

TRU-AIM® MR11 & MR16 FAMILY

Low Voltage Halogen Lamps



- Four families of MR16 lamps to meet the need of virtually any application
- Bright, crisp light throughout lamp life
- UV-filter capsules reduce UV-radiation up to 90%
- Up to 5000-hour average rated life
- Exceptional reflector and filament design provides a superior, smooth beam pattern
- GU4 and GU5.3 base for a solid socket connection

ECOLOGIC® is a comprehensive program of OSRAM SYLVANIA focused on addressing environmental issues at all stages of lamp life.



SYLVANIA's TRU-AIM family of halogen MR16 and MR11 reflector lamps provides a wide variety of extremely compact and highly directional light sources.

TRU-AIM IR MR16

- 5000 hour life
- Exclusive MR16 IR technology – lowers energy consumption compared to standard MR16 lamps
- Hard dichroic reflector – consistent color throughout life
- Cover lens for use in unshielded fixtures

TRU-AIM TITAN® MR11 and MR16

- 4000 hour life
- Hard coated dichroic reflector – consistent color throughout life
- Transmits heat through back of lamp
- Cover lens for use with unshielded fixtures

TRU-AIM BRILLIANT MR16

- Aluminized reflector – consistent color throughout life
- Transmits heat through front of lamp
- 4000 hour life

TRU-AIM MR16

- Economical dichroic reflector
- Transmits heat through back of lamp
- 2000 hour life
- Cover lens for use with unshielded fixtures

Product Availability

| Product | Beam Angle | | | |
|------------------------|---|--|--|------------------------------|
| | 20W | 35W | 50W | 65W |
| TRU-AIM MR11 TITAN | SP 10° FL 35° | SP 10° FL 35° | | |
| TRU-AIM MR16 | NSP 10° FL 35° | NSP 10° NFL 25° FL 35° | NSP 10° NFL 25° FL 35° VWFL 60° | |
| TRU-AIM MR16 BRILLIANT | SP 10° FL 35° | NSP 10° FL 35° | NSP 10° NFL 25° FL 35° | |
| TRU-AIM MR16 TITAN | NSP 10° FL 35° VWFL 60° | NSP 10° NFL 25° FL 35° VWFL 60° | NSP 10° NFL 25° FL 35° VWFL 60° | NSP 10° NFL 25° FL 35° |
| Product | 20W | 37W | 50W | |
| TRU-AIM MR16 IR | NSP 10° NFL 25° FL 35° WFL 60° | NSP 10° NFL 25° FL 35° WFL 60° | NSP 10° NFL 25° FL 35° WFL 60° | |

Sample Specification

Lamp(s) shall be (a) 12V TRU-AIM___(Standard, BRILLIANT, TITAN or IR) halogen lamp(s) with a UV filter capsule, an axial filament, a ___ (consistent color-hard dichroic, semi-hard coat dichroic or aluminized) reflector. Lamp(s) shall be___ (20, 35, 37, 50 or 65) watts with a ___ (SP, NFL, FL or VWFL) beam spread.

Application Information

Applications

Highlight merchandise
Accent / display lighting
Highlight heat sensitive merchandise
High end retail
Art galleries
Hotels, restaurants
Decorative room lighting
Ambient lighting

Fixture Availability

Track
Strips for case lighting
Adjustable downlighting
Landscape lighting
Recessed lighting

Application Notes

TITAN

- The best choice when constant crisp white light is required.
- Hard dichroic coating makes these lamps ideal for heat sensitive merchandising.
- UV filter capsule reduces fading on UV-sensitive merchandising and art.

IR

- MR16 IR lamps offer a reduction in energy consumption.
- All the technical advantages and performance of the 50W TRU-AIM TITAN for only 37 watts. The 50W TRU-AIM IR lamp is a replacement for 65W or 71W consistent color reflector lamps.

BRILLIANT

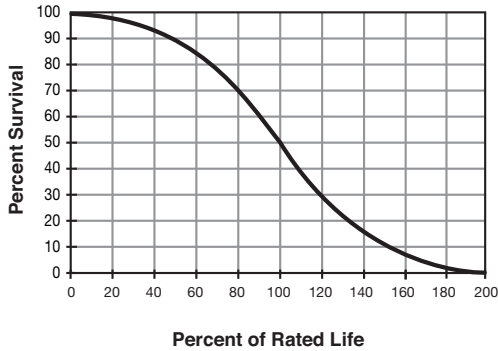
- Prevents fixtures overheating, short transformer life and socket problems.
- At a 5-foot distance the temperature of the beam is the same as dichroic coated lamps.
- UV filter capsule reduces fading on UV-sensitive merchandising and art.

MR11/STANDARD

- A cost competitive product that provides a smooth, even beam.
- UV filter capsule reduces fading on UV-sensitive merchandising and art.

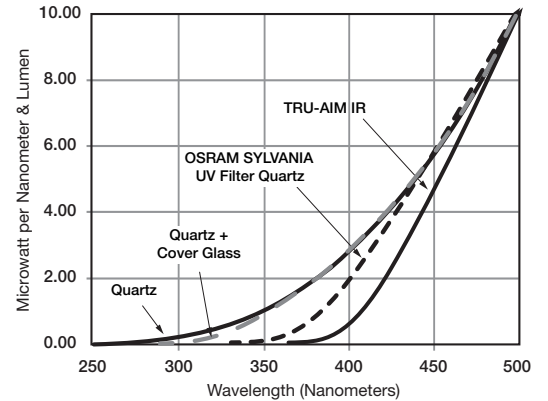
Technical Information

Mortality Curve



This chart shows the expected percentage of lamp failures based on percentage of rated life.

UV-Transmission Curves of Quartz Halogen Capsules



The UV filter quartz capsule in TRU-AIM lamps reduces UV radiation.

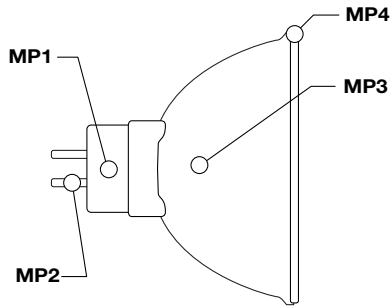
Ordering and Specification Information

| | Item Number | Ordering Abbreviation | Watts | Volts | Base | Average Rated Life (hrs.) | CBCP (cd) | Beam Angle |
|-----------------------|-------------------|-----------------------|-------|-------|-------|---------------------------|-----------|------------|
| TITAN MR11 | 55133 | 20MR11/T/SP10/C/FTB | 20 | 12 | GU4 | 4000 | 4000 | 10 |
| | 55134 | 20MR11/T/FL35/C/FTD | 20 | 12 | GU4 | 4000 | 700 | 35 |
| | 55135 | 35MR11/T/SP10/C/FTE | 35 | 12 | GU4 | 4000 | 6200 | 10 |
| | 55136 | 35MR11/T/FL35/C/FTH | 35 | 12 | GU4 | 4000 | 1350 | 35 |
| Standard MR16 | 54305 | 20MR16/NSP10/ESX/C | 20 | 12 | GU5.3 | 2000 | 3000 | 10 |
| | 54306 | 20MR16/FL35/BAB/C | 20 | 12 | GU5.3 | 2000 | 510 | 35 |
| | 54307 | 35MR16/NSP10/FRB/C | 35 | 12 | GU5.3 | 2000 | 6000 | 10 |
| | 58322 | 35MR16/NFL25/FRA/C | 35 | 12 | GU5.3 | 2000 | 2000 | 25 |
| | 58324 | 35MR16/FL35/FMW/C | 35 | 12 | GU5.3 | 2000 | 1000 | 35 |
| | 58325 | 50MR16/NSP10/EXT/C | 50 | 12 | GU5.3 | 2000 | 7800 | 10 |
| | 58326 | 50MR16/NFL25/EXZ/C | 50 | 12 | GU5.3 | 2000 | 2800 | 25 |
| | 58327 | 50MR16/FL35/EXN/C | 50 | 12 | GU5.3 | 2000 | 1450 | 35 |
| | 58328 | 50MR16/VWFL60/FNV/C | 50 | 12 | GU5.3 | 2000 | 690 | 60 |
| BRILLIANT MR16 | 58314 | 20MR16/B/NSP10 | 20 | 12 | GU5.3 | 4000 | 5000 | 10 |
| | 58315 | 20MR16/B/FL35 | 20 | 12 | GU5.3 | 4000 | 700 | 35 |
| | 58316 | 35MR16/B/NSP10 | 35 | 12 | GU5.3 | 4000 | 9100 | 10 |
| | 58317 | 35MR16/B/FL35 | 35 | 12 | GU5.3 | 4000 | 1100 | 35 |
| | 58319 | 50MR16/B/NSP10 | 50 | 12 | GU5.3 | 4000 | 11500 | 10 |
| | 58320 | 50MR16/B/NFL25 | 50 | 12 | GU5.3 | 4000 | 4400 | 25 |
| | 58321 | 50MR16/B/FL35 | 50 | 12 | GU5.3 | 4000 | 1800 | 35 |
| TITAN MR16 | 58300 | 20MR16/T/NSP10/ESX/C | 20 | 12 | GU5.3 | 4000 | 5000 | 10 |
| | 58301 | 20MR16/T/FL35/BAB/C | 20 | 12 | GU5.3 | 4000 | 780 | 35 |
| | 58302 | 20MR16/T/VWFL60/C | 20 | 12 | GU5.3 | 4000 | 350 | 60 |
| | 58303 | 35MR16/T/NSP10/FRB/C | 35 | 12 | GU5.3 | 4000 | 9100 | 10 |
| | 58304 | 35MR16/T/NFL25/C | 35 | 12 | GU5.3 | 4000 | 3100 | 25 |
| | 58305 | 35MR16/T/FL35/FMW/C | 35 | 12 | GU5.3 | 4000 | 1500 | 35 |
| | 58306 | 35MR16/T/VWFL60/C | 35 | 12 | GU5.3 | 4000 | 700 | 60 |
| | 58307 | 50MR16/T/NSP10/EXT/C | 50 | 12 | GU5.3 | 4000 | 11500 | 10 |
| | 58308 | 50MR16/T/NFL25/EXZ/C | 50 | 12 | GU5.3 | 4000 | 4400 | 25 |
| | 58309 | 50MR16/T/FL35/EXN/C | 50 | 12 | GU5.3 | 4000 | 2200 | 35 |
| | 58310 | 50MR16/T/VWFL60/FNV/C | 50 | 12 | GU5.3 | 4000 | 1100 | 60 |
| | 58311 | 65MR16/T/NSP10/FPA/C | 65 | 12 | GU5.3 | 4000 | 14000 | 10 |
| | 58312 | 65MR16/T/NFL25/C | 65 | 12 | GU5.3 | 4000 | 5600 | 25 |
| | 58313 | 65MR16/T/FL35/FPB/C | 65 | 12 | GU5.3 | 4000 | 2800 | 35 |
| IR MR16 | 58531 | 20MR16/IR/SP10/C | 20 | 12 | GU5.3 | 5000 | 6000 | 10 |
| | 58532 | 20MR16/IR/NFL25/C | 20 | 12 | GU5.3 | 5000 | 2300 | 25 |
| | 58533 | 20MR16/IR/FL35/C | 20 | 12 | GU5.3 | 5000 | 1000 | 35 |
| | 58838 | 20MR16/IR/WFL60/C | 20 | 12 | GU5.3 | 5000 | 450 | 60 |
| | 58641 | 37MR16/IR/SP10/C | 37 | 12 | GU5.3 | 5000 | 12500 | 10 |
| | 58634 | 37MR16/IR/NFL25/C | 37 | 12 | GU5.3 | 5000 | 4400 | 25 |
| | 58633 | 37MR16/IR/FL35/C | 37 | 12 | GU5.3 | 5000 | 2200 | 35 |
| | 58837 | 37MR16/IR/WFL60/C | 37 | 12 | GU5.3 | 5000 | 1100 | 60 |
| | 54175 | 50MR16/IR/SP10/C | 50 | 12 | GU5.3 | 5000 | 15000 | 10 |
| | 54174 | 50MR16/IR/NFL25/C | 50 | 12 | GU5.3 | 5000 | 5700 | 25 |
| | 54173 | 50MR16/IR/FL35/C | 50 | 12 | GU5.3 | 5000 | 2850 | 35 |
| 54237 | 50MR16/IR/WFL60/C | 50 | 12 | GU5.3 | 5000 | 1430 | 60 | |

Ordering Guide

| 50 | MR | 16 | / | T | / | SP | 10 | / | C |
|---------|------------------------|------------|---|-----------------------------|---|-------------|------------|---|---------|
| Wattage | Multifaceted Reflector | Diameter | | Type | | Beam Spread | Beam Angle | | Covered |
| | | 11 = 11/8" | | IR = Infrared Capsule | | NSP | 10° | | |
| | | 16 = 16/8" | | B = Aluminized Reflector | | SP | 20° | | |
| | | | | T = Hard Dichroic Reflector | | NFL | 25° | | |
| | | | | __ = Standard Reflector | | FL | 35° | | |
| | | | | | | WFL, VWFL | 60° | | |

Thermal Performance



Temperature measurements were made in open air with an ambient temperature of 25°C (77°F) using a Bender & Worth 884 socket. Temperature measurements are provided for reference only.

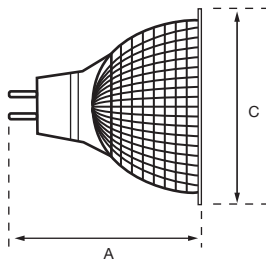
| | Press | Pin | Reflector | Rim |
|--------------------------|-------|--------|-----------|--------|
| Measurement Point | MP1 | MP2 | MP3 | MP4 |
| Max Allowed | 370°C | 250°C* | — | 240°C* |
| 20W TITAN | 160°C | 110°C | 120°C | 110°C |
| 20W IR | 170°C | 125°C | 125°C | 115°C |
| 35W TITAN | 230°C | 150°C | 140°C | 140°C |
| 37W IR | 270°C | 170°C | 160°C | 145°C |
| 50W TITAN | 295°C | 195°C | 165°C | 160°C |
| 50W IR | 325°C | 220°C | 200°C | 180°C |

*20W Max is 220°C

* Covered lamps ONLY

50 watt TRU-AIM® IR MR16 lamps should not be used in semi-enclosed or enclosed fixtures that will inhibit air flow in the neck area or in sockets that will inhibit air flow in this area (MP1 above). Infrared conserving halogen capsules recycle their heat by using a coating on the outside of the halogen capsule. Because of this, all the recycled heat must pass through the capsule glass twice, and the IR capsule will operate at a higher temperature than a standard halogen capsule of the same wattage would. Due to this additional heating, 50W TRU-AIM IR MR16 lamps may have short lamp life when the neck of the lamp is not well ventilated, and should not be used as a direct replacement for standard 50W MR16 lamps.

Dimensions



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| | MOL (A) | Max. Length w/o Pins (B) | Max. Diameter (C) | Max. Pin Spacing (D) |
|--------------|---------|-----------------------------|----------------------|-------------------------|
| TRU-AIM MR16 | 1¾" | 1½" | 2" | ⅞" (5.33mm) |
| TRU-AIM MR11 | 1⅞" | 1⅞" | 1¾" | ⅝" (4mm) |