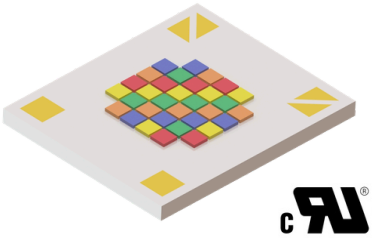
loda
by arkalumen

TUNABLE COLOR LED ARRAYS



Features

> Wide selection of COB-equivalent arrays using discrete component designs
> Patented design enables smooth color mixing
> Compatible with off-the-shelf COB holders and associated optics
> Designed to provide a calibrated lighting solution when combined with the Arkalumen ORB5

Applications

> RGB + W
> Tunable Color
> Full Spectrum Tunable Color
> Circadian Rhythm

Product Nomenclature:

				Colors			
L	5	1	1	A	- RGB	18	40
	Number of Channels		Version Number	Size 24 x 20mm		Low CCT 18: 1800K 20: 2000K 30: 3000K 40: 4000K	High CCT 30: 3000K 40: 4000K

Choose your LED Controller to Complete your System:

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Table of Contents

Warranty Operation Range

Part Number	Max Power [W]	Maximum TC Point Temperature [°C]
L501A-RGBxxyy	17.1	42
L502A-RGBxxyy	22.8	57
L511A-RGBxxyy	13.2	51
L512A-RGBxxyy	20.4	50
L513A-RGBxxyy	26.8	41

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.

Tunable Color LoDAs - RGBWW

Electrical Specifications

Order Code	Technology	LES [mm]	Input Voltage [V]	Wattage [W]	Max Lumens [lm]	Efficacy [lm/W]	Compatible Controllers*
L501A-RGB2040	RGBWW	13	24	17.1	1400	81	ORB5-VA ORB5-VWC APT5-VA-M2 APT5-VWC-M2
L502A-RGB2040	RGBWW	18	24	22.8	2300	101	
L511A-RGB1840	RGBWW	9	12	13.2	1140	86	
L512A-RGB1840	RGBWW	13	24	20.4	1650	81	
L513A-RGB1840	RGBWW	18	24	26.8	2460	92	

**Refer to ORB5-Vx or APT5-Vx-M2 Reference Design Sheets for more information on full systems*

Mechanical Specifications

Part Number	Technology	LES [mm]	# of Contacts	PCB Thickness [mm]
L501A-RGB2040	RGBWW	13	8	1
L502A-RGB2040	RGBWW	18	8	1
L511A-RGB1840	RGBWW	9	8	1
L512A-RGB1840	RGBWW	13	8	1
L513A-RGB1840	RGBWW	18	8	1

RGBWW

Mechanical Diagrams

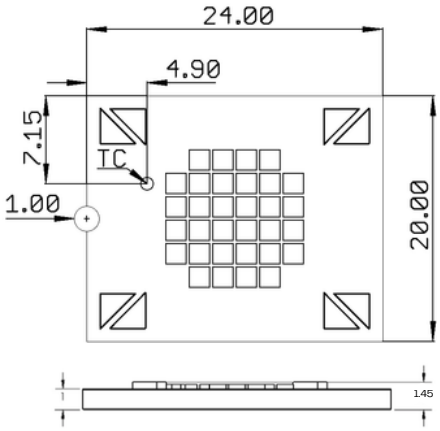

Figure 1 – L501A-RGBxxyy Mechanical Drawing

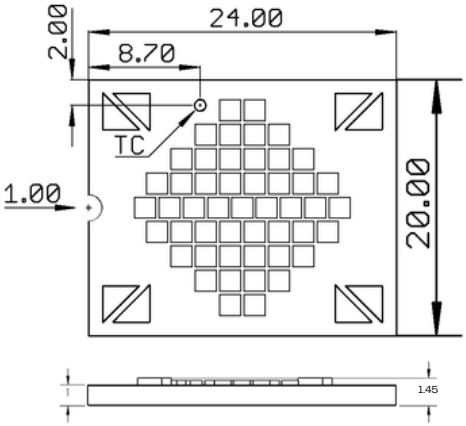

Figure 2 – L502A-RGBxxyy Mechanical Drawing

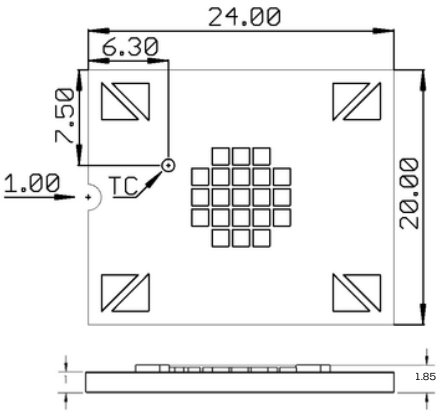

Figure 3 – L511A-RGBxxyy Mechanical Drawing

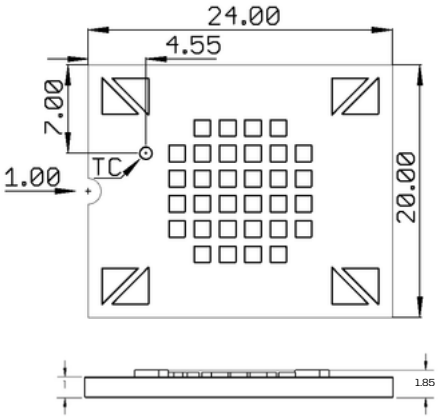

Figure 4 – L512A-RGBxxyy Mechanical Drawing

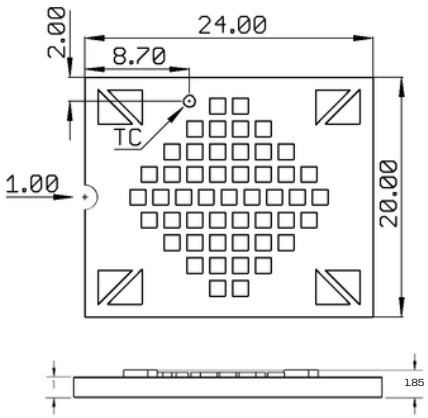

Figure 5– L513A-RGBxxyy Mechanical Drawing

RGBWW

Mechanical Characteristics

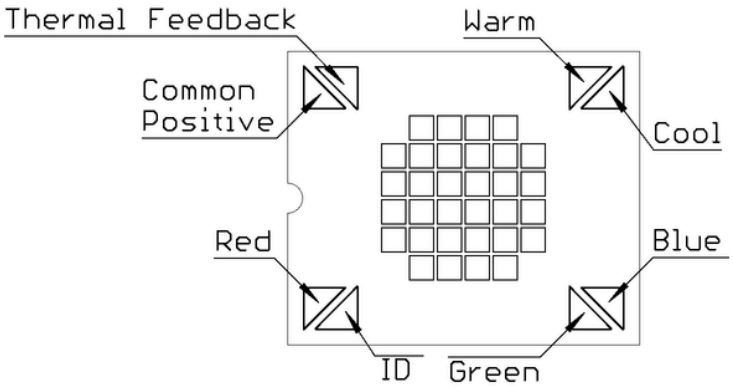

Figure 6– Pinout for L5x0A Series

Compatible Holders

Product	Part Number
Holder	ARK-BW-TCA
LED Controller	ORB5-VA-xxxx ORB5-VWC-xxxx

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LoDA & ORB Systems

Refer to Reference Design Sheets for more information on ORB Systems

Mechanical Specifications

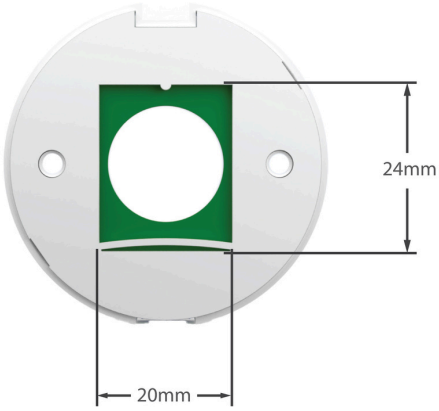
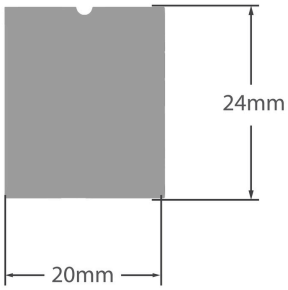


Figure 7 – ORB Bottom View

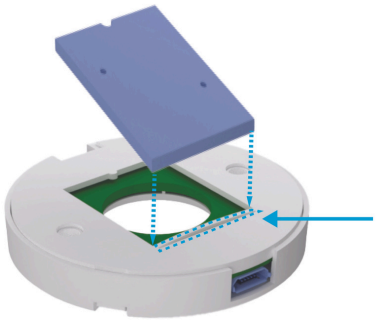


All LxxxA LoDAs have the same dimension and are specifically designed to integrate into all ORB line of products

Figure 8 – Bottom View of LoDA LED Module

How to Insert LoDA Into ORB

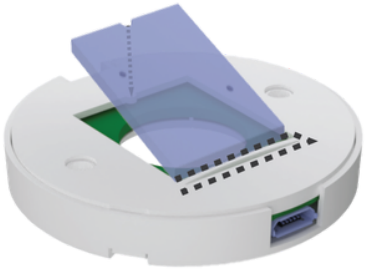
Step 1



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

Figure 9

Step 2



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

Figure 10

Step 3

LoDA properly inserted into ORB

Figure 11

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LoDA & APT M2 Controller Systems

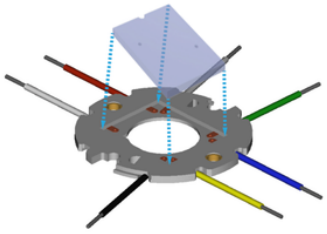
Refer to Reference Design Sheets for more information on APT5-Vx-M2 Systems

Compatible LoDA Holders

Arkalumen Part Number	Compatible APT Controllers
ARK-BW-TCA	APT5-VA-M2-xxxx APT5-VWC-M2-xxxx

Inserting LoDA into ARK-BW-TCA Holder

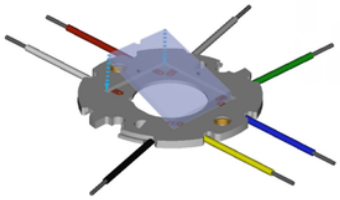
Step 1



Insert LoDA into the COB holder at a 45° angle

Figure 12

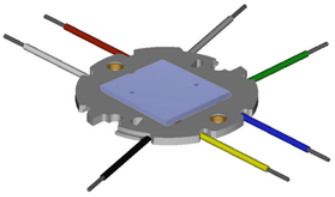
Step 2



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

Figure 13

Step 3



LoDA properly inserted into COB Holder

Figure 14

Note: Ensure the notch on LoDA is inserted in between the white & red wires on the Bender+Wirth holder