



- Category:** GaN on GaN LED technology that can operate at higher temperatures than typical LEDs. LED MR-16 lamp for retrofit or new applications to replace 12VAC halogen MR-16 for Centro, Duplex Cable, Retraco or Monopoint Systems. Center Beam Candlepower matches standard halogen lamps with a single LED source which produces a single crisp shadow.  
Weight: 47g
- Material:** Proprietary fanless aluminum design provides superior thermal dissipation. ANSI Beam standard MR-16 form factor: 1.97" (50mm) W x 1.79" (45.5mm) H.
- Finish:** Aluminum
- Source:** LED. Life of 35,000 hours. Vivid Series CCT: 2700K, 3000K or 4000K; CRI 95. For shipments to CA, due to Title 20, Brilliant HL Series CCT limited to 2700K and 3000K in 90 CRI only.  
Warm Dim Series CCT Range: 1800K to 2700K or 3000K; CRI 95.  
White point accuracy within 3 SDCM. Conventional LEDs use a blue emitter pumping two phosphors to make white light. The resulting spectrum does not exactly match the black body curve for visible light – it has a high blue spike and is missing important parts of the spectrum in violet and cyan. These LEDs can also have values either above or below the black body curve, making their light greener or pinker. GaN on GaN enables LEDs to use a violet LED emitter pumping three phosphors, thus achieving a closer match to the black body curve, and delivering a perfectly balanced full-visible-spectrum light closest to daylight - in fact even better, as it has no ultraviolet or infrared emission. Excellent color stability.
- Optics:** 10°, 25°, 36°.  
GaN on GaN LED technology allows the lamps to operate effectively and efficiently at higher temperatures than other LED lamps, resulting in more light output per diode. Contact factory for photometric charts, lumens and CBCP.
- Electrical:** Note that all LED MR16 lamps (Cree, Sora, etc.) are rated for different operating conditions as per the lamp manufacturer. In addition, since these lamps are new technology; they are subject to frequent changes in recommended operating conditions and/or Spot compatibility. Please carefully check to ensure the lamp specified is rated to be compatible with the selected Tegan Spot.  
Dimmable to 20% (Special operating conditions apply - contact factory). Power Factor: 0.92. 12V (10.8 min, 13.2 max. Operating Temperature: -40°C - 25°C ambient, 80-100°C (125°C max ). Lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation. Works with magnetic transformers and dimmers (contact factory for specific power supply compatibility). Although LED MR-16 lamps operate at cooler temperatures than halogen lamps, it is recommended that gloves be worn when handling bare lamps. Note that the lamp has higher in-rush current than its rated wattage and has to be taken into consideration when specifying the system and power supply. Dimming and non-dimming; all power supplies. Refer to page 5 for information on in-rush current. Contact factory for additional information.
- Spotlights:** [Evo](#), [Arlo](#), [Argent](#), [Claro](#), [Arte MR-16](#), [Tiro](#)
- Labels:** Indoor applications only. Three year warranty. UL, CUL for 12VAC NEC Class 1 and Class 2 systems, FCC 47 CFR Part 15 and Part 18 (EMI), RoHS, CE, C-tick.



# MR-16 LED

LED Lamp for MR-16 Trac Fixtures

Example: SM16 - 07 - 25D - 927 - 03

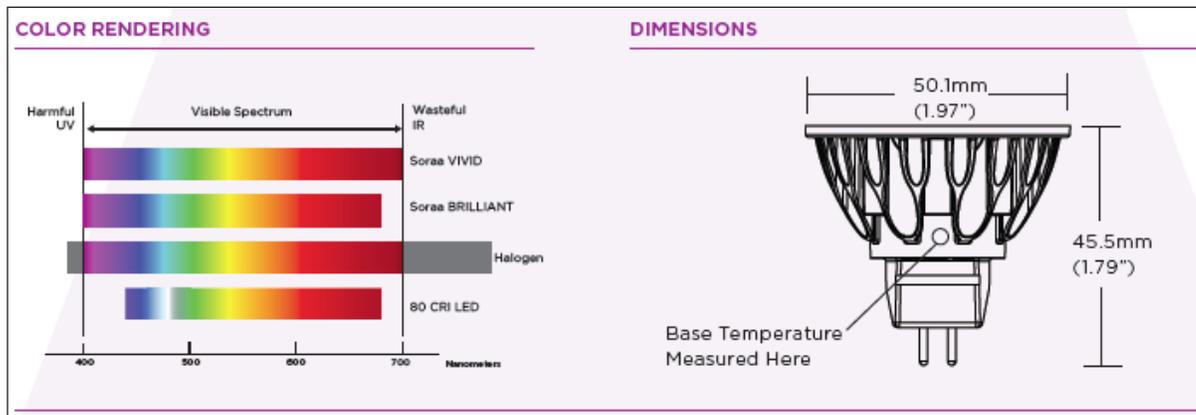
MR16 Lamp <sup>1,3,4</sup>	Wattage <sup>2,3,4</sup>	Beam <sup>2</sup>	CRI, Kelvin Temp, Series <sup>2,5</sup>	Accessories <sup>2,6,7</sup>
SM16	07 09	10D 25D 36D	927-03 930-03 940-03  927/918-01 (WARM-DIM ONLY) 930/918-01  827-H1 (BRILLIANT CA T20) 830-H1	17° Beam Spreader (AC-GC-1717-00) 25° Beam Spreader (AC-GC-2525-00) 36° Beam Spreader (AC-GC-3636-00) 60° Beam Spreader (AC-GC-6060-00) 10°x25° Linear Spread Lens (AC-GE-1025-00) 10°x36° Linear Spread Lens (AC-GE-1036-00) 10°x60° Linear Spread Lens (AC-GE-1060-00) 25°x25° Flat Top Lens (AC-FR-2525-00) 36°x36° Flat Top Lens (AC-FR-3636-00) 40° Cutoff Louver (AC-LU-4040-00) 1/4 CTO CCT Shifter (AC-CC-0001-00) 1/2 CTO CCT Shifter (AC-CC-0002-00) 3/4 CTO CCT Shifter (AC-CC-0003-00)

**Notes:**

- <sup>1</sup> LED MR-16 lamps are 12VAC and must be used with a 12VAC magnetic or electronic Power Supply from Tegan Lighting. Refer to [12VAC Electronic Transformer Specs sheet](#) or [12VAC Magnetic Transformer Specs sheet](#) for details.
- <sup>2</sup> Choose one.
- <sup>3</sup> See page 5 for in-rush current data. Wattages & performances subject to change with new lamp updates from lamp manufacturer.
- <sup>4</sup> NOTE from Soraa: 9W MR-16 LED lamps are NOT listed for use with enclosed fixtures and can only be used with an Argent Spot without media. 7.5W is rated for enclosed fixtures (Evo, Arlo, Claro, Tiro Spots) and can be used with Media (beam altering lenses). Note that if there is no Media, in order to maximize light output, do not use a clear glass lens.
- <sup>5</sup> NOTE from Soraa: For shipments to CA, due to Title 20, 2700K and 3000K, 90CRI available only.
- <sup>6</sup> Soraa's Snap-on Accessory can ONLY be used with 10° lamps.
- <sup>7</sup> Snap-on Accessories can be stacked in combination.

Note that all LED MR16 lamps (Cree, Soraa, etc.) are rated for different operating conditions as per the lamp manufacturer. In addition, since these lamps are new technology; they are subject to frequent changes in recommended operating conditions and/or Spot compatibility. Please carefully check to ensure the lamp specified is rated to be compatible with the selected Tegan Spot.

Note that the lamp has higher in-rush current than its rated wattage and has to be taken into consideration when specifying the system and power supply. Dimming and non-dimming; all power supplies. Refer to page 5 for chart of in-rush current. Contact factory for additional information.

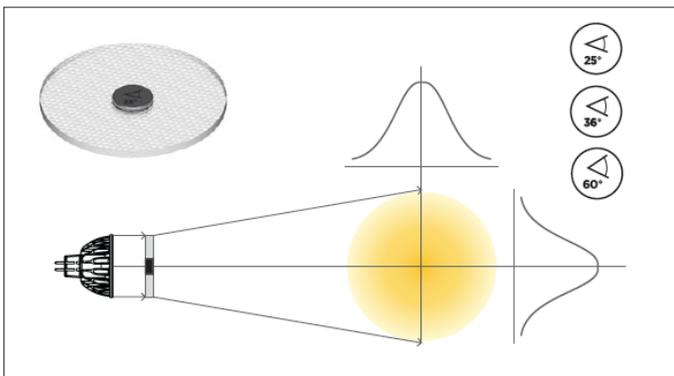


MR-16 LED Accessories



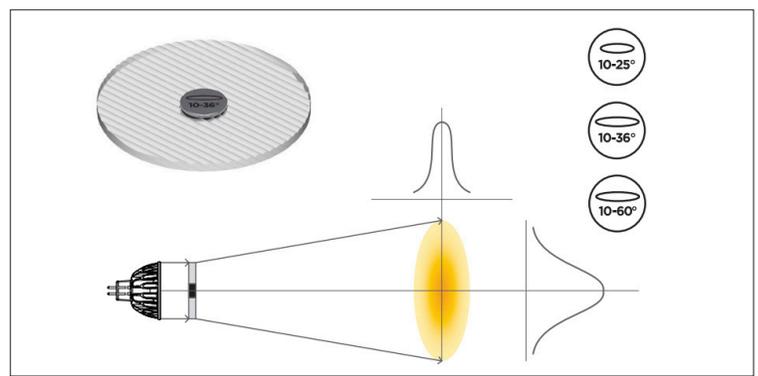
The MR-16 LED Snap System is the first LED lamp/accessory solution that is optimized to work as an integrated system. Based on high brightness single source GaN on GaN™ LED technology, it completely redefines accessory application. The effects that can be achieved are similar to what can be done with halogen sources, but are enabled by a relatively low operating temperature and groundbreaking optical design, materials, and methods of attachment.

The system's self-centering magnetic interconnect system makes using accessories completely user friendly, and opens up possibilities for accessories to a much wider range of fixtures than ever before. Also, the relatively low temperature of the MR-16 LED Snap System lamps mean that new accessory materials, such as advanced polymer films, can be used for beam and color controls never before possible.



Beam Spreader

Use in any combination 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.



Linear Spread Lens

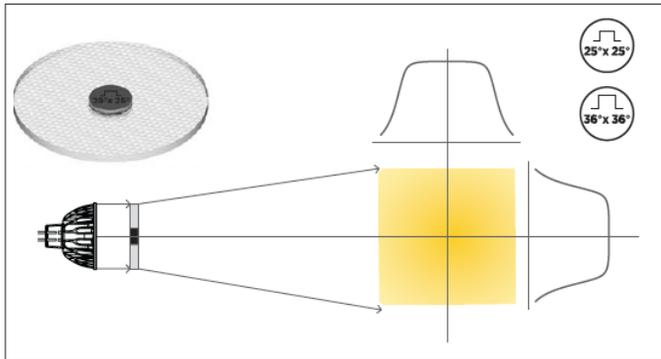
Use in wall washes and illuminating asymmetric objects. Reduces required number of light fixtures and spill illumination of target objects.

Beam	Part Number	CBCP of 10° Lamp	Field Angle
25°	AC-GC-2525-00	29%	40°
36°	AC-GC-3636-00	14%	55°
60°	AC-GC-6060-00	5%	103°

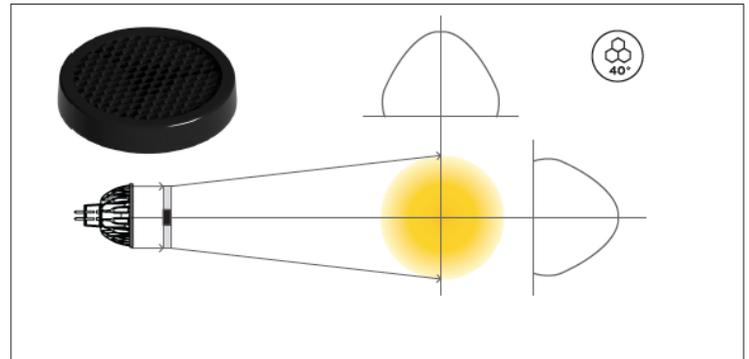
Beam	Part Number	CBCP of 10° Lamp	Field Angle Horiz.	Field Angle Vert.
10° - 25°	AC-GE-1025-00	52%	27°	35°
10° - 36°	AC-GE-1036-00	38%	27°	43°
10° - 60°	AC-GE-1060-00	25%	25°	70°



MR-16 LED Accessories



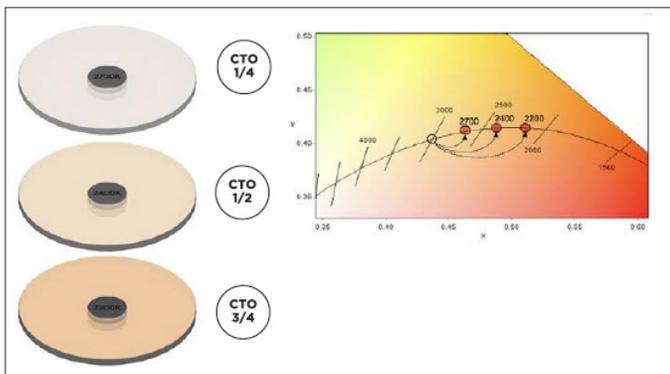
**Flat Top Snap**  
Use in any combination where reducing the number of beam angle SKUs is required. Reduces inventory costs. Shortens specification, design, sales cycles. Provides maximum flexibility up to the time of installation.



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

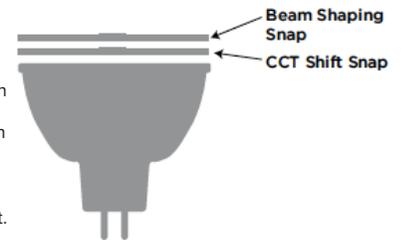
Beam	Part Number	CBCP of 10° Lamp	Field Angle Horiz.	Field Angle Vert.
25° x 25°	AC-FR-2525-00	19%	44°	44°
36° x 36°	AC-FR-3636-00	14%	46°	46°

Cutoff Angle	Part Number	CBCP of 10° Lamp
40°	AC-LU-4040-00	63%



**CCT Shifter Snap (CCT)**  
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.

**Stacking of Accessories**  
Snap accessories can be stacked in combination. For example, a beam spreader can be used in combination with a CCT Shifter. When combining beam shaping Snap accessories with CCT Shifting Snap accessories, for best results always place CCT Shifting Snap on lamp first, below beam shapers as shown in diagram at right.



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

Starting Lamp CCT	CCT SHIFT EFFECT		
	1/4 CTO	1/2 CTO	3/4 CTO
2700K	2450K	2200K	2000K
3000K	2700K	2400K	2200K
4000K	3500K	3000K	2700K

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



## MR-16 LED In-Rush Current

“In-rush current” is a very brief current spike the LED lamp will see twice per cycle. This spike in current has to be provided by the transformer or dimmer feeding power to the lamps, and will affect the recommended lamp load on each transformer or dimmer. This link will display a “Tools” page that includes a calculator as a guideline for system sizing: [In Rush Current Calculator](#).\*

\* In-Rush Current data provided by lamp manufacturer, not Tegan Lighting. Contact factory for more details and/or updates.

