SORAA vivid™

MR16 GU10 7.5W 230V



Output	390 - 455 lumen
Beam Angle	10°, 25°, 36°, 60°
Color Temperature	2700K, 3000K, 4000K
Color Metrics	CIE Metrics: CRI 95, R9 95 TM30 Metrics: Rf 90, Rg 100 Whiteness Index: Rw 100
Applications	Hotels & Hospitality Galleries & Museums High-End Retail

SORAA VIVID™
Soraa VIVID lamps offer beautiful and accurate color and white rendering across the entire visible spectrum, mimicking the natural range of sunlight to deliver unmatched quality of light for color critical applications.

POINT SOURCE OPTICS™
Point Source Optics deliver exceptional beam quality with crisp shadows, perfect uniformity and precisely controlled beam distributions from 10° to 60°.

SORAA VIVID COLOR™
Soraa VIVID lamps utilize full spectrum light to provide industry-leading color rendition of CRI/95, R9/95, Rf/90, Rg/100 for precise color reproduction.

SORAA NATURAL WHITE™
Soraa VIVID lamps are engineered to deliver outstanding whiteness rendering for true-to-life whites, which matches or exceeds incandescent sources at 2700K and 3000K.

ENERGY EFFICIENCY
85% more energy efficient than standard halogen lamps, with typical payback of one year or less.

ACCESSORIES
Narrow spot compatible with the Soraa SNAP System™.

THERMAL COMPATIBILITY
Suitable for use in fully enclosed fixtures, subject to the maximum heatsink temperature limits stated in this data sheet. Designed to safely turn down in high temperature environments to protect LED and components.

ELECTRICAL COMPATIBILITY
Compatible with trailing edge phase cut dimmers only.
Not for use with leading edge dimmers
Check individual lamp website pages for compatibility data.
For more information visit: www.soraa.com

INTENDED USE & LOCATION RATING
Intended for use in MR16 GU10 compatible recessed downlights, track lighting and other indoor applications. Suitable for damp locations, not rated for use in wet locations.

This light source produces greater than 2mW/klm of UV light and is intended only for high color and white rendering applications, where the UV light is required to activate optical brightening agents in illuminated objects.

LIFETIME & WARRANTY
Rated lifetime to L70: 35,000hrs
Warranty: 3yrs or 25,000hrs whichever comes first
For warranty information visit: www.soraa.com/resources/legal

RoHS

GENERAL SPECIFICATIONS

Form Factor
Width: 49.9mm (1.96")
Height: 53.5mm (2.10")
Weight: 61g

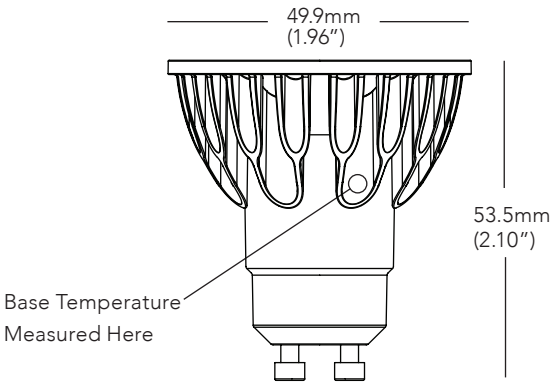
Operating Temperature
Minimum: -40°C (ambient)
Typical: 85°C - 95°C (base)
Maximum: 100°C (base)

Electrical
Wattage: 7.5W
Power factor: 0.80
Voltage: 230V +/- 23V
Frequency: 50/60Hz

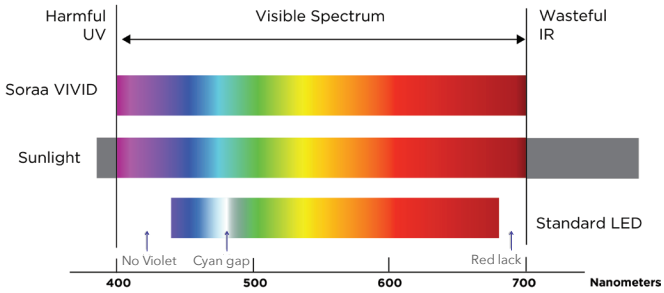
Dimming
Please reference our compatibility chart for dimmer and transformer information.

Information and specifications subject to change

DIMENSIONS

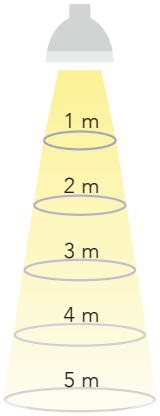


COLOR RENDERING



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%

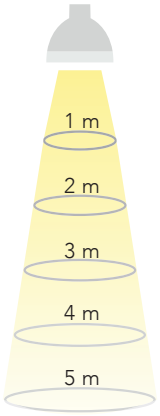


25 DEGREE BEAM

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%

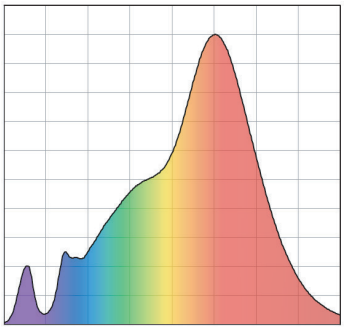
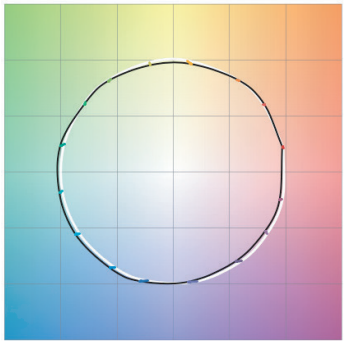
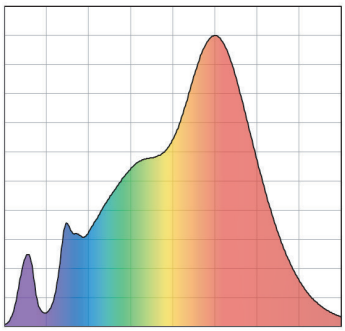
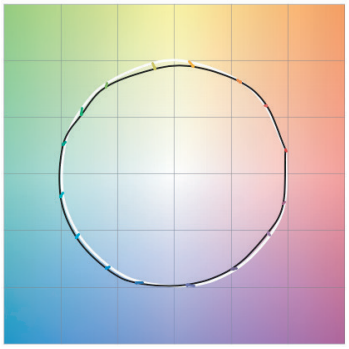
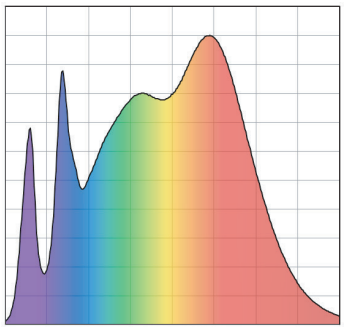
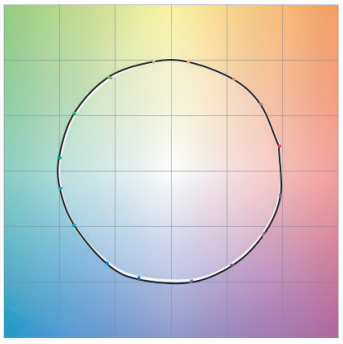
Note: Lux may be calculated by multiplying the Peak Intensity of the desired model number by the percentage in the tables above

SPECIFICATIONS BY MODEL NUMBER* SORAA LED MR16-GU10 7.5W 230V

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	Peak Intensity	Total Flux (Lm)	90° Lumens	Efficacy (Lm/W)	McA	SNAP
VIVID SERIES										
SM16GW-07-10D-927-03-S3	01075	2700	10	17	5710	390	345	52	3	YES
SM16GW-07-25D-927-03-S3	01087	2700	25	38	2260	410	385	55	3	-
SM16GW-07-36D-927-03-S3	01099	2700	36	54	1070	410	375	55	3	-
SM16GW-07-60D-927-03-S3	01585	2700	60	84	420	410	375	55	3	-
SM16GW-07-10D-930-03-S3	01079	3000	10	17	6000	410	360	55	3	YES
SM16GW-07-25D-930-03-S3	01091	3000	25	38	2400	435	410	58	3	-
SM16GW-07-36D-930-03-S3	01103	3000	36	54	1130	435	400	58	3	-
SM16GW-07-60D-930-03-S3	01589	3000	60	84	440	435	400	58	3	-
SM16GW-07-10D-940-03-S3	01081	4000	10	17	6290	430	380	57	4	YES
SM16GW-07-25D-940-03-S3	01093	4000	25	38	2510	455	430	61	4	-
SM16GW-07-36D-940-03-S3	01105	4000	36	54	1190	455	415	61	4	-
SM16GW-07-60D-940-03-S3	01591	4000	60	84	460	455	415	61	4	-

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

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

CCT	SPECTRAL POWER DISTRIBUTION	COLOR QUALITY METRICS	COLOR ACCURACY
VIVID 2700K	 CRI: 95, R9: 95	CRI 95 R9 95 Rf 95 Rg 100 Rf-h1 95 Rw 90	
VIVID 3000K	 CRI: 95, R9: 95	CRI 95 R9 95 Rf 95 Rg 100 Rf-h1 95 Rw 90	
VIVID 4000K	 CRI: 95, R9: 95	CRI 95 R9 95 Rf 98 Rg 100 Rf-h1 100 Rw 100	

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www.ecosenselighting.com

SNAP SYSTEM ACCESSORIES

SMALL (2")

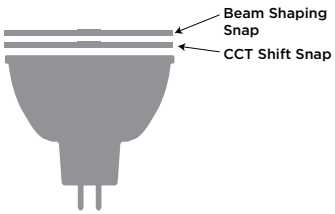


DESCRIPTION

The award winning Soraa SNAP SYSTEM™ is the first LED lamp/accessory solution that is optimized to work as an integrated system. Based on high brightness single source GaN on GaN™ LED technology, it completely redefines accessory application. The effects that can be achieved are similar to what can be done with halogen sources, but are enabled by a relatively low operating temperature and ground-breaking optical design, materials, and methods of attachment.

STACKING ACCESSORIES

SNAP SYSTEM accessories can be stacked in combination. For example, a beam spreader can be used in combination with CCT shifter. When combining the beam shaping Snap accessory with CCT shifting Snap Accessory, for best results always place CCT shifting Snap on the lamp first, as shown in diagram below.



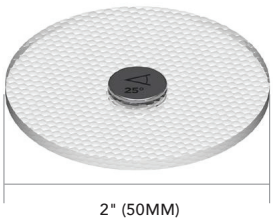
ATTACHMENT

The SNAP SYSTEM's self-centering magnetic interconnect system makes using accessories completely user friendly. Simply attached the SNAP SYSTEM accessory directly to any Narrow Spot Soraa lamp, the magnetic force from both the accessory and lamp will securely attached to one another and center itself.

COMPATIBILITY

The SNAP SYSTEM accessories Small (2") are compatible with the lamps and Optical Light Engines outlined below. The SNAP SYSTEM are only compatible with SORAA Narrow Spot lamps and Optical Light Engines. See each accessory data for exact diameter.

Small (2")
MR16
GU10
PAR20
OLE/C 16



PHOTOMETRICS

IES files of accessories is available for download at
http://www.soraa.com/products/snap_system

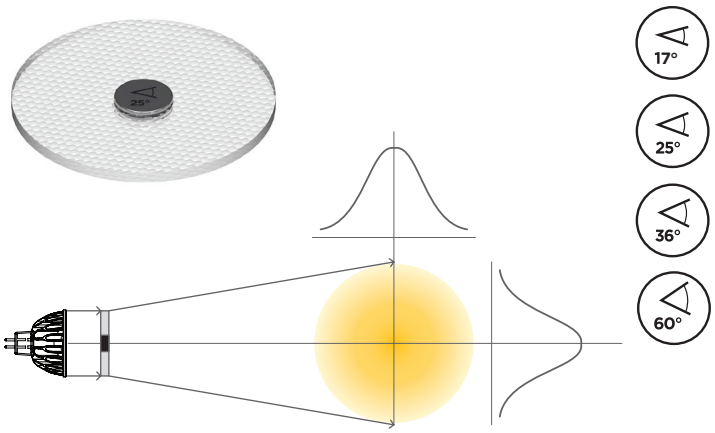
SORAA SNAP SYSTEM LED ACCESSORIES – SMALL (2")

BEAM SPREADER SNAP

Use in any application where reducing the number of beam angle SKUs is required. Reduces inventory costs. Shortens specification, design, sales cycles. Provides maximum flexibility up to the time of installation.

Beam	Part Number	Product Code	CBCP of 10˚ Lamp	Field Angle
17°	AC-GC-1717-00-S1	03263	30%	33°
25°	AC-GC-2525-00-S1	00325	29%	40°
36°	AC-GC-3636-00-S1	00327	14%	55°
60°	AC-GC-6060-00 -S1	00329	5%	103°

Lumen Transmissivity: 90%
Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.45 lb-F

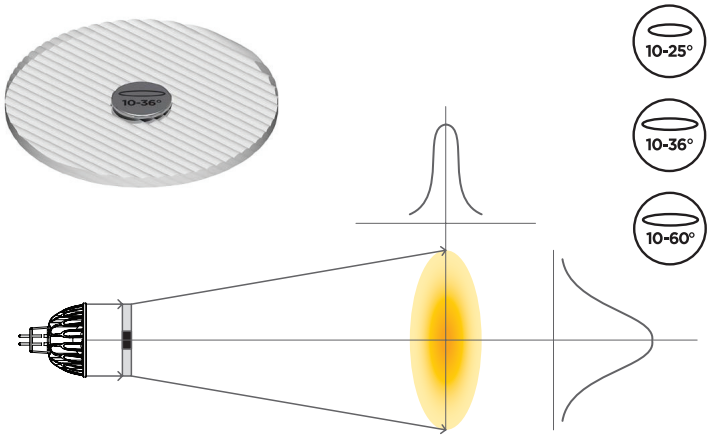


LINEAR SNAP

Use in wall washes and illuminating asymmetric objects. Reduces required number of light fixtures and spill illumination of target objects.

Beam	Part Number	Product Code	CBCP of 10˚ Lamp	Field Angle Horiz.	Field Angle Vert.
10° - 25°	AC-GE-1025-00-S1	00331	52%	27°	35°
10° - 36°	AC-GE-1036-00-S1	00333	38%	27°	43°
10° - 60°	AC-GE-1060-00-S1	03259	25%	25°	70°

Lumen Transmissivity: 90%
Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.45 lb-F

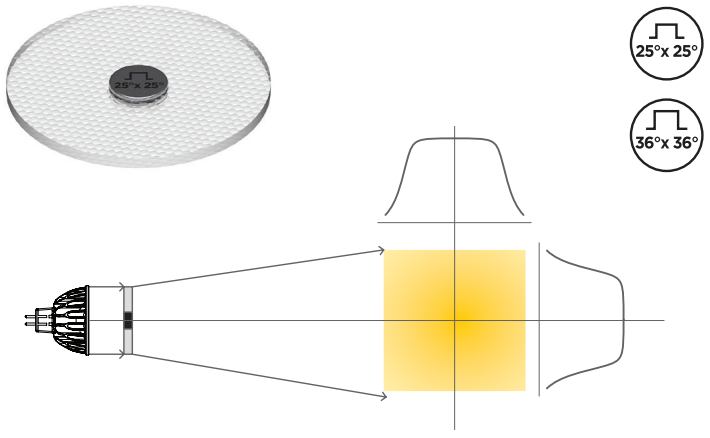


FLAT TOP SNAP

Provides even illumination center to edge. Eliminates video camera saturation, for use in applications such as critical video surveillance.

Beam	Part Number	Product Code	CBCP of 10˚ Lamp	Field Angle Horiz.	Field Angle Vert.
25° x 25°	AC-FR-2525-00-S1	00335	19%	44°	44°
36° x 36°	AC-FR-3636-00-S1	00337	14%	46°	46°

Lumen Transmissivity: 90%
Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.45 lb-F



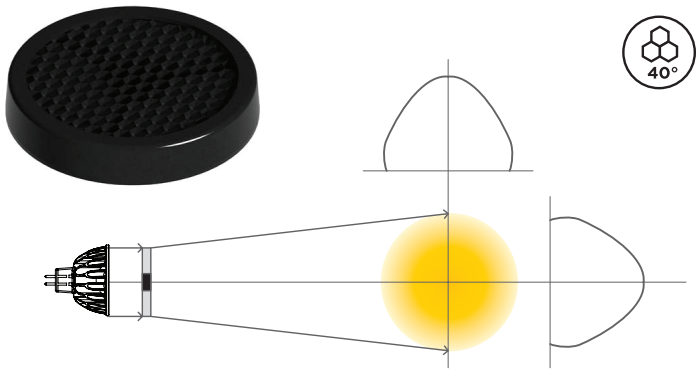
SORAA SNAP SYSTEM LED ACCESSORIES – SMALL (2")

LOUVER SNAP

Eliminates high angle glare, making light beams disappear in downlight applications.

Cutoff Angle	Part Number	Product Code	CBCP of 10˚ Lamp
40°	AC-LU-4040-00-S1	00339	63%

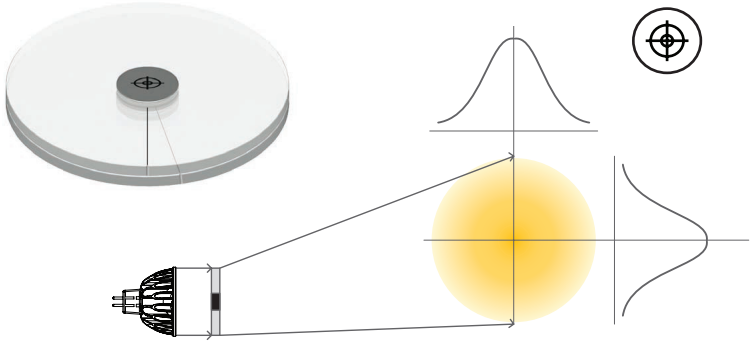
Diameter: 51.1 mm Thickness: 9.0 mm
Magnetic Attach Force: 0.45 lb-F
Reduces angular intensity to 0.1% of peak at 40° full angle.
Fits around lamp face. Can be used in combination with gimbal ring fixtures.



AIM SNAP

Designed with two lenses the Aim Snap bends the beam from 0 degree to maximum deflection angle of 20 degrees, while maintaining uniform and consistent color and shape.

Part Number	Product Code	Lumen Transmission	Beam Angle	Max Deflection
AC-AM-0020-00-S1	03255	85%	13°	20°



Suggested method of use:

Use the orientation lines to adjust beam deflection angle.



Narrower angle between orientation lines results in more deflection

Wider angle between orientation lines results in lesser deflection

Stacked orientation lines will result in undesirable optical artifacts. Rotate one lens slightly to mitigate.

Note: May be used with Beam Spreader, Linear, and Flat Top SNAP accessory.

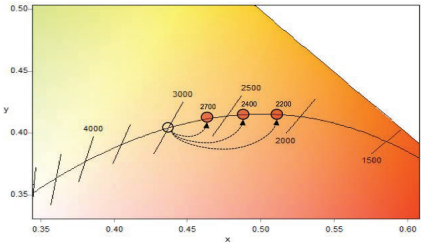
CCT SHIFTER SNAP

Use in hospitality and restaurant applications to simulate warm dimming. Create custom colors for festive occasions or brand identity. Single Lamp SKU can be used for multiple color temperatures

CTO*	Part Number	Product Code	Lumen Transmissivity	Mired Shift
1/4	AC-CC-0001-00-S1	00323	90%	37
1/2	AC-CC-0002-00-S1	00321	75%	83
3/4	AC-CC-0003-00-S1	00319	60%	120

*Color Temperature Orange
Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.45 lb-F





CCT SHIFT EFFECT

Starting Lamp CCT	1/4 CTO	1/2 CTO	3/4 CTO
2,700K	2,450K	2,200K	2,000K
3,000K	2,700K	2,400K	2,200K
4,000K	3,500K	3,000K	2,700K

SORAA SNAP SYSTEM LED ACCESSORIES – SMALL (2")

CLEAR SNAP

Use together with gel and dichroic filters for total color freedom. Produce the exact mood and effect for any environment with the Clear SNAP accessory, Clear Snap are sold in quantities of ten.



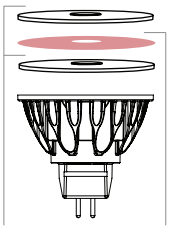
CL

Part Number	Product Code	Lumen Transmissivity (1 Snap)	Lumen Transmissivity (2 Snaps)
AC-CL-0000-00-S1	02183	93%	87%

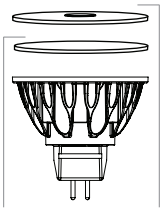
Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.45 lb-F

Suggested method of use for:

Gel Filter

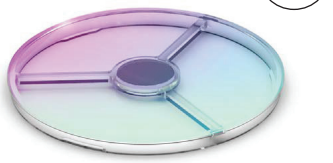


Dichroic Filter



ENHANCE

Enhance is a unique color-enhancing filter. Designed to modify the spectrum of Soraa Vivid lamps, it increases the vividness of warm colors (including red, orange and pink colors) as well as greens. In applications where a more colorful setting is sought, Enhance lets the richness of colors stand out even more.



E1

Part Number	Product Code	Lumen Transmissivity	Whiteness
AC-EN-0001-00-S1	03281	75%	130%

Diameter: 50.0 mm Thickness: 2 mm
Magnetic Attach Force: 0.20 lb-F

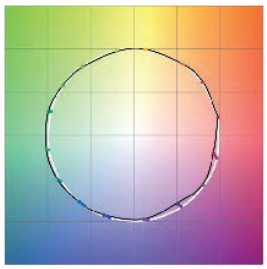
Application Notes:

Can be used in combination with any SORAA Vivid 10° lamp.
Recommended use with CCTs of 3000K and 2700K

Recommend that the Enhance be combined with either a Louver Snap accessory (for 10° spot applications) or with a Beam Spreader Snap accessory (for other beam angles).

When stacking the Enhance Snap with other Snap accessories the Enhance Snap should be placed as the first filter on the lamp, followed by other Snaps.

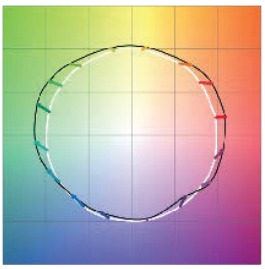
SORAA VIVID



Rf:90, Rg:100

Rw (Whiteness): 120 (2700K & 3000K)

ENHANCE SNAP



Rf:75, Rg:112

Rw (Whiteness): 130 (2700K & 3000K)