Product Information Bulletin

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 capsule reduces UV-radiation up to 90%
- Up to 4000-hour average rated life
- Exceptional reflector and filament design provides 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

- Exclusive MR16 IR technology – lowers energy consumption compared to standard MR16 lamps
- Hard dichroic reflector – consistent color throughout life

TRU-AIM TITAN MR16

- Hard coated dichroic reflector – consistent color throughout life
- Transmits heat through back of lamp

TRU-AIM Brilliant MR16

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

TRU-AIM Standard MR11 and MR16

- Economical dichroic reflector
- Transmits heat through back of lamp

Product Availability

	Beam Angle			
Product	**20W**	**35W**	**50W**	**65W**
TRU-AIM MR11	SP 10° FL 35°	SP 10° FL 35°		
TRU-AIM MR16 STANDARD	NSP 8° FL 40°	NSP 8° SP 20° FL 40°	NSP 12° NFL 25° FL 40° VWFL 60°	NSP 10° NFL 25° FL 40°
TRU-AIM MR16 BRILLIANT	SP 8° FL 35°	NSP 10°	NSP 11° NFL 25° FL 35°	NSP 10° NFL 25° FL 35°
TRU-AIM MR16 TITAN	NSP 10° FL 40° VWFL 60°	NSP 10° NFL 25° FL 40° VWFL 60°	NSP 10° NFL 25° FL 40° VWFL 60°	NSP 10° NFL 25° FL 40° VWFL 60°
Product	**20W**	**37W**	**50W**	
TRU-AIM MR16 IR	NSP 10° NFL 25° FL 40° WFL 60°	NSP 10° NFL 25° FL 40° WFL 60°	NSP 10° NFL 25° FL 40° WFL 60°	

SEE THE WORLD IN A NEW LIGHT SYLVANIA

Sample Specification

TRU-AIM 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 ___ (NSP, SP, NFL, FL, WFL or VWFL) beam spread.

Lamp Comparison

OSRAM SYLVANIA	Brand X	Brand Y
TRU-AIM MR11	STANDARD MR11	Halogen MRC-11
TRU-AIM MR16 STANDARD	STANDARD MR16	Halogen MR
TRU-AIM MR16 BRILLIANT	No competitive product available	Halogen MR Aluminum
TRU-AIM MR16 TITAN	CONSTANT COLOR Precise	Halogen MR Long Life
TRU-AIM MR16 IR	CONSTANT COLOR Precise IR	Halogen MR Energy Advantage IR

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

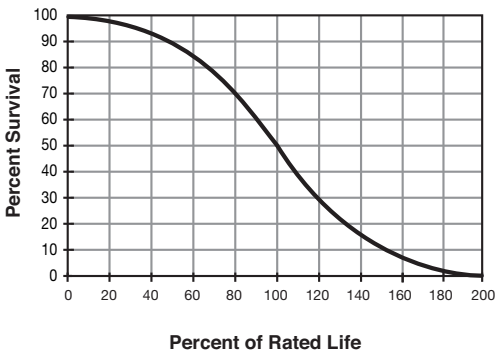
- Prevents fixtures overheating, short transformer life and socket problems.
- At a 5-foot distance the temperature of the beam is the same as dichroic coated lamps.
- UV filter capsule reduces fading on UV-sensitive merchandising and art.

MR11/STANDARD

- A cost competitive product that provides a smooth, even beam
- UV filter capsule reduces fading on UV-sensitive merchandising and art.
- 4000 hour rated life

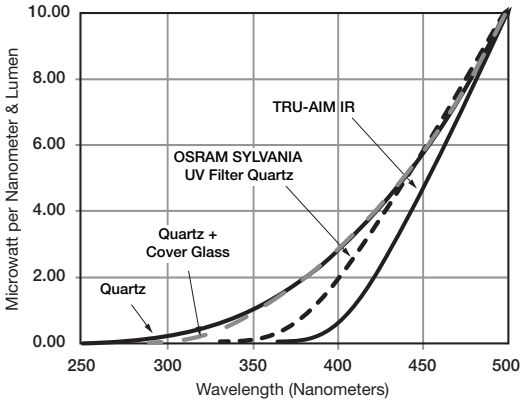
Technical Information

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.

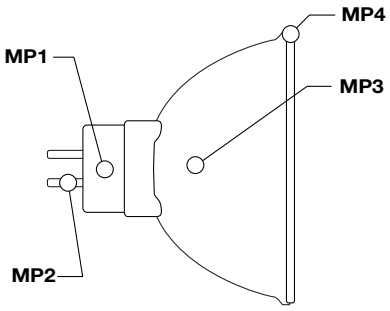
Ordering and Specification Information

	Item Number	Ordering Abbreviation	Watts	Volts	Base	Average Rated Life (hrs.)	CBCP (cd)	Beam Angle
Standard MR11	55109	20MR11/SP10(FTB)	20	12	GU4	3000	5500	10
	55107	20MR11/FL35(FTD)	20	12	GU4	3000	700	35
	55113	35MR11/SP10(FTE)	35	12	GU4	3000	8300	10
	55111	35MR11/FL35(FTH)	35	12	GU4	3000	1500	35
Covered MR11	55119	20MR11/FL35/C(FTD)	20	12	GU4	3000	700	35
Standard MR16	54201	20MR16/NSP8(ESX)	20	12	GU5.3	4000	6000	8
	54200	20MR16/FL40(BAB)	20	12	GU5.3	4000	700	40
	54204	35MR16/NSP8(FRB)	35	12	GU5.3	4000	11,000	8
	58602	35MR16/SP20(FRA)	35	12	GU5.3	4000	2800	20
	54203	35MR16/FL40(FMW)	35	12	GU5.3	4000	1400	40
	54208	50MR16/NSP12(EXT)	50	12	GU5.3	4000	11,000	12
	54205	50MR16/NFL25(EXZ)	50	12	GU5.3	4000	3200	25
	54207	50MR16/FL40(EXN)	50	12	GU5.3	4000	2000	40
	54206	50MR16/VWFL60(FNV)	50	12	GU5.3	4000	1200	60
	58563	65MR16/NSP10(FPA)	65	12	GU5.3	4000	14,000	10
	58565	65MR16/NFL25(FPC)	65	12	GU5.3	4000	4000	25
	58564	65MR16/FL40(FPB)	65	12	GU5.3	4000	2100	40
Brilliant MR16	58589	20MR16/B/NSP8	20	12	GU5.3	4000	4650	8
	58590	20MR16/B/FL35	20	12	GU5.3	4000	625	35
	58591	35MR16/B/NSP10	35	12	GU5.3	4000	8700	10
	58593	35MR16/B/FL35	35	12	GU5.3	4000	1300	35
	58594	50MR16/B/NSP11	50	12	GU5.3	4000	10,500	11
	58595	50MR16/B/NFL25	50	12	GU5.3	4000	3000	25
	58596	50MR16/B/FL35	50	12	GU5.3	4000	1900	35
	58559	65MR16/B/NSP10	65	12	GU5.3	4000	12,500	10
	58561	65MR16/B/NFL25	65	12	GU5.3	4000	3600	25
	58560	65MR16/B/FL35	65	12	GU5.3	4000	2100	35
Brilliant MR16 Covered	58569	20MR16/B/NSP8/C	20	12	GU5.3	4000	4400	8
	58570	20MR16/B/FL35/C	20	12	GU5.3	4000	600	35
	58539	35MR16/B/NSP8/C	35	12	GU5.3	4000	8700	8
	58574	50MR16/B/NSP11/C	50	12	GU5.3	4000	10,000	11
	58575	50MR16/B/FL35/C	50	12	GU5.3	4000	1800	35
Titan MR16	58550	20MR16/T/NSP10(ESX)	20	12	GU5.3	4000	5000	10
	58551	20MR16/T/FL40(BAB)	20	12	GU5.3	4000	700	40
	58562	20MR16T/VWFL60	20	12	GU5.3	4000	350	60
	58558	35MR16/T/NSP10(FRB)	35	12	GU5.3	4000	8300	10
	58547	35MR16/T/NFL25	35	12	GU5.3	4000	3100	25
	58557	35MR16/T/FL40(FMW)	35	12	GU5.3	4000	1250	40
	58552	35MR16/T/VWFL60	35	12	GU5.3	4000	650	60
	58556	50MR16/T/NSP10(EXT)	50	12	GU5.3	4000	11,500	10
	58555	50MR16/T/NFL25(EXZ)	50	12	GU5.3	4000	3200	25
	58554	50MR16/T/FL40(EXN)	50	12	GU5.3	4000	2000	40
	58553	50MR16/T/VWFL60(FNV)	50	12	GU5.3	4000	1000	60
	58566	65MR16/T/NSP10(FPA)	65	12	GU5.3	4000	14,000	10
	58567	65MR16/T/NFL25	65	12	GU5.3	4000	4000	25
	58571	65MR16/T/FL40(FPB)	65	12	GU5.3	4000	2100	40
	58572	65MR16/T/VWFL60	65	12	GU5.3	4000	1050	60
Titan MR16 Covered	58549	35MR16/T/NFL25/C	35	12	GU5.3	4000	1650	25
IR MR16 Covered	58531	20MR16/IR/SP10/C	20	12	GU5.3	4000	6000	10
	58532	20MR16/IR/NFL25/C	20	12	GU5.3	4000	2300	25
	58533	20MR16/IR/FL40/C	20	12	GU5.3	4000	1000	40
	58838	20MR16/IR/WFL60/C	20	12	GU5.3	4000	450	60
	58641	37MR16/IR/SP10/C	37	12	GU5.3	4000	12,500	10
	58634	37MR16/IR/NFL25/C	37	12	GU5.3	4000	4400	25
	58633	37MR16/IR/FL40/C	37	12	GU5.3	4000	2200	40
	58837	37MR16/IR/WFL60/C	37	12	GU5.3	4000	1100	60
	54175	50MR16/IR/SP10/C	50	12	GU5.3	4000	15,000	10
	54174	50MR16/IR/NFL25/C	50	12	GU5.3	4000	5700	25
	54173	50MR16/IR/FL40/C	50	12	GU5.3	4000	2850	40
	54237	50MR16/IR/WFL60/C	50	12	GU5.3	4000	1430	60

Ordering Guide

50	MR	16 /	T /	SP	10 /	C
Wattage	Multifacetted 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 8°,10°, 11°, 12° 20° 25° 40° 60°	Covered

Thermal Performance



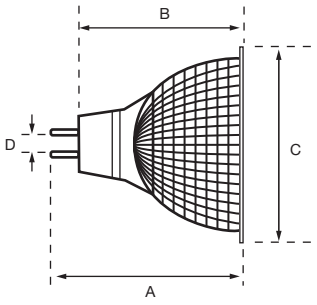
Temperature measurements were made in open air with an ambient temperature of 25ºC (77ºF) using a Bender & Worth 884 socket. Temperature measurements are provided for reference only.

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

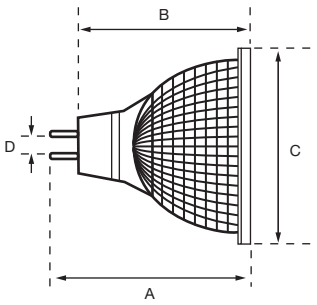
*20W Max is 220°C +Covered lamps ONLY

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



Uncovered



Covered

	MOL (A)	Max. Length w/o Pins (B)	Max. Diameter (C)	Max. Pin Spacing (D)
TRU-AIM MR16	1¾"	1½"	2"	7/32" (5.33mm)
TRU-AIM MR16 Covered	1 15/16"	1⅝"	2"	7/32" (5.33mm
TRU-AIM MR11	1½"	1⅛"	1⅜"	5/32" (4mm)
TRU-AIM MR11 Covered	1⅜"	1⅛"	1⅜"	5/32" (4mm)

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