

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 sora.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 applications

Designed to work with external constant current drive

STORAGE CONDITIONS

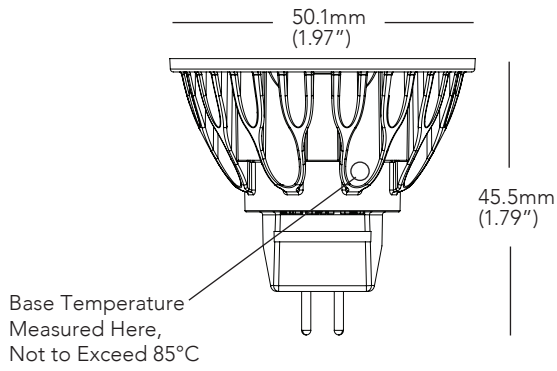
Maximum storage temperature of 90°C

GENERAL SPECIFICATIONS

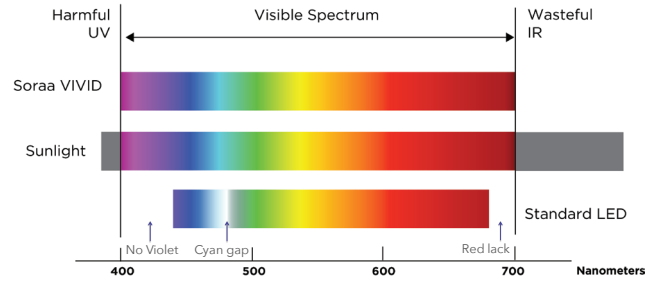
| Form Factor | Operating Temperature | Operating Current* | Forward Voltage |
|------------------------|------------------------------|--------------------|------------------|
| Width: 50.1mm (1.97") | Minimum: -40°C (ambient) | Typical: 350mA | Nominal: 18V DC |
| Height: 45.5mm (1.79") | Typical: 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



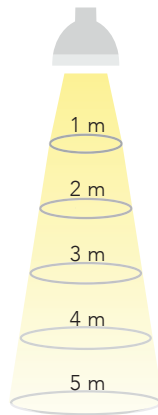
COLOR RENDERING



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

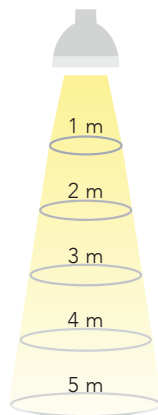
PHOTOMETRICS: 95CRI, 3000K AT 450MA, 85°C

| 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 | 412 | 3 | - |
| SM16C-CC2-36D-927-03 | 13330 | 2700 | 36 | 54 | 1250 | 465 | 430 | 3 | - |
| SM16C-CC2-10D-930-03 | 13326 | 3000 | 10 | 17 | 6800 | 465 | 437 | 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 | 484 | 3 | - |
| SM16C-CC2-10D-940-03 | 13337 | 4000 | 10 | 17 | 7100 | 485 | 425 | 3 | YES |
| SM16C-CC2-25D-940-03 | 13340 | 4000 | 25 | 39 | 2850 | 515 | 447 | 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 **EI:** 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 |

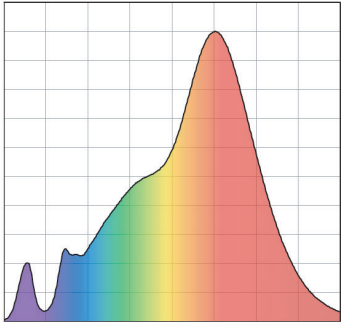
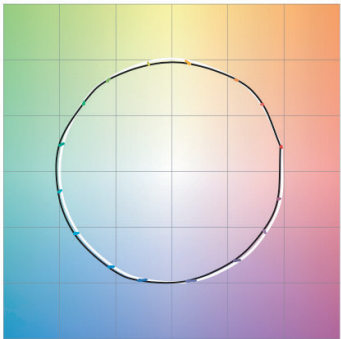
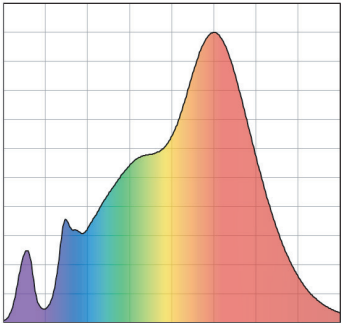
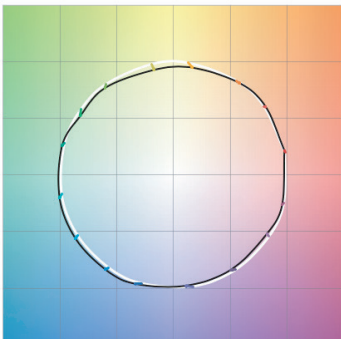
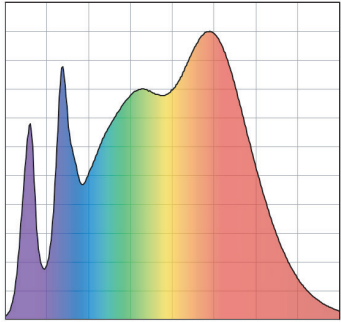
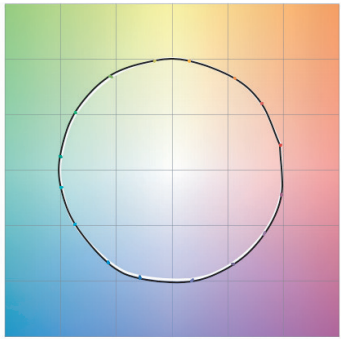
Note: User needs to determine that operating current and corresponding lamp power meet application requirements (lamp base not to exceed 85°C)

CCT

SPECTRAL POWER DISTRIBUTION

COLOR QUALITY METRICS

COLOR ACCURACY

| | | | | | | | | | | | | | | | |
|-------------------------------|---|--|------------|----|-----------|----|-----------|----|-----------|-----|--------------|-----|-----------|-----|---|
| <p>VIVID 2700K</p> |  <p>CRI: 95, R9: 95</p> | <table border="0"> <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 | | | | | | | | | | | | | | |
| <p>VIVID 3000K</p> |  <p>CRI: 95, R9: 95</p> | <table border="0"> <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 | | | | | | | | | | | | | | |
| <p>VIVID 4000K</p> |  <p>CRI: 95, R9: 95</p> | <table border="0"> <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 |  |
| CRI | 95 | | | | | | | | | | | | | | |
| R9 | 95 | | | | | | | | | | | | | | |
| Rf | 98 | | | | | | | | | | | | | | |
| Rg | 100 | | | | | | | | | | | | | | |
| Rf-h1 | 100 | | | | | | | | | | | | | | |
| Rw | 100 | | | | | | | | | | | | | | |