

# MR16 9W



<b>OUTPUT RANGE: VIVID SERIES</b>	465 - 490 lumen
<b>OUTPUT RANGE: BRILLIANT SERIES</b>	560 - 590 lumen
<b>BEAM ANGLE RANGE</b>	25°, 36°
<b>COLOR TEMPERATURE RANGE</b>	2700K, 3000K
<b>APPLICATION</b>	<b>Not suitable for enclosed, lensed, baffled, or deeply recessed fixtures.</b> Halogen replacement for indoor applications.



## POINT SOURCE OPTICS

Exceptional beam control with smooth uniform beams  
Single light source, single crisp shadow

## VP<sub>3</sub> VIVID COLOR AND VP<sub>3</sub> NATURAL WHITE

VIVID series provides accurate color rendering across the visible spectrum from 400nm to 700nm, with CRI/95, R9/95, Rf/90, Rg/100

Whiteness rendering matches or exceeds that of halogen and incandescent sources at 2700K and 3000K

## ENERGY EFFICIENCY AND LONG LIFE

85% more energy efficient than standard halogen lamps

Typical payback of one year or less

Rated lifetime to L70: 35,000hrs

Warranty: 3yrs or 25,000hrs whichever comes first.

Detailed warranty information available at [soraa.com/resources/legal](http://soraa.com/resources/legal)

## CERTIFICATIONS

UL/CUL Class 2 and non-Class 2, FCC Title 47 Part 15B, RoHS, CE



## GENERAL SPECIFICATIONS

Form Factor	Operating Temperature	Electrical	Dimming and Flicker
Width: 50.1mm (1.97")	Minimum: -40°C (ambient)	Wattage: 9W	Dimmable to <20%
Height: 45.5mm (1.79")	Typical: 90°C - 95°C (base)	Power factor: 0.92	Flicker Index: 0.02
Weight: 47g	Maximum: 100°C (base)	Voltage: 12V +/- 1.2V	Percent Flicker: 5%*
		Frequency: 50/60Hz	

\*These Soraa lamps are certified to California's demanding JA8 standard, which requires <30% flicker

## HIGHLY COMPATIBLE

Geometrically compatible with standard fixtures and suitable for damp locations

Not suitable for enclosed, lensed, baffled, or deeply recessed fixtures

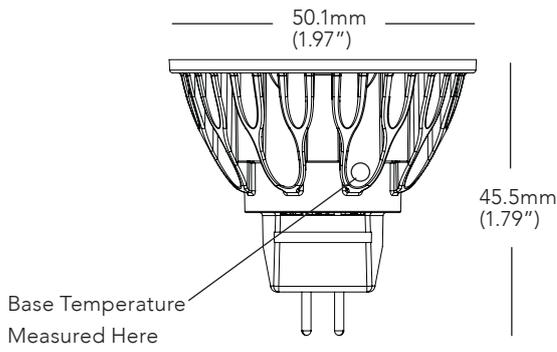
Works with trailing edge and leading edge phase cut dimmers, 12V AC magnetic and electronic transformers and 12V DC transformers (see [www.soraa.com/resources](http://www.soraa.com/resources))

## INTENDED USE AND APPLICATIONS

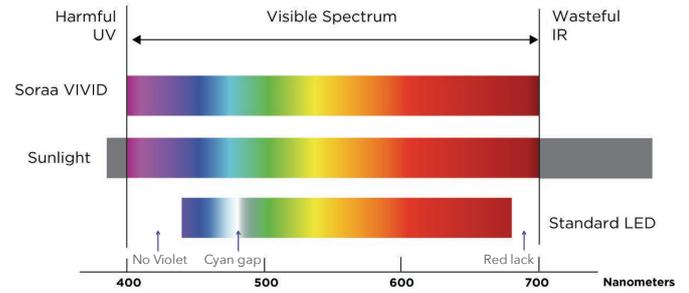
Intended for use in MR16 compatible recessed downlights, track lighting and other indoor and outdoor applications

Soraa lamps are designed to safely turn down in high temperature environments to protect LED and components

## DIMENSIONS

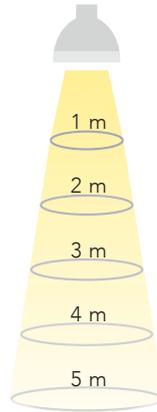


## COLOR RENDERING



## 25 DEGREE BEAM

Beam Dia at 50% Intensity (m)	Field Dia at 10% Intensity (m)	Lux (% of Intensity)
0.4	0.7	100%
0.9	1.5	25%
1.3	2.2	11%
1.8	2.9	6%
2.2	3.6	4%



## 36 DEGREE BEAM

Beam Dia at 50% Intensity (m)	Field Dia at 10% Intensity (m)	Lux (% of Intensity)
0.6	1.1	100%
1.3	2.2	25%
1.9	3.3	11%
2.6	4.3	6%
3.2	5.4	4%

Note: Lux may be calculated by multiplying the peak Intensity of the desired model number by the percentage in the tables above

## SPECIFICATIONS BY MODEL NUMBER\* SORAA LED MR16 9W

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	Peak Intensity	Total Flux (Lm)	Efficacy (Lm/W)	90° Lumens	McA	EEl	SNAP
<b>VIVID SERIES</b>											
SM16-09-25D-927-03-S3	01221	2700	25	40	2570	465	52	440	3	A	-
SM16-09-36D-927-03-S3	01229	2700	36	57	1210	465	52	425	3	A	-
SM16-09-25D-930-03-S3	01225	3000	25	40	2700	490	54	465	3	A	-
SM16-09-36D-930-03-S3	01233	3000	36	57	1280	490	54	450	3	A	-
<b>BRILLIANT SERIES</b>											
SM16-09-25D-827-03-S3	01219	2700	25	40	3090	560	62	530	3	A	-
SM16-09-36D-827-03-S3	01227	2700	36	57	1460	560	62	515	3	A	-
SM16-09-25D-830-03-S3	01223	3000	25	40	3260	590	66	560	3	A	-
SM16-09-36D-830-03-S3	01231	3000	36	57	1540	590	66	540	3	A	-

CCT: Correlated Color Temperature **McA**: White Point Accuracy in McA step **SNAP**: SORAA SNAP System Compatible **EEl**: Energy Efficiency Index

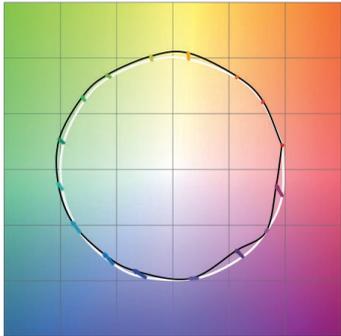
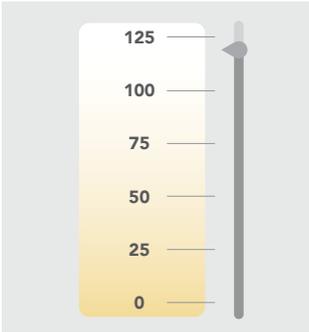
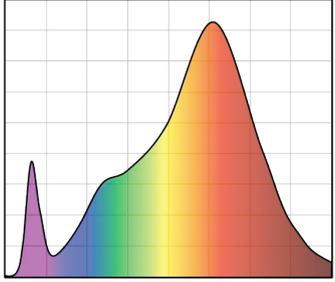
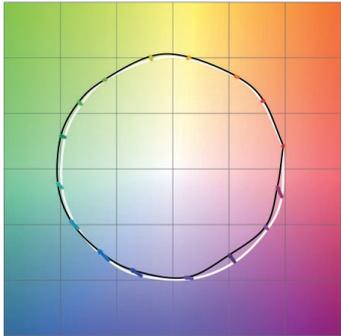
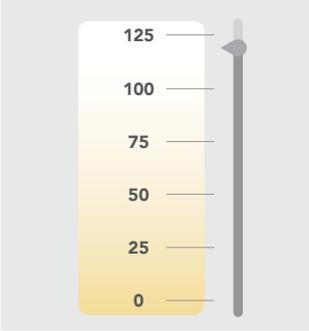
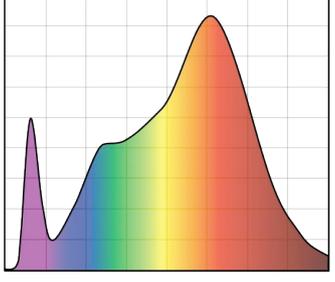
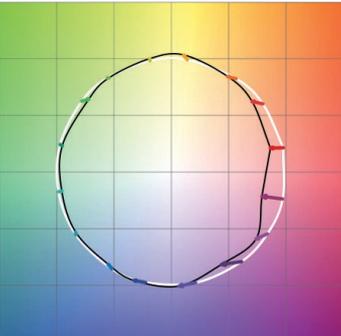
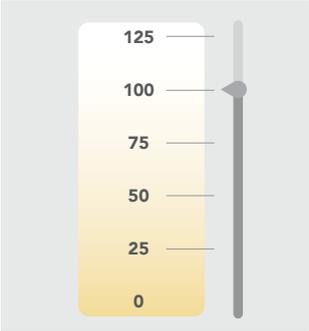
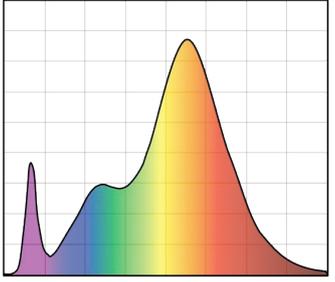
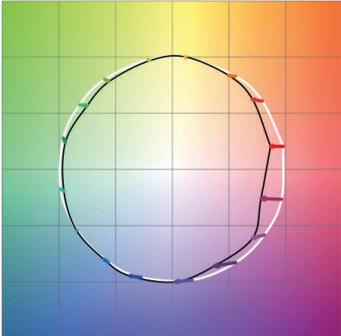
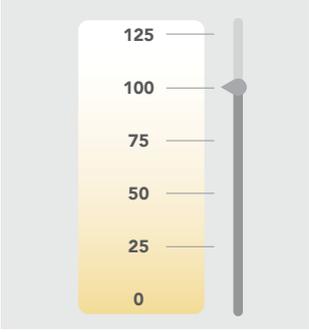
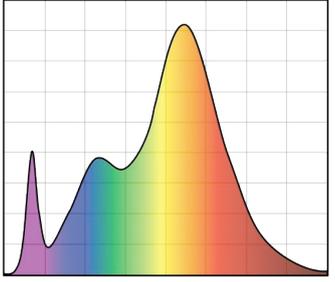
\*Specifications are at stable warm operating conditions (25°C ambient)

**SERIES/CCT**

**COLOR ACCURACY**

**WHITENESS INDEX**

**SPECTRAL POWER DISTRIBUTION**

<p><b>VIVID 2700K</b></p>	 <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p>	 <p><b>Rw: 120</b></p>	 <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 95, R9: 95</b></p>
<p><b>VIVID 3000K</b></p>	 <p><b>Rf: 90, Rg: 100, Rfh1: 95</b></p>	 <p><b>Rw: 120</b></p>	 <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 95, R9: 95</b></p>
<p><b>BRILLIANT 2700K</b></p>	 <p><b>Rf: 85, Rg: 92, Rfh1: 77</b></p>	 <p><b>Rw: 100</b></p>	 <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 85, R9: &gt;0</b></p>
<p><b>BRILLIANT 3000K</b></p>	 <p><b>Rf: 85, Rg: 92, Rfh1: 77</b></p>	 <p><b>Rw: 100</b></p>	 <p><b>Wavelength (nm)</b> 380 780</p> <p><b>CRI: 85, R9: &gt;0</b></p>

Rf: TM-30 metric measuring color fidelity (whether colors are similar to those under natural light). Rf is a more accurate version of the CRI Ra. Rf is 100 for natural light.  
 Rg: TM-30 metric measuring color gamut (whether colors are more saturated than under natural light). Rg is 100 for natural light.  
 Rfh1: TM-30 metric measuring color fidelity for red tones. Rfh1 is a more accurate version of the CRI R9. Rfh1 is 100 for natural light.  
 Rw: Soraa-developed metric to measure white fidelity. Rw measures the magnitude of excitation of whitening agents within whites. Rw is about 100 for natural light.