| Project: | |
|--------------|--|
| Comments: | |
| Prepared By: | |



- Fully tunable spectrum single point source produces wide range of white, pastels and saturated colors
- Closed-loop color point maintenance to <1 MacAdam ellipse over lifetime and temperature
- Integrated temperature protection maintains product within safe operating conditions
- Programmable digital dimming to 1%
- Integrated wireless control for seamless connection with Ketra's predefined light content
- Ketra's technology ensures consistent appearance and guaranteed compatibility as LED technology evolves



Hardware Ordering Guide

| S | 38 | 09 | Α | Т | | 1 | | |
|--------|----------------|--------|----------|---------|---------------|--------|--------------|------------------|
| Series | Form Factor | Lumens | Platform | Control | Beam Angle | Region | Base Type | Housing Color |

| Series | Code | Platform (see page 4 color chart) | Code | Region | Code |
|---------------|------|--|------------------------|--------------------------|---------------|
| S Series Lamp | S | Wide Gamut | А | NA 120 V 60 Hz | 1 |
| Form Factor | Code | Control | Code | Base Type | Code |
| PAR38 | 38 | Tunable | T | E26 GU24 | E26 G24 |
| Lumens | Code | Beam Angle | Code | Housing Color | Code |
| 900 | 09 | Spot (10°) Flood (25°) Wide Flood (40°) Very Wide Flood (60°) | SP FL WFL VFL | White Black Silver | WH BK S |

Ketra lamps can be ordered with a variety of custom light settings, including specific color points and correlated color temperatures.

Contact Ketra for more details.

770-000001-01-9
Specifications are subject to change without notice.



Specifications¹

Optical Performance

| Lumen Output | 900 lm ² |
|-----------------------------|--|
| Color | Red: 330 lm, Green: 435 lm, Blue: 130 lm ³ |
| CRI (Ra) | >90 |
| Lumen Maintenance | 25,000 hours to L70 @ 25°C T _A ⁴ |
| Color Spatial Uniformity | <2 MacAdam ellipses across field angle |
| Color Point Maintenance | <1 MacAdam ellipse over product lifetime |
| Equivalent Traditional Lamp | 75W halogen PAR38 |
| Dimming Range | 1 - 100% lm ⁵ |

Environmental

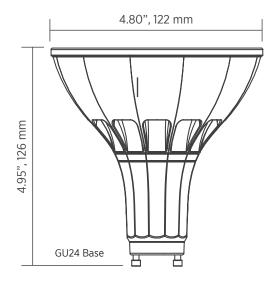
| Operating Temperature (T _A) | 0 - 50°C ⁶ |
|---|----------------------------|
| Storage Temperature | -20 - 80°C |
| Humidity | 0 - 95%, Non-condensing |
| Certification | UL, cUL, RoHS, FCC Class B |
| Location | UL Damp Location, IP50 |

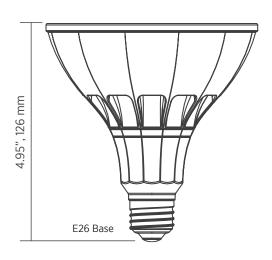
Mechanical

| Weight | 13.8 oz, 390 g |
|------------------|---------------------------------|
| Housing Material | Powder Coated Aluminum, Polymer |
| Lens Material | Non-yellowing PMMA |
| Base Type | E26 or GU24 |

Electrical

| Power Consumption | 17W |
|-------------------|------------|
| Power Factor | >0.9 |
| Current | 170 mA Max |
| Efficacy | >50 lm/W |





CAD files available upon request

¹All performance measurements taken at 3000K, 25°C ambient, 100% power input, unless otherwise stated.

² Lumen measurement complies with IES LM-79-08 testing procedures.

³ See color gamut chart at the end of this document.

⁴ Lumen maintenance values calculated in accordance to TM-21 procedures based on LM-80 compliant measurement data.

 $^{^{\}rm 5}$ Intensity and color point controlled via Ketra's wireless network

⁶ Not to be used in fully enclosed luminaires.



ISO Footcandle Charts: 2700 - 5000K Values Only

1.8'

LM-79 compliant IES files available upon request.

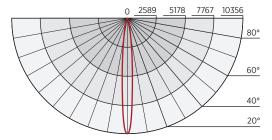
Beam Angle: 10° Spot (SP)

| Product Code ¹ | Wattage | Lumens | СВСР |
|---------------------------|---------|--------|-------|
| S3809ATSP1E26WH | 17W | 900 | 10356 |

| Foot-candles | | Beam Dia. |
|--------------|----|-----------|
| | | |
| 2589 | 2' | 0.4' |
| | | |
| 647 | 4' | 0.7' |
| | | |
| 288 | 6' | 1.1' |
| | | |
| 162 | 8' | 1.4' |
| | / | |

Distance From Light

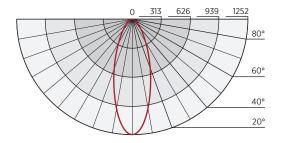
104



Beam Angle: 40° Wide Flood (WFL)

| Product Code ¹ | Wattage | Lumens | СВСР |
|---------------------------|---------|--------|------|
| S3809ATWFI 1F26WH | 17W | 900 | 1252 |

| Foot-candle | s A | Beam Dia. |
|-------------|---------------------|-----------|
| | \mathcal{A} | |
| 313 | 2' | 1.4' |
| | | |
| 78 | 4' | 2.9' |
| | | |
| 35 | 6' | 4.3' |
| | | |
| 20 | 8' | 5.8' |
| | | |
| 13 | / 10' | 7.2' |
| | Distance From Light | |

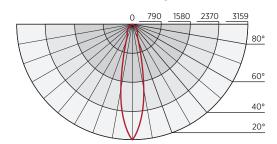


¹ Performance data applies to all base types and housing colors.

Beam Angle: 25° Flood (FL)

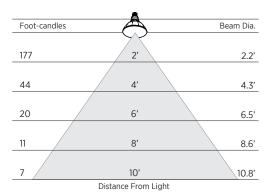
| Product Code ¹ | Wattage | Lumens | CBCP |
|---------------------------|---------|--------|------|
| S3809ATFL1E26WH | 17W | 900 | 3159 |

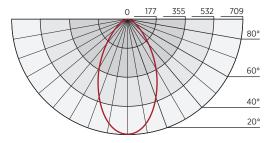
| Foot-candles | | Beam Dia. | | | |
|---------------------|--------|-----------|--|--|--|
| | | | | | |
| 790 | /2'\ | 0.8' | | | |
| | | | | | |
| 197 | / 4' \ | 1.6' | | | |
| | | | | | |
| 88 | 6' | 2.3' | | | |
| | | | | | |
| 49 | / 8' | 3.1' | | | |
| | | | | | |
| 32 | / 10' | 3.9' | | | |
| Distance From Light | | | | | |



Beam Angle: 60° Very Wide Flood (VFL)

| Product Code ¹ | Wattage | Lumens | CBCP | |
|---------------------------|---------|--------|------|--|
| S3809ATVFL1E26WH | 17W | 900 | 709 | |

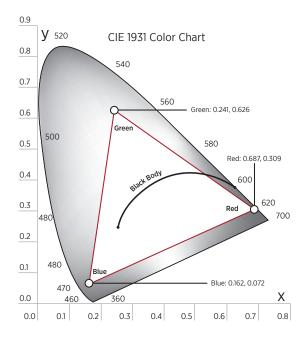






Wide Gamut:

Ketra's tunable spectrum PAR38 lamp can easily be configured via our intuitive Design Studio software tool. The product can reproduce any color point within the triangle shaped gamut indicated in the chart below. With Ketra's innovative optical and thermal feedback system, the color point is maintained to an accuracy of <1 MacAdam ellipse over the lifetime of the product and across operating temperature range.



General Specifications:

- LED PAR38 lamp shall employ closed loop optical and thermal feedback capable of maintaining color point accuracy of <1 MacAdam ellipse.
- LED PAR38 lamp shall have color spatial uniformity of <2 MacAdam ellipses over full field angle.
- LED PAR38 lamp shall have an integrated wireless control onboard.
- LED PAR38 lamp shall be capable of a CRI >90 at any point along the Black Body Curve from 2700 5000K.
- LED PAR38 lamp shall be a single source multi-die emitter consisting of both monochromatic and phosphor converted blue LED die.
- LED PAR38 lamp shall be sealed, meeting UL damp location and IP50 requirements.

- LED PAR38 lamp shall be compatible with E26 or GU24 base sockets.
- LED PAR38 lamp shall be dimmable to 1% of measured luminous flux with digital dimming.
- LED PAR38 lamp shall be UL listed and RoHS compliant.
- LED PAR38 lamp shall be capable of in situ firmware and software upgrades.
- Ketra LED Lamps are warranted to be free from material defects in material and workmanship for five (5) years or 25,000 hours from date of shipment, whichever is less.

| LED PAR38 lamp shall be # _ | LED | PAR38 | lamp | shall | be# | |
|-----------------------------|-----|-------|------|-------|-----|--|
|-----------------------------|-----|-------|------|-------|-----|--|