

MR16 CONSTANT CURRENT (18V)



OUTPUT RANGE: VIVID SERIES	440-515 lumen
BEAM ANGLE RANGE	10°, 25°, 36°
COLOR TEMPERATURE RANGE	2700K, 3000K, 4000K
APPLICATION	LED constant current lamp for indoor applications



DIM



POINT SOURCE OPTICS

Exceptional beam control enables unique 10° narrow spot and smooth uniform beams

Single light source, single crisp shadow

SORAA VIVID COLOR AND NATURAL WHITE

VIVID series provides Soraa's industry-leading full spectrum output, with CRI >95, R9 >95, R_w >90, R_f >95, and R_g 100.

ENERGY EFFICIENCY AND LONG LIFE

Rated lifetime to L70: 35,000hrs

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

Detailed warranty information available at soraa.com/resources/legal

CERTIFICATIONS



RoHS



HIGHLY COMPATIBLE

Fixture compatibility and driving current are subject to the lamp base temperature. Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the CC MR16 lamp, voiding the lamp warranty. The temperature at the base of the lamp must be measured at the point indicated on this specification sheet.

Geometrically compatible with standard MR16 fixtures

Not recommended for enclosed fixtures or for use with front glass cover

Suitable for damp locations

Compatible with the Soraa SNAP System™

INTENDED USE AND APPLICATIONS

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

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.

STORAGE CONDITIONS

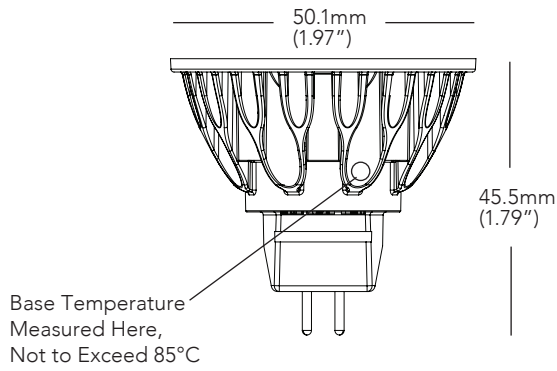
Maximum storage temperature of 90°C

GENERAL SPECIFICATIONS

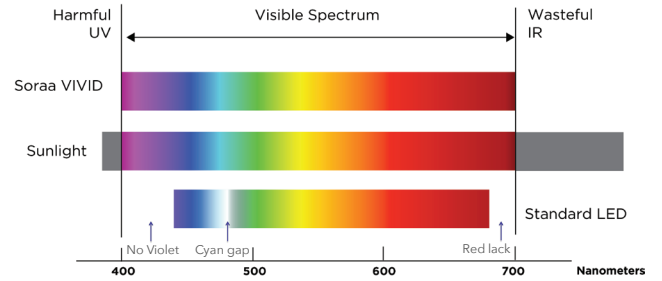
Form Factor	Operating Temperature	Operating Current*	Forward Voltage
Width: 50.1mm (1.97")	Minimum: -40°C (ambient)	Typical: 350mA	Nominal: 18V DC
Height: 45.5mm (1.79")	Typical: 80-85°C (lamp base)	Maximum*: 450mA	Range: 17-19V DC
Weight: 44g	Maximum: 85°C (lamp base)		

*User must determine that operating current and corresponding lamp power meet application requirements (lamp base not to exceed 85°C)

DIMENSIONS



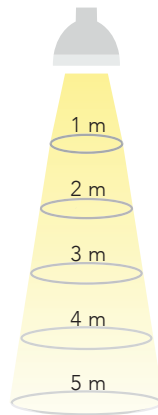
COLOR RENDERING



10 DEGREE BEAM

PHOTOMETRICS: 95CRI, 3000K AT 450MA, 85°C

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
0.5	0.9	11.1%
1.0	1.8	2.8%
1.6	2.7	1.2%
2.1	3.6	0.7%
2.6	4.5	0.4%



25 DEGREE BEAM

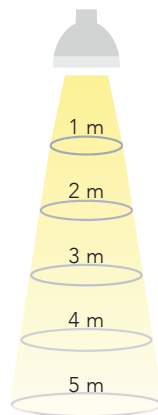
PHOTOMETRICS: 95CRI, 3000K AT 450MA, 85°C

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
1.3	2.1	11.1%
2.7	4.1	2.8%
4.0	6.2	1.2%
5.3	8.3	0.7%
6.7	10.3	0.4%

36 DEGREE BEAM

PHOTOMETRICS: 95CRI, 3000K AT 450MA, 85°C

Beam Dia at 50% CBCP (ft)	Field Dia at 10% CBCP (ft)	Foot-candles (% of CBCP)
1.9	3.1	11.1%
3.9	6.1	2.8%
5.8	9.2	1.2%
7.8	12.2	0.7%
9.7	15.3	0.4%



SPECIFICATIONS BY MODEL NUMBER* SORAA LED MR16 CONSTANT CURRENT

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	CBCP (Cd)	Total Flux (Lm)	90° Lumens	McA	SNAP
VIVID SERIES									
SM16C-CC2-10D-927-03	13331	2700	10	17	6500	440	390	3	YES
SM16C-CC2-25D-927-03	13327	2700	25	39	2600	465	437	3	-
SM16C-CC2-36D-927-03	13330	2700	36	54	1250	465	425	3	-
SM16C-CC2-10D-930-03	13326	3000	10	17	6800	465	412	3	YES
SM16C-CC2-25D-930-03	13325	3000	25	39	2700	490	461	3	-
SM16C-CC2-36D-930-03	13332	3000	36	54	1300	490	447	3	-
SM16C-CC2-10D-940-03	13337	4000	10	17	7100	485	430	3	YES
SM16C-CC2-25D-940-03	13340	4000	25	39	2850	515	484	3	-
SM16C-CC2-36D-940-03	13338	4000	36	54	1350	515	470	3	-

CCT: Correlated Color Temperature **McA**: White Point Accuracy in McA step **SNAP**: SORAA SNAP System Compatible **EEL**: Energy Efficiency Index
*Specifications are at 450mA and 85°C body temperature

LIGHT OUTPUT NORMALIZED TO 450mA, 85°C

Current	Body Temperature			
	25°C	45°C	65°C	85°C
80mA	0.19	0.19	0.19	0.18
240mA	0.55	0.55	0.54	0.53
300mA	0.72	0.71	0.70	0.69
350mA	0.81	0.80	0.78	0.77
400mA	0.89	0.88	0.86	0.85
450mA	1.04	1.04	1.02	1.00

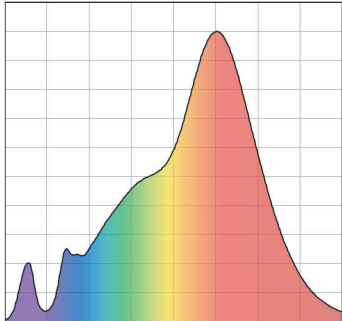
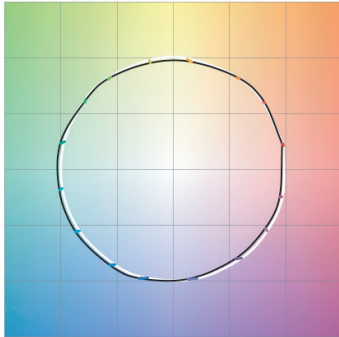
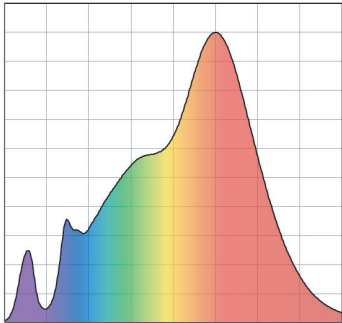
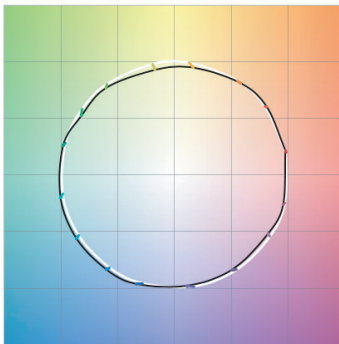
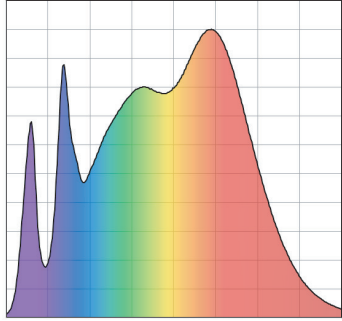
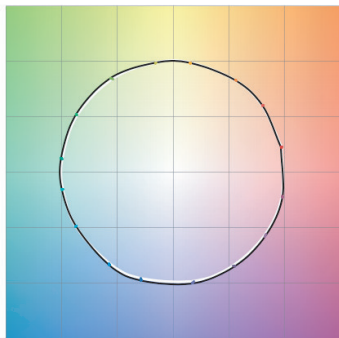
Note: User needs to determine that operating current and corresponding lamp power meet application requirements (lamp base not to exceed 85°C)

CCT

SPECTRAL POWER DISTRIBUTION

COLOR QUALITY METRICS

COLOR ACCURACY

VIVID 2700K	 CRI: 95, R9: 95	<table><tr><td>CRI</td><td>95</td></tr><tr><td>R9</td><td>95</td></tr><tr><td>Rf</td><td>95</td></tr><tr><td>Rg</td><td>100</td></tr><tr><td>Rf-h1</td><td>95</td></tr><tr><td>Rw</td><td>90</td></tr></table>	CRI	95	R9	95	Rf	95	Rg	100	Rf-h1	95	Rw	90	
CRI	95														
R9	95														
Rf	95														
Rg	100														
Rf-h1	95														
Rw	90														
VIVID 3000K	 CRI: 95, R9: 95	<table><tr><td>CRI</td><td>95</td></tr><tr><td>R9</td><td>95</td></tr><tr><td>Rf</td><td>95</td></tr><tr><td>Rg</td><td>100</td></tr><tr><td>Rf-h1</td><td>95</td></tr><tr><td>Rw</td><td>90</td></tr></table>	CRI	95	R9	95	Rf	95	Rg	100	Rf-h1	95	Rw	90	
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Rg	100														
Rf-h1	95														
Rw	90														
VIVID 4000K	 CRI: 95, R9: 95	<table><tr><td>CRI</td><td>95</td></tr><tr><td>R9</td><td>95</td></tr><tr><td>Rf</td><td>98</td></tr><tr><td>Rg</td><td>100</td></tr><tr><td>Rf-h1</td><td>100</td></tr><tr><td>Rw</td><td>100</td></tr></table>	CRI	95	R9	95	Rf	98	Rg	100	Rf-h1	100	Rw	100	
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