

## Reference Design Sheet – L502A-RGB2040 (RGBWW LES18)

### Performance Specifications:

Output	Input Voltage [V]	Wattage [W]	Lumens [lm]	Efficacy [lm/W]
Standard	24	17.3	1650	85
High	24	22.3	1790	80

Note: All performance measurements taken @ 4000K, 100% intensity, 25°C ambient with ARK-IR-ST-LES18 and no diffuser in use

### Calibrated CCT Specs:

CCT [K]	Typical CRI
1800 (min)	90
3000	95
3500	96
4000	94
6500 (max)	89

### Diffuser Transmittance:

Diffuser	Transmittance
ARK-DF-SF2	88
ARK-DF-SF4	77
ARK-DF-SF6	70
ARK-DF-SF8	64

### Temperature Conditions:

Output	Max T [°C]
Standard Output Tc	80
High Output Tc	83
Environment Ta	40

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

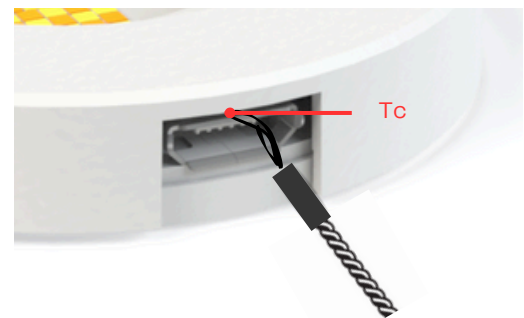


Figure 1 - Tc is measured on the metal sleeve of the micro-USB programming port. To measure Tc, insert thermal probe between micro-USB and top encasement of the ORB controller as shown.

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### 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

#### High Output:

Thermal Interface Material: Thermal paste – PN: TC3-1G or equivalent.  
Heat Sink: Anodized aluminum. Dissipated power(W): 57 – Thermal Resistance (°C/W): 0.9

Contact Arkalumen for validation of any other thermal interface materials. The use of gallium based paste is not recommended.

### System Inclusions:

#### DMX/RDM

Order Code	LoDA	ORB	Cable	Inner Reflector	Diffuser/Holder	Firmware
<b>Z502A2040-VA1-18-X-4010</b>	L502A-RGB2040	ORB5-VA	ARK-C1-5A-30	ARK-IR-ST-LES18	ARK-RH-SA*	4010
<b>Z502A2040-VA1-18-4-4010</b>	L502A-RGB2040	ORB5-VA	ARK-C1-5A-30	ARK-IR-ST-LES18	ARK-DF-SF4	4010

#### Casambi

Order Code	LoDA	ORB	Cable	Inner Reflector	Diffuser/Holder	Firmware
<b>Z502A2040-VWC1-18-X-4010</b>	L502A-RGB2040	ORB5-VWC	ARK-C1-2A-30	ARK-IR-ST-LES18	ARK-RH-SA*	4010
<b>Z502A2040-VWC1-18-4-4010</b>	L502A-RGB2040	ORB5-VWC	ARK-C1-2A-30	ARK-IR-ST-LES18	ARK-DF-SF4	4010

\*\*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.