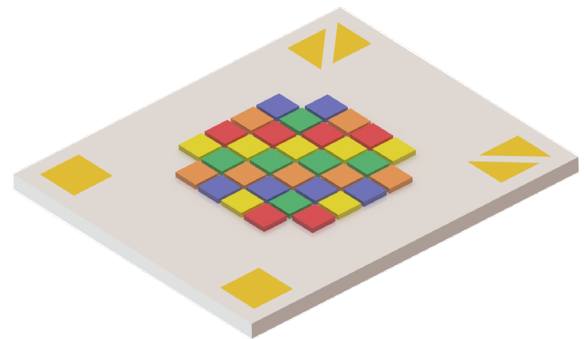
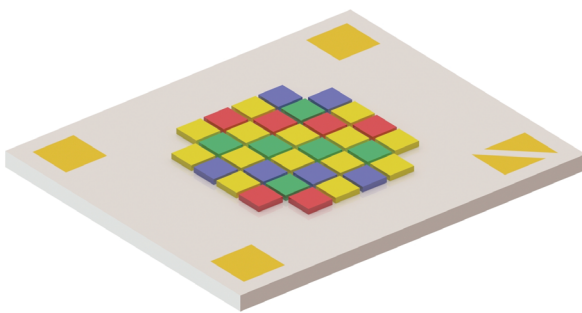


Features

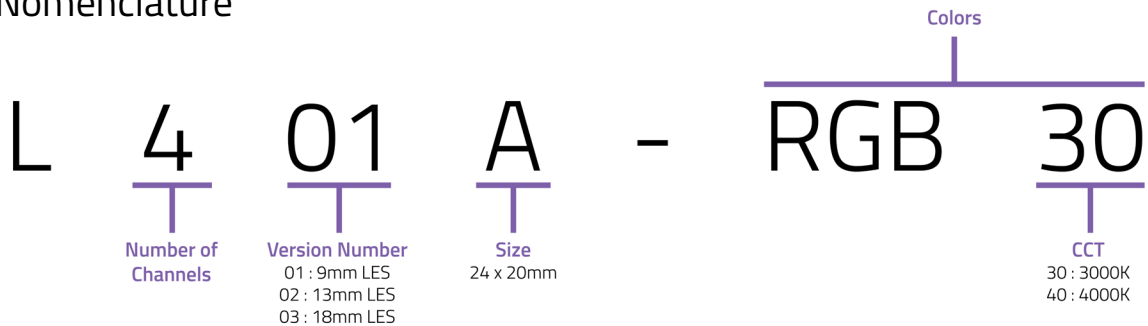
- > Wide selection of COB-equivalent arrays using discrete component designs
- > Patented design enables smooth color mixing
- > Compatible with off-the-shelf COB holders and associated optics
- > Designed to provide a calibrated lighting solution when combined with the Arkalumen ORB5

Applications

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



Product Nomenclature



Arkalumen Products may be covered by patents in the US and elsewhere. www.arkalumen.com/patents

Warranty Operation Range

Part Number	Maximum Current	Max Power [W]	Maximum TC Point Temperature [°C]
L401A-RGBxx	W: 700mA R: 500mA G: 500mA B: 500mA	13	85°C ¹
L402A-RGBxx	W: 1,000mA R: 500mA G: 500mA B: 500mA	20	
L403A-RGBxx	W: 1,400mA R: 500mA G: 500mA B: 500mA	28	
L501A-RGBxxyy	W: 700mA W: 700mA R: 500mA G: 500mA B: 500mA	20	
L502A-RGBxxyy	W: 1,000mA W: 1,000mA R: 500mA G: 500mA B: 500mA	28	

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.

RGBW L401A-RGBxx 9mm LES

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

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L401A-RGB30	Red	500	7.2	14	190
	Green	500	7.2	14	1250
	Blue	500	3.4	14	270
	3000K, 90 CRI	500	8.7	17	935
		700	12.6	18	1230

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L401A-RGB40	Red	500	7.2	14	190
	Green	500	7.2	14	1250
	Blue	500	7.2	14	270
	4000K, 90 CRI	500	8.7	17	995
		700	12.6	18	1310

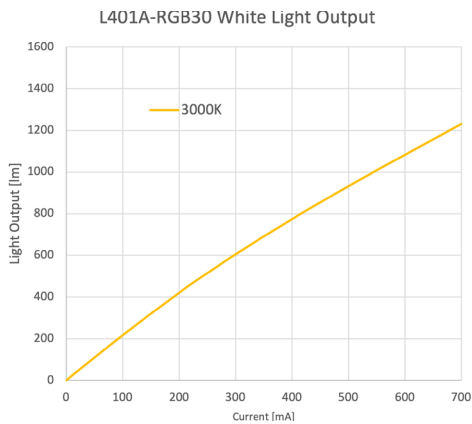


Figure 1

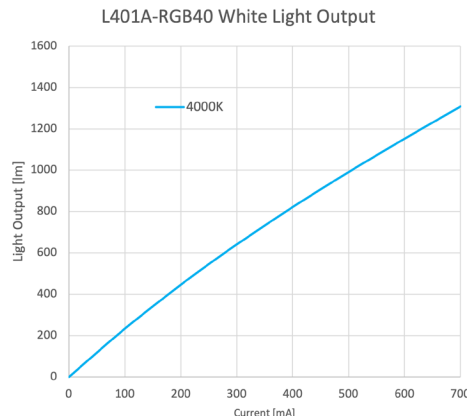


Figure 2

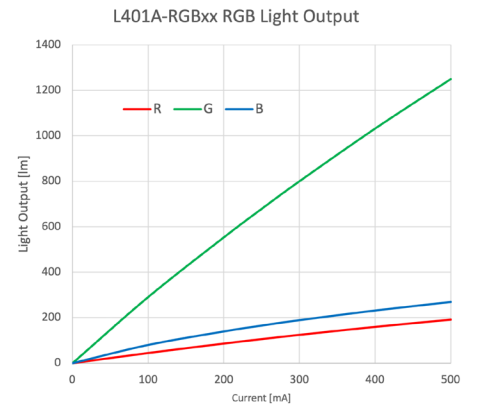


Figure 3

RGBW L402A-RGBxx 13mm LES

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

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L402A-RGB30	Red	500	8.7	17	230
	Green	500	8.7	17	1500
	Blue	500	8.7	17	325
	3000K, 90 CRI	700	13.8	20	1615
		1000	20.3	20	2180

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L402A-RGB40	Red	500	8.7	16	230
	Green	500	8.7	16	1500
	Blue	500	8.7	16	325
	4000K, 90 CRI	700	13.8	20	1710
		1000	20.3	20	2315

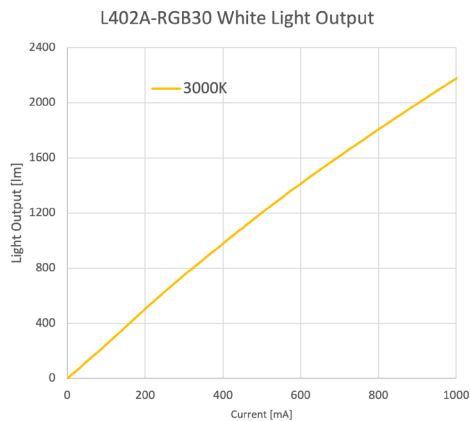


Figure 4

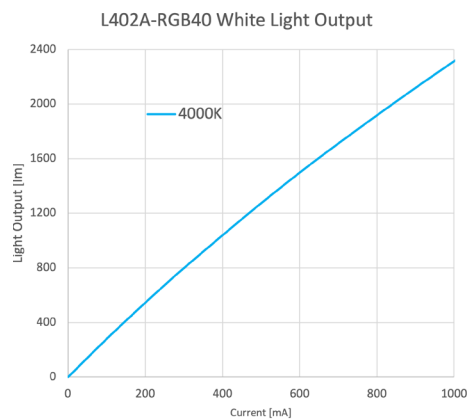


Figure 5

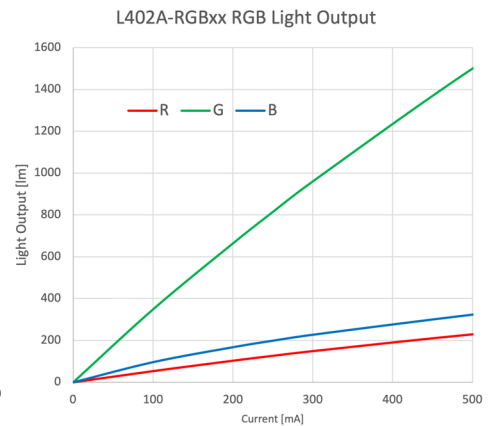


Figure 6

RGBW L403A-RGBxx 18mm LES

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

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L403A-RGB30	Red	500	10.2	20	270
	Green	500	10.2	20	1750
	Blue	500	10.2	20	375
	3000K, 90 CRI	1000	19.4	19	2410
		1400	27.7	20	3230

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L403A-RGB40	Red	500	10.2	20	270
	Green	500	10.2	20	1750
	Blue	500	10.2	20	375
	4000K, 90 CRI	1000	19.4	19	2545
		1400	27.7	20	3420

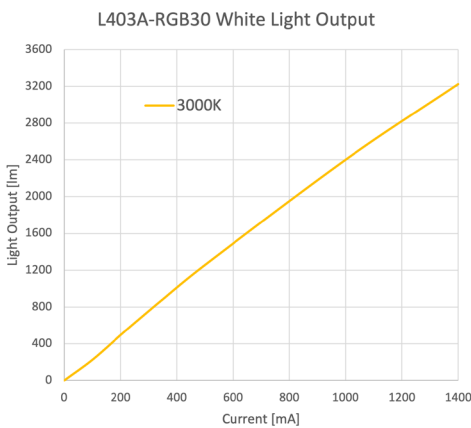


Figure 7

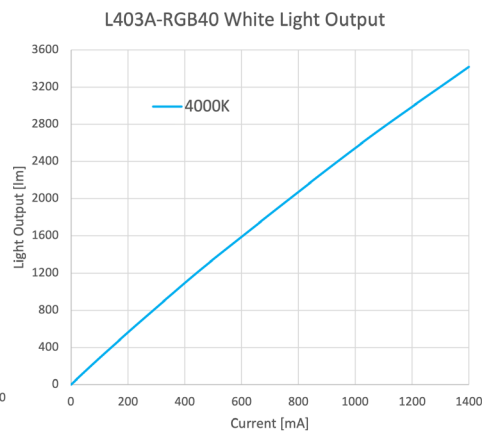


Figure 8

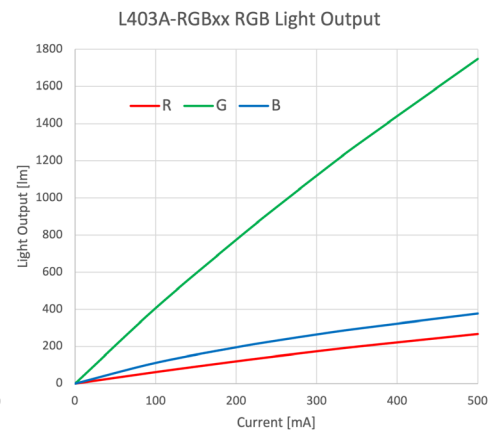


Figure 9

RGBW

Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L401A-RGBxx	24 x 20	9	RGBW	7	1
L402A-RGBxx	24 X 20	13	RGBW	8	1
L403A-RGBxx	24 x 20	18	RGBW	8	1

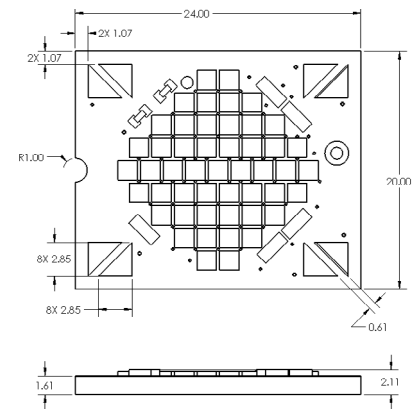
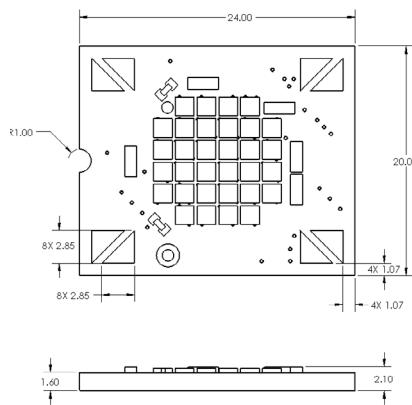
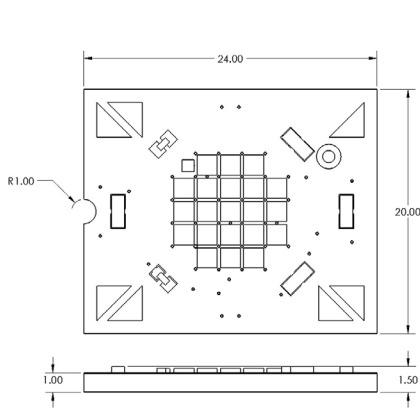
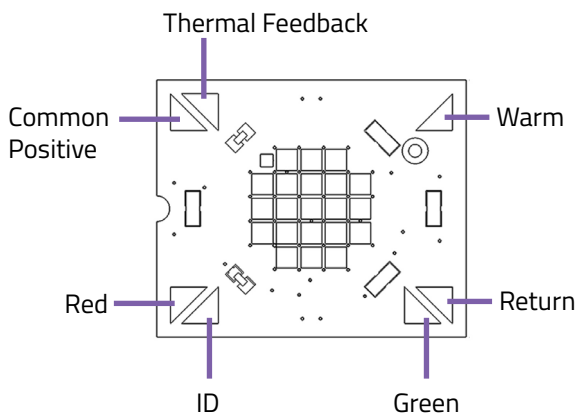


Figure 10 – L401A-RGBxx Mechanical Drawing

Figure 11 – L402A-RGBxx Mechanical Drawing

Figure 12 – L403A-RGBxx Mechanical Drawing



Compatible Holders

Product	Part Number
COB Holder	ARK-BW-TCA
LED Controller	ORB5

*Note: See last page for more info

Figure 13 – Pinout for L401A-RGB-xx, L402A-RGBxx, L403-RGBxx

RGBWW L501A-RGB2040 13mm LES

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

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L501A-RGB2040	Red	500	8.7	17	230
	Green	500	8.7	17	1500
	Blue	500	8.7	17	325
	2000K, 90 CRI	500	10.2	20	705
		700	14.6	21	930
	4000K, 90 CRI	500	10.2	20	1155
700		14.6	21	1525	

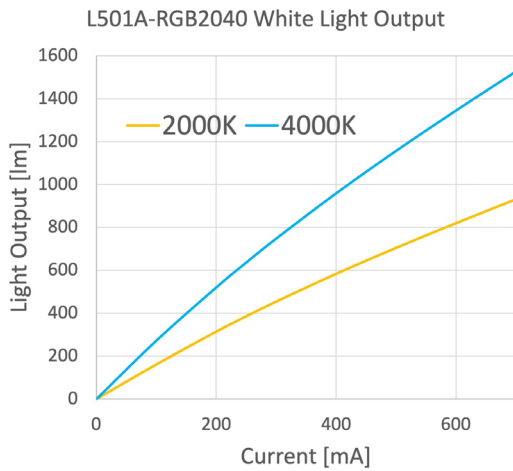


Figure 14

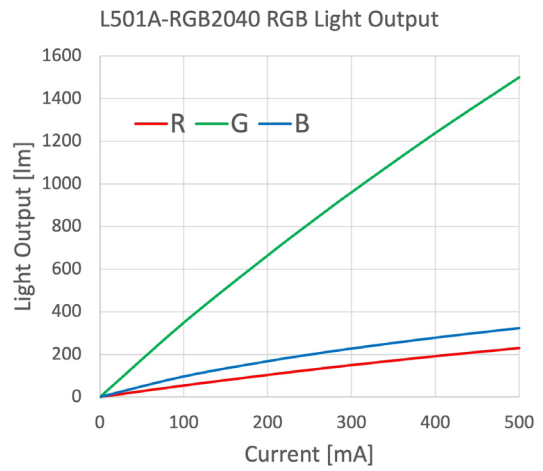


Figure 15

RGBWW L502A-RGB2040 18mm LES

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

Part Number	Color	Current [mA]	Power [W]	Voltage [V]	Light Output [lm]
L502A-RGB2040	Red	500	10.2	20	270
	Green	500	10.2	20	1750
	Blue	500	10.2	20	375
	2000K, 90 CRI	700	13.8	19	1040
		1000	20.3	20	1410
	4000K, 90 CRI	700	13.8	19	1710
		1000	20.3	20	2315

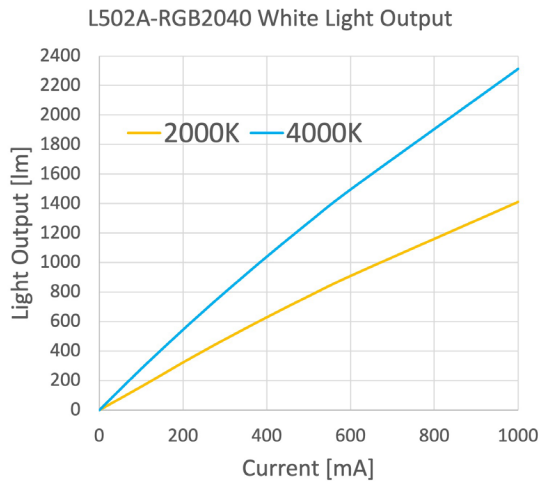


Figure 16

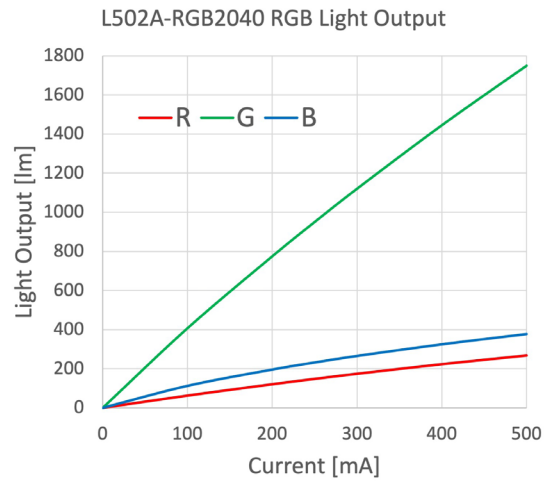


Figure 17

RGBWW

Mechanical Characteristics

Part Number	COB Size [mm]	LES [mm]	Technology	# of Contacts	PCB Thickness [mm]
L501A-RGBxxyy	24 x 20	13	RGBWW	8	1
L502A-RGBxxyy	24 x 20	18	RGBWW	8	1

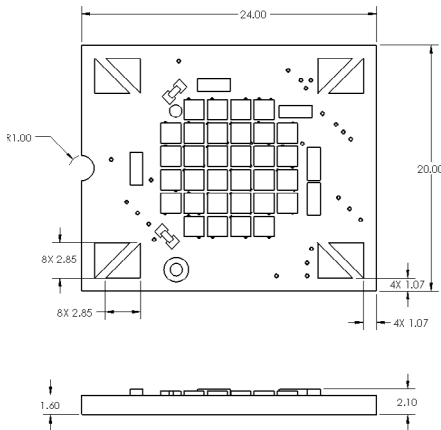


Figure 18 – L501A-RGBxxyy Mechanical Drawing

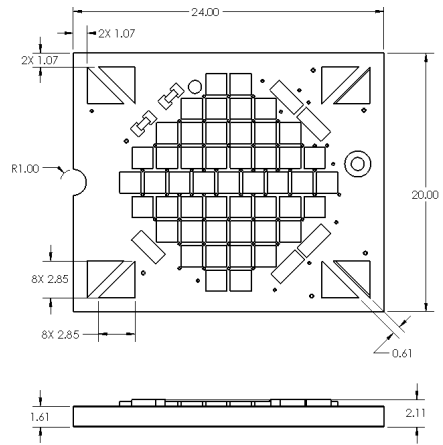


Figure 19– L502A-RGBxxyy Mechanical Drawing

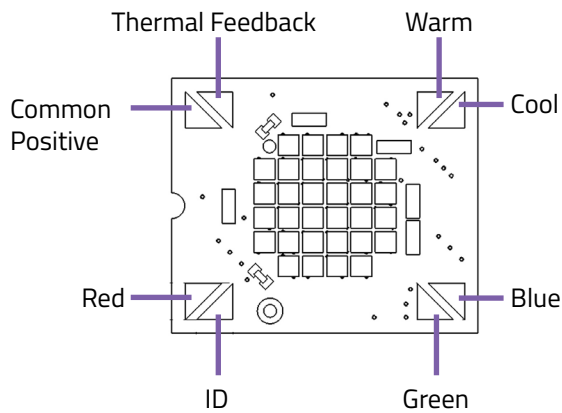


Figure 20 – Pinout for L501A-RGB-xyy, L502A-RGBxxyy

Compatible Holders

Product	Part Number
COB Holder	ARK-BW-TCA
LED Controller	ORB5

*Note: See last page for more info

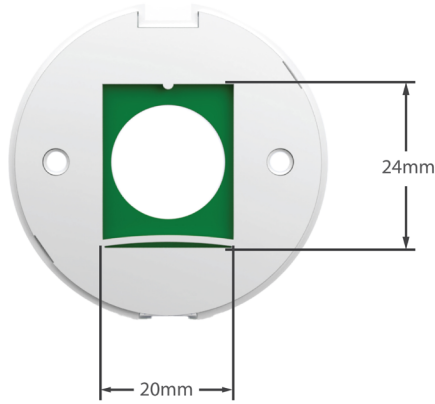


Figure 21 – ORB Bottom View

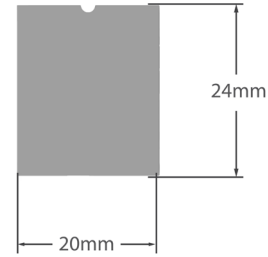
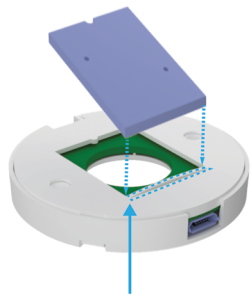


Figure 22 – Bottom View of LoDA LED Module

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

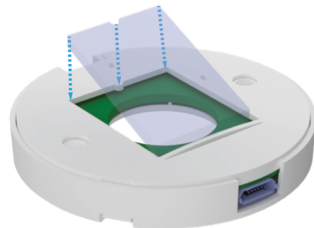
Step 1



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

Figure 23

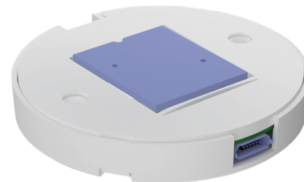
Step 2



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

Figure 24

Step 3

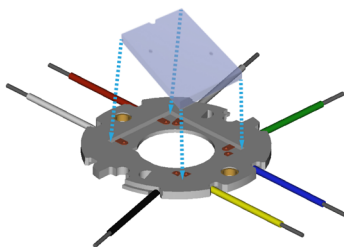


LoDA properly inserted into ORB

Figure 25

How to Align LoDA to Bender+Wirth COB Holder

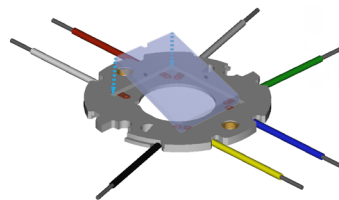
Step 1



Insert LoDA into the COB holder at a 45° angle

Figure 26

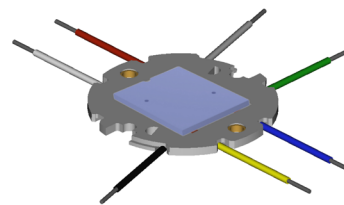
Step 2



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

Figure 27

Step 3



LoDA properly inserted into COB Holder

Figure 28