

# MR16-GU10 7.5W



**OUTPUT RANGE: VIVID SERIES** 390 - 455 lumen

**OUTPUT RANGE: BRILLIANT SERIES** 475 - 525 lumen

**BEAM ANGLE RANGE** 10°, 25°, 36°, 60°

**COLOR TEMPERATURE RANGE** 2700K, 3000K, 4000K

**APPLICATION** Halogen replacement for indoor & outdoor applications



## POINT SOURCE OPTICS

Exceptional beam control enables unique 10° narrow spot and 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

RoHS, CE



## HIGHLY COMPATIBLE

Narrow spot compatible with Soraa SNAP System accessories

Geometrically compatible with standard fixtures and suitable for damp locations

This lamp is suitable for use in fully enclosed fixtures, subject to the maximum heatsink temperature limits stated in this data sheet. A list of qualified enclosed fixtures can be found at [www.soraa.com/resources](http://www.soraa.com/resources)

Compatible with trailing edge phase cut dimmers only. Not for use with leading edge dimmers (see [www.soraa.com/resources](http://www.soraa.com/resources))

## INTENDED USE AND APPLICATIONS

Intended for use in GU10 compatible recessed downlights, track lighting and other indoor and outdoor applications

Soraa lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation

## GENERAL SPECIFICATIONS

### Form Factor

Width: 49.9mm (1.96")

Height: 53.5mm (2.10")

Weight: 61g

### Operating Temperature

Minimum: -40°C (ambient)

Typical: 85°C - 95°C (base)

Maximum: 100°C (base)

### Electrical

Wattage: 7.5W

Power factor: 0.80

Voltage: 230V +/- 23V

Frequency: 50/60Hz

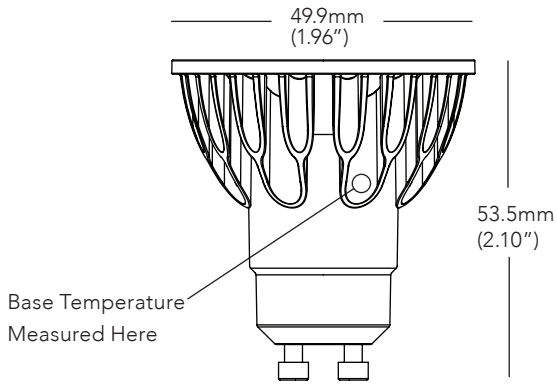
### Dimming and Flicker

Dimmable to <20%

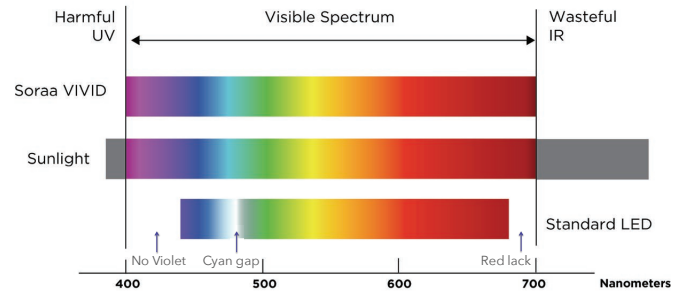
Flicker Index: <0.12

Percent Flicker: 40%

## DIMENSIONS

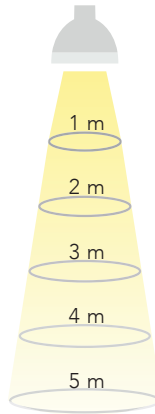


## COLOR RENDERING



## 10 DEGREE BEAM

Beam Dia at 50% Intensity (m)	Field Dia at 10% Intensity (m)	Lux (% of Intensity)
0.2	0.4	100%
0.3	0.7	25%
0.5	1.1	11%
0.7	1.4	6%
0.9	1.8	4%

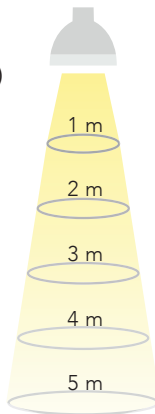


## 25 DEGREE BEAM

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%



## 60 DEGREE BEAM

Beam Dia at 50% Intensity (m)	Field Dia at 10% Intensity (m)	Lux (% of Intensity)
1.2	1.8	100%
2.3	3.6	25%
3.5	5.4	11%
4.6	7.2	6%
5.8	9.0	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-GU10 7.5W

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	Peak Intensity	Total Flux (Lm)	Efficacy (Lm/W)	90° Lumens	McA	EEI	SNAP
<b>VIVID SERIES</b>											
SM16GW-07-10D-927-03-S3	01075	2700	10	17	5710	390	52	345	3	A	YES
SM16GW-07-25D-927-03-S3	01087	2700	25	38	2260	410	55	385	3	A	-
SM16GW-07-36D-927-03-S3	01099	2700	36	54	1070	410	55	375	3	A	-
SM16GW-07-60D-927-03-S3	01585	2700	60	84	420	410	55	375	3	A	-
SM16GW-07-10D-930-03-S3	01079	3000	10	17	6000	410	55	360	3	A	YES
SM16GW-07-25D-930-03-S3	01091	3000	25	38	2400	435	58	410	3	A	-
SM16GW-07-36D-930-03-S3	01103	3000	36	54	1130	435	58	400	3	A	-
SM16GW-07-60D-930-03-S3	01589	3000	60	84	440	435	58	400	3	A	-
SM16GW-07-10D-940-03-S3	01081	4000	10	17	6290	430	57	380	4	A	YES
SM16GW-07-25D-940-03-S3	01093	4000	25	38	2510	455	61	430	4	A	-
SM16GW-07-36D-940-03-S3	01105	4000	36	54	1190	455	61	415	4	A	-
SM16GW-07-60D-940-03-S3	01591	4000	60	84	460	455	61	415	4	A	-
<b>BRILLIANT SERIES</b>											
SM16GW-07-10D-827-03-S3	01073	2700	10	17	6950	475	63	420	3	A	YES
SM16GW-07-25D-827-03-S3	01085	2700	25	38	2760	500	67	475	3	A	-
SM16GW-07-36D-827-03-S3	01097	2700	36	54	1310	500	67	460	3	A	-
SM16GW-07-60D-827-03-S3	01583	2700	60	84	510	500	67	460	3	A	-
SM16GW-07-10D-830-03-S3	01077	3000	10	17	7320	500	67	445	3	A	YES
SM16GW-07-25D-830-03-S3	01089	3000	25	38	2900	525	70	495	3	A	-
SM16GW-07-36D-830-03-S3	01101	3000	36	54	1370	525	70	480	3	A	-
SM16GW-07-60D-830-03-S3	01587	3000	60	84	540	525	70	480	3	A	-

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

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

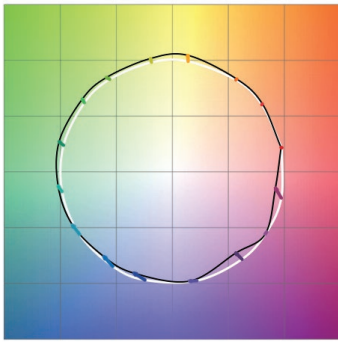
**SERIES/CCT**

**COLOR ACCURACY**

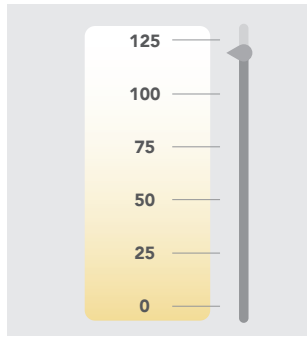
**WHITENESS INDEX**

**SPECTRAL POWER DISTRIBUTION**

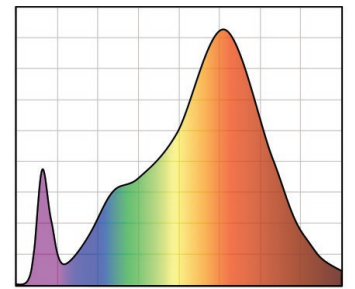
**VIVID  
2700K**



Rf: 90, Rg: 100, Rfh1: 95



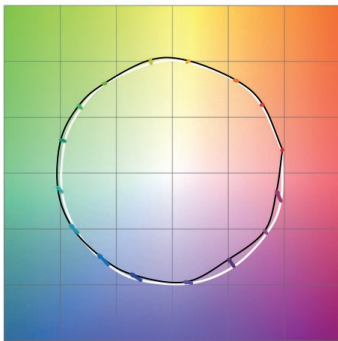
Rw: 120



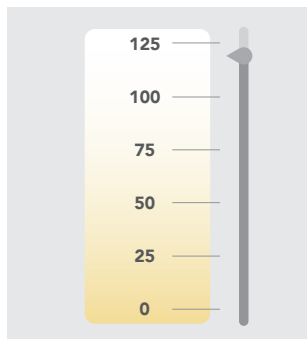
380 Wavelength (nm) 780

CRI: 95, R9: 95

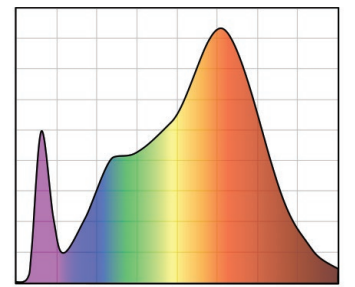
**VIVID  
3000K**



Rf: 90, Rg: 100, Rfh1: 95



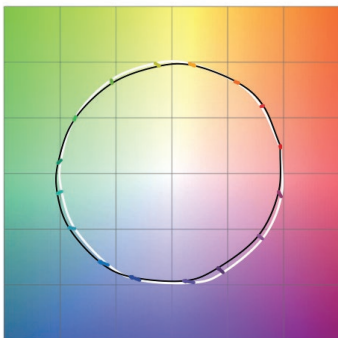
Rw: 120



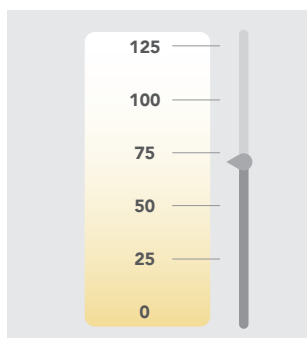
380 Wavelength (nm) 780

CRI: 95, R9: 95

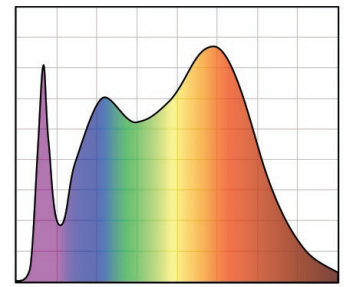
**VIVID  
4000K**



Rf: 90, Rg: 100, Rfh1: 95



Rw: 70



380 Wavelength (nm) 780

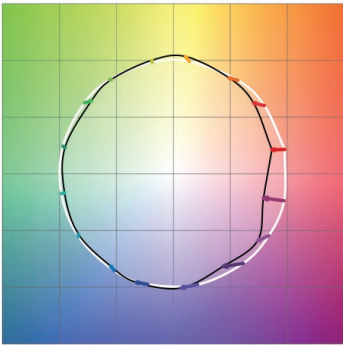
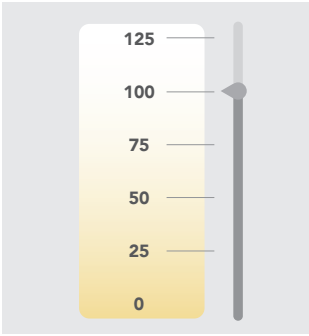
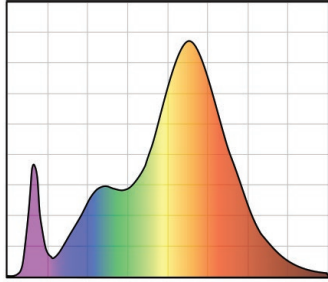
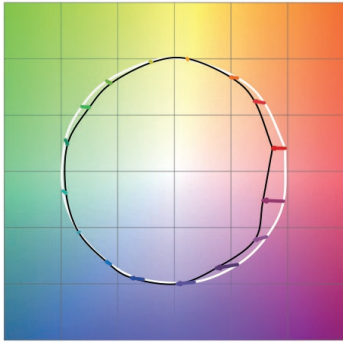
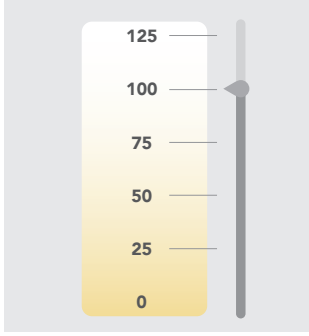
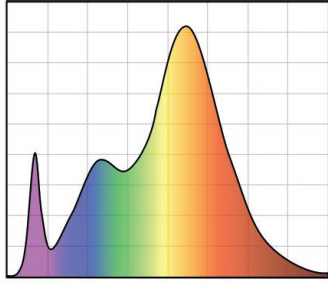
CRI: 95, R9: 95

**SERIES/CCT**

**COLOR ACCURACY**

**WHITENESS INDEX**

**SPECTRAL POWER DISTRIBUTION**

<p><b>BRILLIANT 2700K</b></p>	 <p><b>Rf: 85, Rg: 92, Rfh1: 77</b></p>	 <p><b>Rw: 100</b></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>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.