

TUNABLE WHITE LED ARRAYS

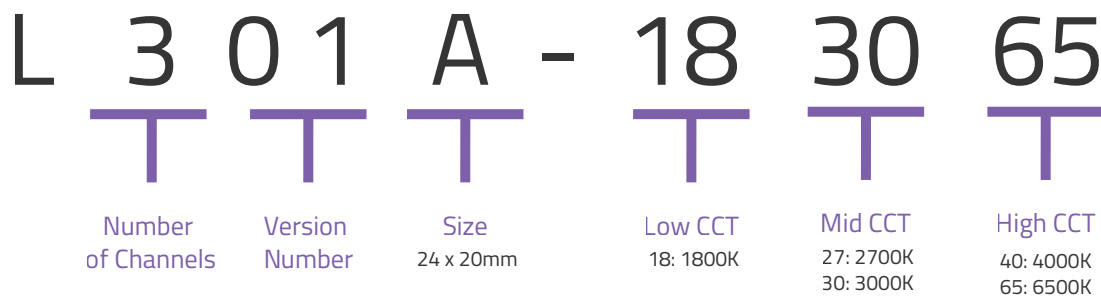
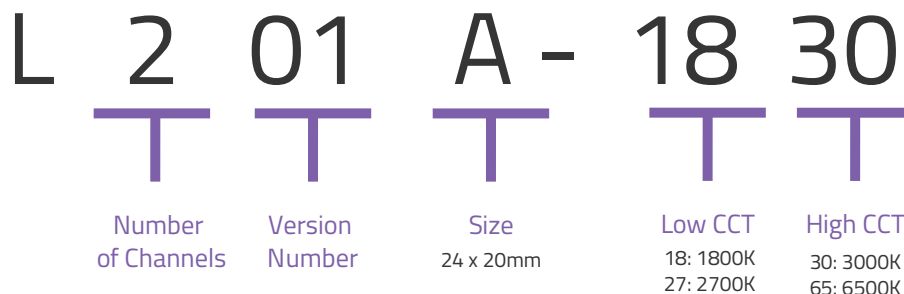
Features

- > 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
- > A simple dim-to-warm lighting solution when combined with the Arkalumen ORB-CC-VS

Applications

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

Product Nomenclature



Choose your LED Controller to Complete your System:



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Warranty Operation Range

Part Number	Total Max Power [W]
L201A-1830	6.9
L201A-2765	6.9
L202A-1830	12.3
L202A-2765	12.3
L301A-183065	10.3
L301A-182740	10.3
L302A-183065	18.4
L302A-182740	18.4
L303A-183065	28.9
L303A-182740	28.9

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 system-specific information, including thermal management recommendations, please refer to the applicable LoDA Reference Design Sheet, available at www.arkalumen.com.

For further assistance with selecting thermal management products, please contact Arkalumen at support@arkalumen.com.



2 Channel White (WW)

Electrical Characteristics

Order Code	Technology	LES [mm]	Nominal Input Voltage [V]	Wattage [W]	Max Lumens [lm]	Efficacy [lm/W]	Compatible Controller*
L201A-1830	WW	9	24	6.9	720	103	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY2
L201A-2765	WW	9	24	6.9	700	101	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY2
L202A-1830	WW	13	24	12.3	1280	104	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY2
L202A-2765	WW	13	24	12.3	1260	102	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY2

*YY: APT-CC3-VS-M1-xxxxYY2 is available in Dim-to-Warm, Tunable White, Selectable White - Programmable, and Selectable White - DIP Switch

2 Channel White (WW)

Mechanical Specifications

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L201A-xyyy	24x20	7	WW	5	1
L202A-xyyy	24x20	10	WW	5	1

Mechanical Diagrams

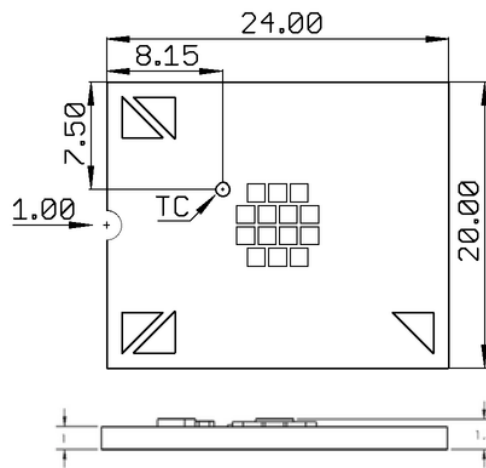


Figure 1 – L201A-xyyy Mechanical Drawing

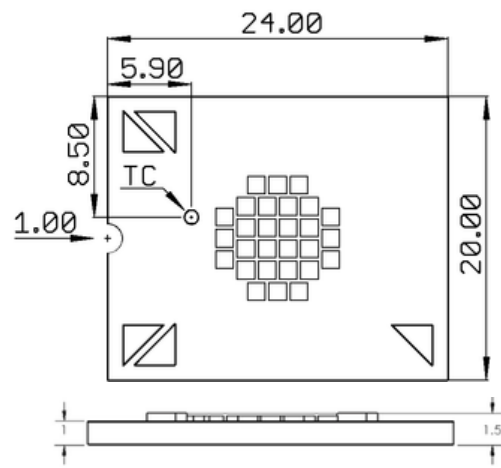


Figure 2 – L202A-xyyy Mechanical Drawing

2 Channel White (WW)

Mechanical Characteristics

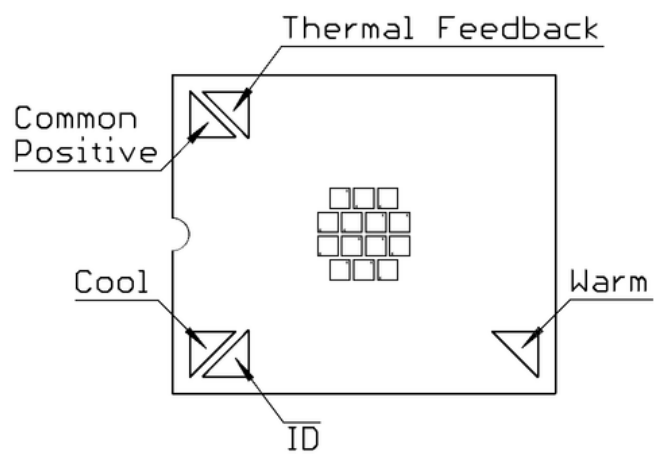


Figure 3 – Pinout for 2 Channel White (WW) LoDAs

Compatible Holders

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

**Note: See last page for more info*

3 Channel White (WWW)

Electrical Characteristics

Order Code	Technology	LES [mm]	Nominal Input Voltage [V]	Wattage [W]	Max Lumens [lm]	Efficacy [lm/W]	Compatible Controller*
L301A-183065	WWW	9	24	10.3	950	93	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3
L301A-182740	WWW	9	24	10.3	970	94	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3
L302A-183065	WWW	13	24	18.4	1880	102	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3
L302A-182740	WWW	13	24	18.4	1930	104	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3
L303A-183065	WWW	18	24	28.9	2800	97	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3
L303A-182740	WWW	18	24	28.9	2840	98	ORB3-Vx ORB-CC-VS APT3-Vx-M2 APT-CC3-VS-M1-xxxxYY3

*YY: APT-CC3-VS-M1-xxxxYY3 is available in Dim-to-Warm, Tunable White, Selectable White - Programmable, and Selectable White - DIP Switch

3 Channel White (WWW)

Mechanical Specifications

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L301A-xyyyzz	24x20	7	WWW	6	1
L302A-xyyyzz	24x20	10	WWW	6	1
L303A-xyyyzz	24x20	18	WWW	6	1

Mechanical Diagrams

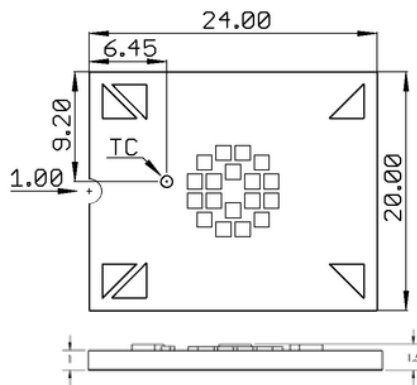


Figure 4 – L301A-xyyyzz Mechanical Drawing

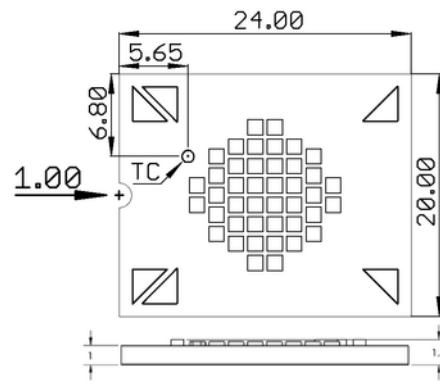


Figure 5 – L302A-xyyyzz Mechanical Drawing

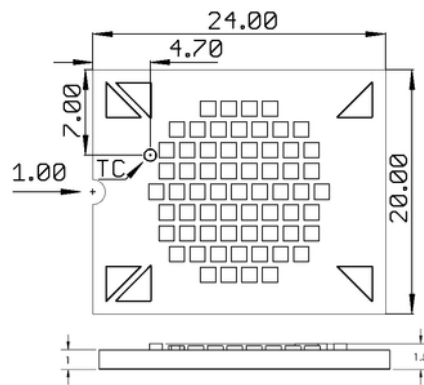


Figure 6 – L303A-xyyyzz Mechanical Drawing

3 Channel White (WWW)

Mechanical Characteristics

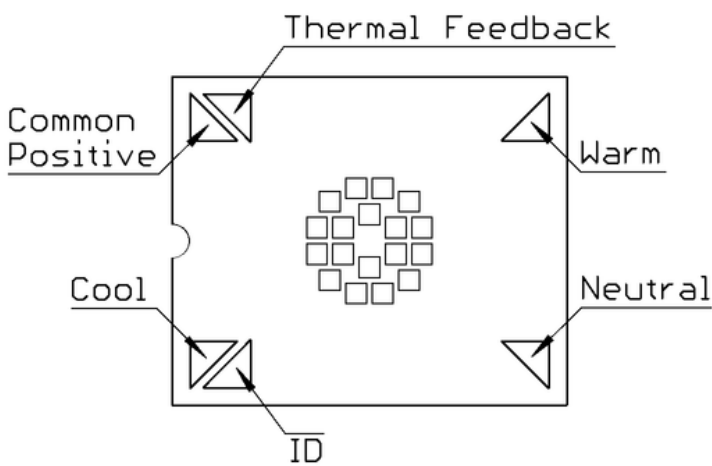


Figure 7 – Pinout for 3 Channel White (WWW) LoDAs

Compatible Holders

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



LoDA & ORB Systems

Refer to Reference Design Sheets for more information on Tunable White ORB Systems

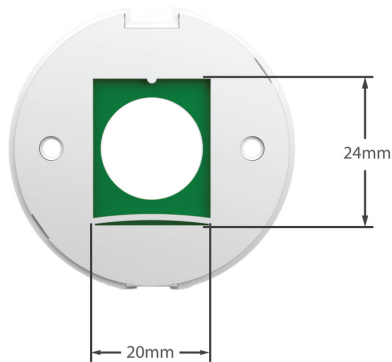
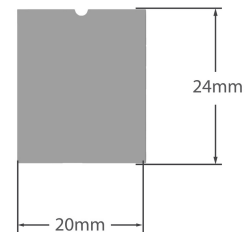


Figure 8 – ORB Bottom View

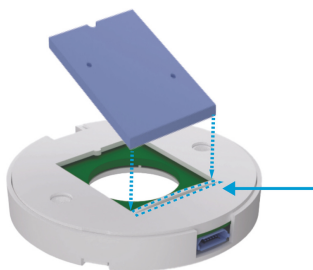


All LxxxA LoDAs have the same dimension and are specifically designed to integrate into all ORB line of products

Figure 9 – Bottom View of LoDA LED Module

How to Insert LoDA Into ORB

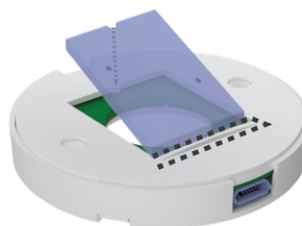
Step 1



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

Figure 10

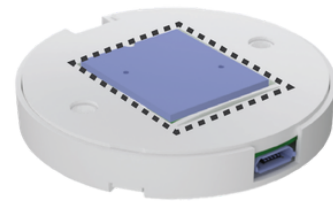
Step 2



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

Figure 11

Step 3



LoDA properly inserted into ORB

Figure 12



LoDA & APT M2 Controller Systems

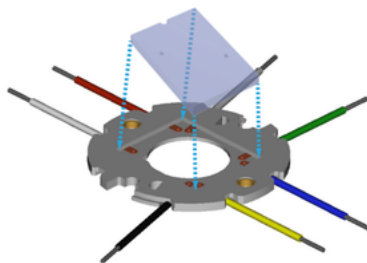
Refer to Reference Design Sheets for more information on APT3-Vx-M2 Systems

Compatible LoDA Holders

Arkalumen Part Number	Compatible APT Controllers
ARK-BW-TWA	APT3-VA-M2-xxxx APT3-VWC-M2-xxxx

How to Align LoDA to Bender+Wirth COB Holder

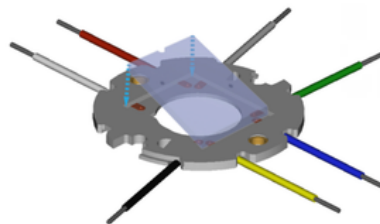
Step 1



Insert LoDA into the COB holder at a 45° angle

Figure 13

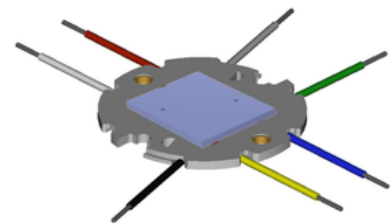
Step 2



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

Figure 14

Step 3



LoDA properly inserted into COB Holder

Figure 15