

# TRU-AIM® MR11 & MR16 Family

Low Voltage Halogen Lamps



SYLVANIA 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 with 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

## Application Information

### Applications

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

### Key Features & Benefits

- 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 focused on addressing environmental issues at all stages of lamp life.



## Product Offering

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

### Fixture Availability

- Adjustable downlighting
- Landscape lighting
- Recessed lighting
- Strips for case lighting
- Track



## Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

### Ordering Information

Item Number	Ordering Abbreviation	Watts	Volts	Base	Beam Angle	Lumens	CBCP (cd)	Average Rated Life	CCT (K)	CRI
<b>TITAN MR11</b>										
55133	20MR11/T/SP10/C/FTB	20	12	GU4	10	270	4000	4000	3000	100
55134	20MR11/T/FL35/C/FTD	20	12	GU4	35	270	700	4000	3000	100
55135	35MR11/T/SP10/C/FTE	35	12	GU4	10	580	6200	4000	3000	100
55136	35MR11/T/FL35/C/FTH	35	12	GU4	35	580	1350	4000	3000	100
<b>Standard MR16</b>										
54305	20MR16/NSP10/ESX/C	20	12	GU5.3	10	250	3000	2000	3000	100
54306	20MR16/FL35/BAB/C	20	12	GU5.3	35	250	510	2000	3000	100
54307	35MR16/NSP10/FRB/C	35	12	GU5.3	10	500	6000	2000	3000	100
58322	35MR16/NFL25/FRA/C	35	12	GU5.3	25	500	2000	2000	3000	100
58324	35MR16/FL35/FMW/C	35	12	GU5.3	35	500	1000	2000	3000	100
58325	50MR16/NSP10/EXT/C	50	12	GU5.3	10	700	7800	2000	3000	100
58326	50MR16/NFL25/EXZ/C	50	12	GU5.3	25	700	2800	2000	3000	100
58327	50MR16/FL35/EXN/C	50	12	GU5.3	35	700	1450	2000	3000	100
58328	50MR16/VWFL60/FNV/C	50	12	GU5.3	60	700	690	4000	3000	100
<b>BRILLIANT MR16</b>										
58314	20MR16/B/NSP10	20	12	GU5.3	10	250	5000	4000	3000	100
58315	20MR16/B/FL35	20	12	GU5.3	35	250	780	4000	3000	100
58317	35MR16/B/FL35	35	12	GU5.3	35	500	1500	4000	3000	100
58319	50MR16/B/NSP10	50	12	GU5.3	10	700	11,500	4000	3000	100
58320	50MR16/B/NFL25	50	12	GU5.3	25	700	4400	4000	3000	100
58321	50MR16/B/FL35	50	12	GU5.3	35	700	2200	4000	3000	100
<b>TITAN MR16</b>										
58300	20MR16/T/NSP10/ESX/C	20	12	GU5.3	10	300	5000	4000	3000	100
58301	20MR16/T/FL35/BAB/C	20	12	GU5.3	35	300	780	4000	3000	100
58302	20MR16/T/VWFL60/C	20	12	GU5.3	60	300	350	4000	3000	100
58303	35MR16/T/NSP10/FRB/C	35	12	GU5.3	10	700	9100	4000	3000	100
58304	35MR16/T/NFL25/C	35	12	GU5.3	25	700	3100	4000	3000	100
58305	35MR16/T/FL35/FMW/C	35	12	GU5.3	35	700	1500	4000	3000	100
58306	35MR16/T/VWFL60/C	35	12	GU5.3	60	700	700	4000	3000	100
58307	50MR16/T/NSP10/EXT/C	50	12	GU5.3	10	900	11,500	4000	3000	100
58308	50MR16/T/NFL25/EXZ/C	50	12	GU5.3	25	900	4400	4000	3000	100
58309	50MR16/T/FL35/EXN/C	50	12	GU5.3	35	900	2200	4000	3000	100
58310	50MR16/T/VWFL60/FNV/C	50	12	GU5.3	60	900	1100	4000	3000	100
<b>IR MR16</b>										
58531	20MR16/IR/SP10/C	20	12	GU5.3	10	380	6000	5000	3000	100
58532	20MR16/IR/NFL25/C	20	12	GU5.3	25	380	2300	5000	3000	100
58533	20MR16/IR/FL35/C	20	12	GU5.3	35	380	1000	5000	3000	100
58838	20MR16/IR/WFL60/C	20	12	GU5.3	60	380	450	5000	3000	100
58641	37MR16/IR/SP10/C	37	12	GU5.3	10	800	12,500	5000	3000	100
58634	37MR16/IR/NFL25/C	37	12	GU5.3	25	800	4400	5000	3000	100
58633	37MR16/IR/FL35/C	37	12	GU5.3	35	800	2200	5000	3000	100
58837	37MR16/IR/WFL60/C	37	12	GU5.3	60	800	1100	5000	3000	100
54175	50MR16/IR/SP10/C	50	12	GU5.3	10	1100	15,000	5000	3000	100
54174	50MR16/IR/NFL25/C	50	12	GU5.3	25	1100	5700	5000	3000	100
54173	50MR16/IR/FL35/C	50	12	GU5.3	35	1100	2850	5000	3000	100
54237	50MR16/IR/WFL60/C	50	12	GU5.3	60	1100	1430	5000	3000	100

### Ordering Guide

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

## Application Information

### 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

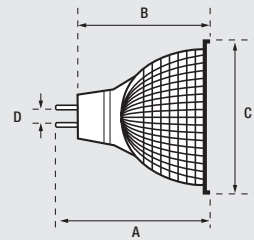
- Prevents fixtures overheating, short transformer life and socket problems.
- At a 5-foot distance the temperature of the beam is the same as dichroic coated lamps.
- UV filter capsule reduces fading on UV-sensitive merchandising and art.

#### MR11/STANDARD

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

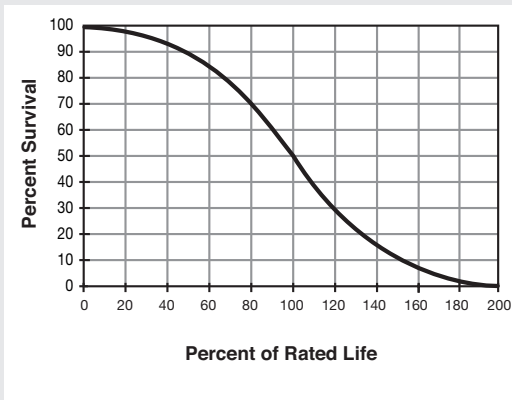
## Lamp Dimensions

	Maximum Overall Length (A)	Max. Length w/o Pins (B)	Maximum Diameter (C)	Max. Pin Spacing (D)
TRU-AIM MR16	1 3/4"	1 1/2"	2"	7/32" (5.33mm)
TRU-AIM MR11	1 7/16"	1 1/8"	1 3/8"	5/32" (4mm)



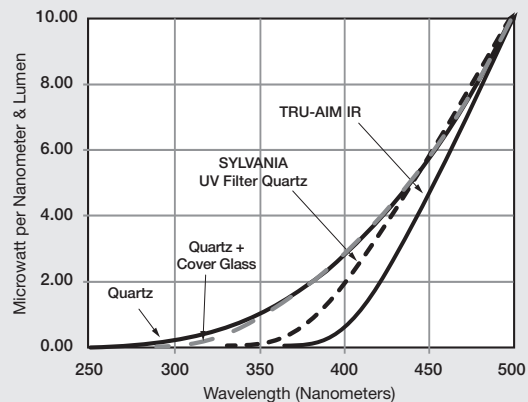
## Technical Information

**Mortality Curve**



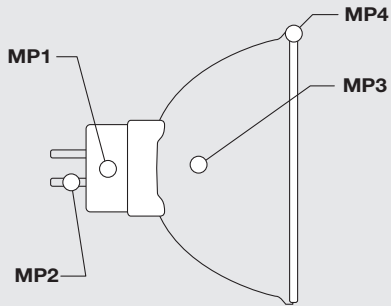
This chart shows the expected percentage of lamp failures based on percentage of rated life.

**UV-Transmission Curves of Quartz Halogen Capsules**



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

## 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
<b>Measurement Point</b>	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

The maximum recommended operating temperature for the moly seal (MP1 above) of the 50W TRU-AIM® IR MR16 lamp is 370 degrees C. Using the 50W IR MR16 lamp in a fixture where there is an elevated ambient installation temperature or a socket that inhibits air flow in the neck area of the lamp resulting in a moly seal temperature above 370 degrees C, can lead to short lamp life. 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. 50W IR MR16 lamps should not be used as a direct replacement for standard 50W MR16 lamps.

## 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.

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