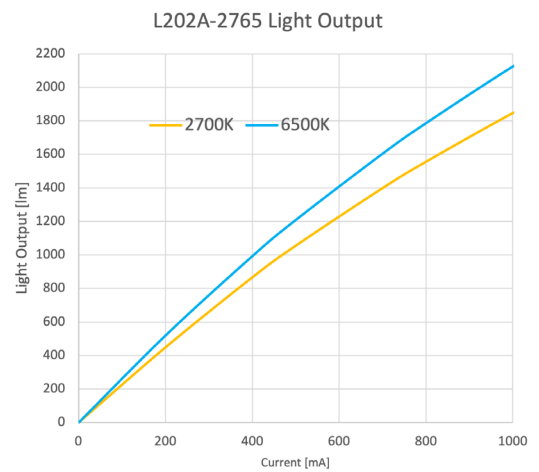


Figure 4

# WW

## Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L201A-xyyy	24 x 20	7	WW	5	1
L202A-xyyy	24 X 20	10	WW	5	1

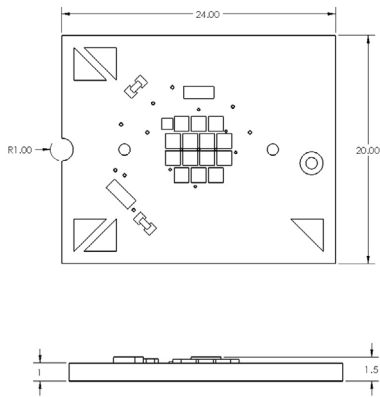


Figure 5 – L201A-xyyy Mechanical Drawing

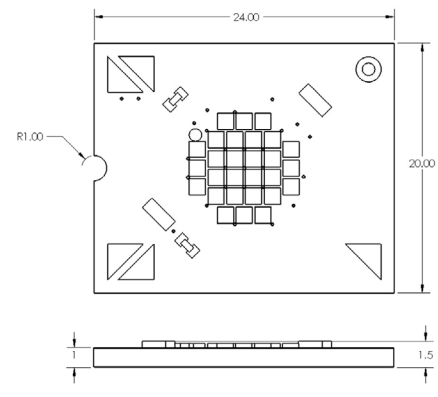


Figure 6 – L202A-xyyy Mechanical Drawing

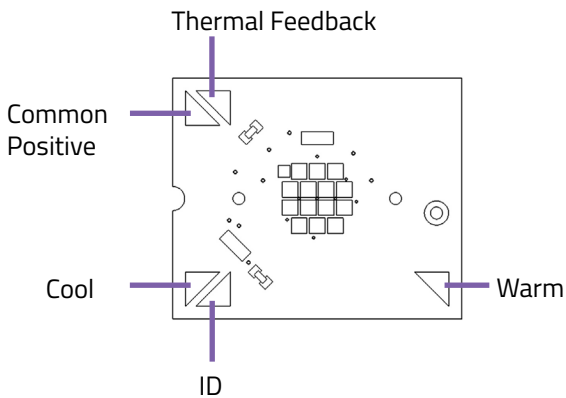


Figure 7 – Pinout for L201A-xyyy and L201A-xyyy

## Compatible Holders

Product	Part Number
COB Holder	ARK-BW-TWA
LED Controller	ORB2 & ORB3

\*Note: See last page for more info

# WWW L301A-xyyy 9mm LES

Electrical Characteristics ( $T_j = 85^\circ\text{C}$ )

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L301A-182740	1800K, 90 CRI	500	9.0	18	500
		700	13.2	19	655
	2700K, 90 CRI	500	9.0	18	795
		700	13.2	19	1015
	4000K, 90 CRI	500	9.0	18	910
		700	13.2	19	1170

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L301A-183065	1800K, 90 CRI	500	9.0	18	500
		700	13.2	19	655
	3000K, 90 CRI	500	9.0	18	855
		700	13.2	19	1100
	6500K, 90 CRI	500	9.0	18	910
		700	13.2	19	1170

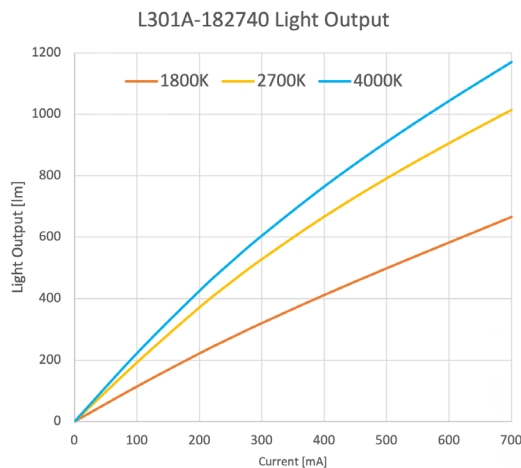


Figure 8

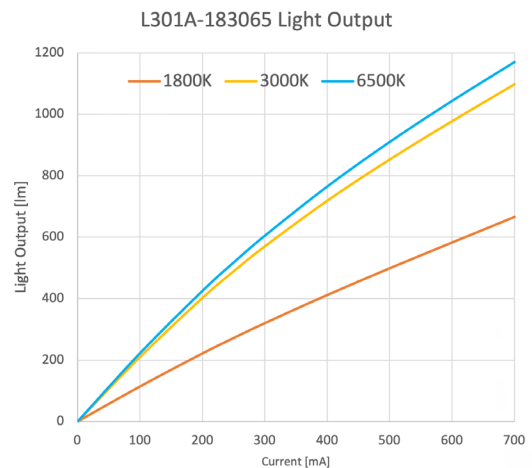


Figure 9

## WWW L302A-xyyy 13mm LES

Electrical Characteristics ( $T_j = 85^\circ\text{C}$ )

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L302A-182740	1800K, 90 CRI	700	14.2	20	855
		1000	21.1	21	1165
	2700K, 90 CRI	700	14.2	20	1400
		1000	21.1	21	1845
	4000K, 90 CRI	700	14.2	20	1605
		1000	21.1	21	2125

Part Number	CCT	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L302A-183065	1800K, 90 CRI	700	14.2	20	1400
		1000	21.1	21	1845
	3000K, 90 CRI	700	14.2	20	1510
		1000	21.1	21	1990
	6500K, 90 CRI	700	14.2	20	1605
		1000	21.1	21	2125

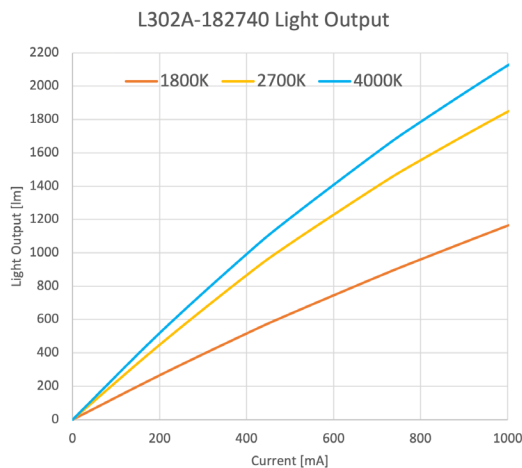


Figure 10

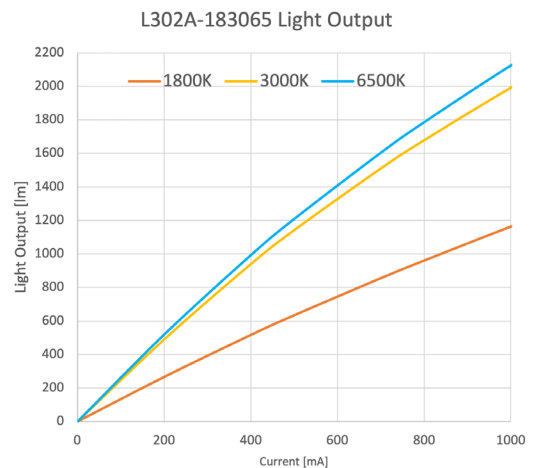


Figure 11

# WWW

## Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L301A-xyyzz	24 x 20	9	WWW	6	1
L302A-xyyzz	24 X 20	13	WWW	6	1

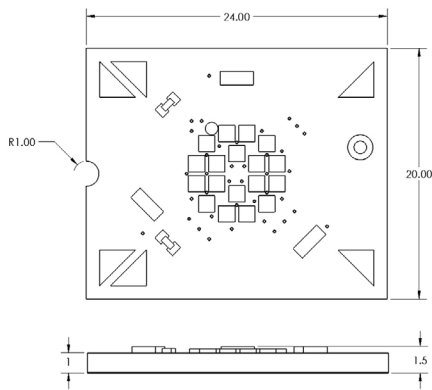


Figure 12 – L301A-xyy Mechanical Drawing

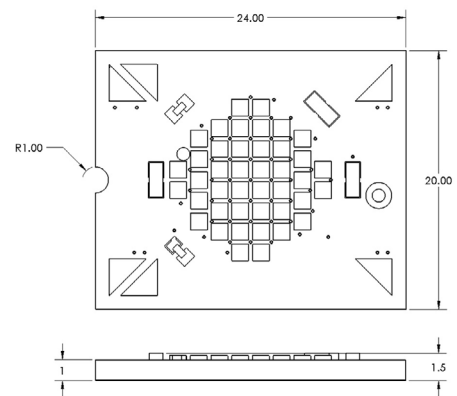


Figure 13 – L302A-xyy Mechanical Drawing

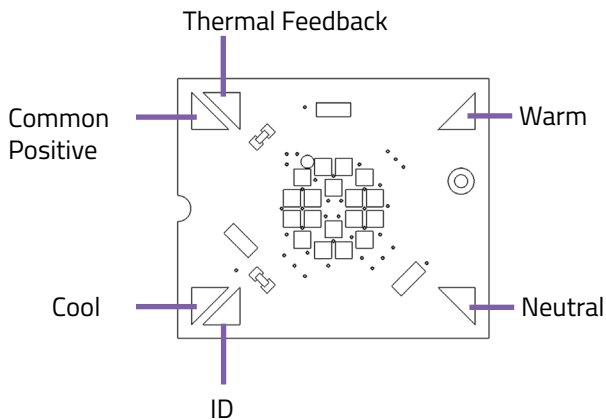


Figure 14 – Pinout for L301A-xyy and L302A-xyy

## Compatible Holders

Product	Part Number
COB Holder	ARK-BW-TWA
LED Controller	ORB3

\*Note: See last page for more info



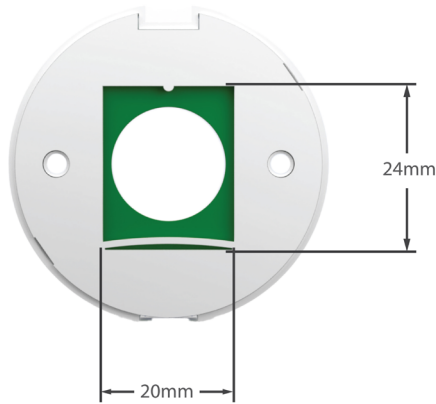


Figure 15 – ORB Bottom View

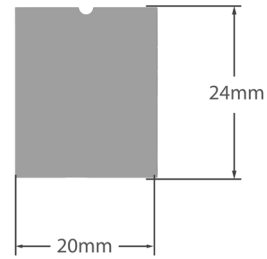
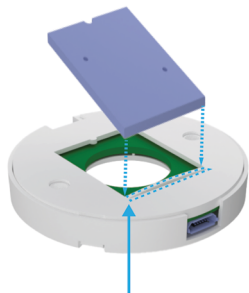


Figure 16 – Bottom View of LoDA LED Module

All LxxxA LoDAs have the same dimension and are specifically designed to integrate into all ORB line of products

## How to Insert LoDA Into ORB

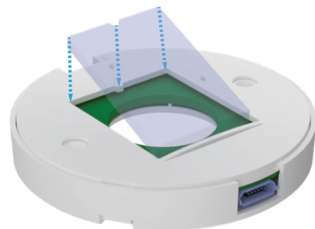
Step 1



Insert LoDA into the back of the ORB at a 45° angle, toward the spring side

Figure 17

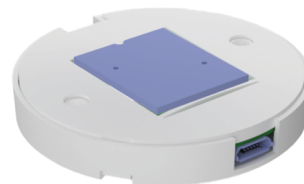
Step 2



Once the LoDA is aligned with the bottom of the ORB, push down into a flush position

Figure 18

Step 3

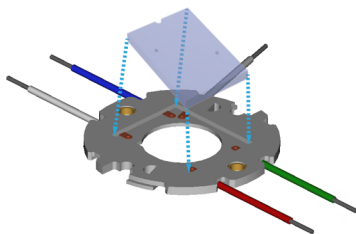


LoDA properly inserted into ORB

Figure 19

## How to Align LoDA to Bender+Wirth COB Holder

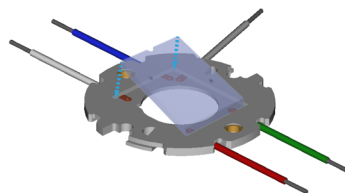
Step 1



Insert LoDA into the COB holder at a 45° angle

Figure 20

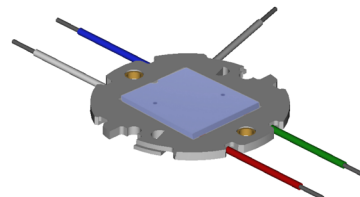
Step 2



Once LoDA is aligned with the bottom of the COB holder, push down into a flush position

Figure 21

Step 3



LoDA properly inserted into COB Holder

Figure 22