

Reference Design Sheet – L501A-RGB2040 (RGBWW LES13)

Performance Specifications:

Output	Input Voltage [V]	Wattage [W]	Lumens [lm]	Efficacy [lm/W]
Standard	24	17.1	1414	83

Note: All performance measurements taken @ 4000K, 100% intensity, 25°C ambient with ARK-IR-PL-LES13 and no diffuser in use

Calibrated CCT Specs:

CCT [K]	Typical CRI
1800 (min)	91
2700	94
3000	96
3500	96
4000	92
6500 (max)	84

Diffuser Transmittance:

Diffuser	Transmittance
ARK-DF-SF2	96
ARK-DF-SF4	91
ARK-DF-SF6	84
ARK-DF-SF8	76

Recommended Thermal Management Specifications:

Standard Output:

Thermal Interface Material: Thermal paste - PN: TC3-1G or equivalent. Alternatively, 18x18mm phase change thermal pad - PN: ARK-TM-PC1-1818
Heat Sink: Anodized aluminum. Dissipated power(W): 48 - Thermal Resistance (°C/W): 1.1

Temperature Conditions:

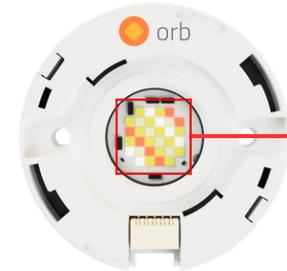
Output	Max T [°C]
Max Tc	85
Max LED Surface	145

Note: Temperature conditions applicable for 4000K, 100% intensity

*Refer to the ORB System Thermal Testing Guideline application note in the Resource section:
www.arkalumen.com/orb-led-controllers



Figure 1 - USB Tc temperature is measured on the metal sleeve of the micro-USB programming port. To measure USB Tc, insert a K-type thermal probe between micro-USB and top encasement of the ORB controller as shown. Solder the tip of the thermal probe to the center of the USB connector.



LED Array
Surface Temp

Figure 2 - To measure LED array surface temperature, use thermal camera with diffuser removed after system reached thermal equilibrium

System Inclusions:

DMX/RDM

Order Code	LoDA	ORB	Cable	Inner Reflector	Diffuser/Holder	Firmware
Z501A2040-VA1-13-X-4020	L501A-RGB2040	ORB5-VA	ARK-C1-5A-30	ARK-IR-PL-LES13	ARK-RH-SA*	4020
Z501A2040-VA1-13-4-4020	L501A-RGB2040	ORB5-VA	ARK-C1-5A-30	ARK-IR-PL-LES13	ARK-DF-SF4	4020

Casambi

Order Code	LoDA	ORB	Cable	Inner Reflector	Diffuser/Holder	Firmware
Z501A2040-VWC1-13-X-4020	L501A-RGB2040	ORB5-VWC	ARK-C1-2A-30	ARK-IR-PL-LES13	ARK-RH-SA*	4020
Z501A2040-VWC1-13-4-4020	L501A-RGB2040	ORB5-VWC	ARK-C1-2A-30	ARK-IR-PL-LES13	ARK-DF-SF4	4020

**When selecting a system without a diffuser, an inner reflector holder (RH) will be included
Other system combinations available (alternative diffusers, cables). Contact Arkalumen for all options.