



Philips MASTER LEDlamps











See what light can do



PHILIPS

sense and simplicity

MASTER LEDlamps range

MASTER LEDspots Low Voltage	 LV MR16 GU5.3 Non-Dimmable 3	 LV MR16 GU5.3 Dimmable 4	 LV MR11 GU4 Non-Dimmable 6	 LV ARI11 G53 Dimmable 7
MASTER LEDspots Mains Voltage	 MV GU10 Dimmable 8	 PAR Dimmable/ Non-Dimmable 10		
MASTER LEDbulb	 Designer Dimmable 11	 Dimmable 12	 A60 Dimmable 12	
Novallure	 Candles Dimmable 13			
Features explained	Halogen transformer compatibility 14		MASTER LEDbulb designer 14	

Why choose Philips for LED lamps?

How do professional end users rate Philips LED lamps?

Together with TNS Infratest Philips investigated customer experiences in various countries in Europe.

Here is a summary of the results including customer quotes:

Best Product

- **Superior light and product quality:**
"Philips LED lamps were closest to what we had before... according to our experience a big difference compared to the other brands."
- **High energy saving results with a short ROI period:**
"We reached amortization much earlier than expected. The energy savings are amazing."

Best Partner

- **Close cooperation with Philips before, during, and after projects:**
"They really tried hard to satisfy our needs well. They really have cared a lot and showed a lot of commitment..."
- **Technical consulting and intense customer support:**
"Quick and competent responses to questions"
- **Close cooperation with local wholesalers was a key element of assuring on-time product availability:**
"Philips is flexible to offer different delivery options"

Best Portfolio

- **Philips LED expertise and portfolio:**
"Philips already has an image of being the LED specialist in the market"
- **A wide range of LED Lamps ensures various applications are possible:**
"Philips offers the best portfolio of LED Light compared to competitors"



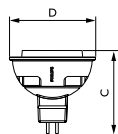


Features:

- low energy consumption: 4 W → 20 W, 5.5 W → 35 W, 6.5 W → 50 W (12 V)
- non-dimmable
- patented intelligent driver
- retrofittable with low-voltage MR16 halogen lamps with GU5.3 socket

Benefits/applications:

- up to 80% energy saving compared with halogen lamp
- broad compatibility with transformers
- ideal for accent lighting in hotels, hospitals, shops and museums (e.g. floors, elevators, displays) in open luminaires (with an open/free air gap of min. 10 mm)



Product	4 W	5.5 W	6.5 W
C (mm)	47.8	47.8	50.1
D (mm)	49.9	49.9	49.9
Weight (g)	49	46	49



Hospitality



Retail



Office

Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable	Lumen	Efficacy	Color	Color
MASTER LEDspot LV		Halogen		shape	intensity	angle			output		rendering	temp.
	W	W			cd	°	hours		lm	lm/W	index	K
4-20W 2700K MR16 24D	4	20	GU5.3	MR16	1000	24	45,000	No	210	52	>80	2700
4-20W 3000K MR16 24D	4	20	GU5.3	MR16	1100	24	45,000	No	220	55	>80	3000
5.5-35W 2700K MR16 24D	5.5	35	GU5.3	MR16	1500	24	25,000	No	300	54	>80	2700
5.5-35W 2700K MR16 36D	5.5	35	GU5.3	MR16	1000	36	25,000	No	300	54	>80	2700
5.5-35W 3000K MR16 24D	5.5	35	GU5.3	MR16	1550	24	25,000	No	310	56	>80	3000
5.5-35W 3000K MR16 36D	5.5	35	GU5.3	MR16	1030	36	25,000	No	310	56	>80	3000
6.5-50W 2700K MR16 24D	6.5	50	GU5.3	MR16	2000	24	25,000	No	380	58	>80	2700
6.5-50W 2700K MR16 36D	6.5	50	GU5.3	MR16	1200	36	25,000	No	380	58	>80	2700
6.5-50W 3000K MR16 24D	6.5	50	GU5.3	MR16	2030	24	25,000	No	390	60	>80	3000
6.5-50W 3000K MR16 36D	6.5	50	GU5.3	MR16	1250	36	25,000	No	390	60	>80	3000



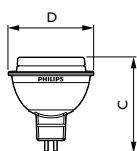
7 W / 10 W

Features:

- low energy consumption: 7 W → 35 W, 10 W → 50 W (12 V)
- dimmable*
- patented intelligent driver
- air movement mechanism (active fan cooling) with very low sound levels
- retrofittable with low-voltage MR16 halogen lamps with GU5.3 socket

Benefits/applications:

- up to 80% energy saving compared with halogen lamp
- broad compatibility with transformers
- long lifetime
- 80% energy saving
- no IR- and UV radiation; ideal to illuminate heat sensitive objects
- minimises maintenance costs
- short pay-back time
- ideal for accent lighting in hotels, hospitals, shops and museums (e.g. floors, elevators, displays) in open luminaires (with an open/free air gap of min. 10 mm)



Product	7 W / 10 W
C (mm)	53.7
D (mm)	50
Weight (g)	44



Hospitality



Retail



Office

Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable*	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot LV		Halogen		shape	intensity	angle			output		per	rendering	temp.
	W	Wattage			cd	°	hours		lm	lm/W	pack	index	K
D 7-35W 2700K MR16 24D	7	35	GU5.3	MR16	1450	24	40,000	Yes	310	44	10	>80	2700
D 7-35W 2700K MR16 36D	7	35	GU5.3	MR16	763	36	40,000	Yes	305	43	10	>80	2700
D 7-35W 3000K MR16 24D	7	35	GU5.3	MR16	1550	24	40,000	Yes	330	47	10	>80	3000
D 7-35W 3000K MR16 36D	7	35	GU5.3	MR16	810	36	40,000	Yes	325	46	10	>80	3000
D 7-35W 4000K MR16 24D	7	35	GU5.3	MR16	1640	24	40,000	Yes	350	50	10	>80	4000
D 7-35W 4000K MR16 36D	7	35	GU5.3	MR16	810	36	40,000	Yes	325	46	10	>80	4000

Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable*	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot LV		Halogen		shape	intensity	angle			output		per	rendering	temp.
	W	W			cd	°	hours		lm	lm/W	pack	index	K
D 10-50W 2700K MR16 24D	10	50	GU5.3	MR16	1800	24	30,000	Yes	385	39	10	>80	2700
D 10-50W 2700K MR16 36D	10	50	GU5.3	MR16	960	36	30,000	Yes	385	39	10	>80	2700
D 10-50W 2700K MR16 60D	10	50	GU5.3	MR16	405	60	30,000	Yes	385	39	10	>80	2700
D 10-50W 3000K MR16 24D	10	50	GU5.3	MR16	1920	24	30,000	Yes	410	41	10	>80	3000
D 10-50W 3000K MR16 36D	10	50	GU5.3	MR16	1010	36	30,000	Yes	405	41	10	>80	3000
D 10-50W 3000K MR16 60D	10	50	GU5.3	MR16	425	60	30,000	Yes	405	41	10	>80	3000
D 10-50W 4000K MR16 24D	10	50	GU5.3	MR16	2050	24	30,000	Yes	440	44	10	>80	4000
D 10-50W 4000K MR16 36D	10	50	GU5.3	MR16	1020	36	30,000	Yes	410	41	10	>80	4000
D 10-50W 4000K MR16 60D	10	50	GU5.3	MR16	450	60	30,000	Yes	450	45	10	>80	4000

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



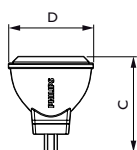


Features:

- low energy consumption: 4 W → 20 W (12 V)
- non-dimmable
- clearly defined beam spread
- UV- and IR-free light for less heat and protection for heat-sensitive objects
- retrofitable

Benefits/applications:

- CRI80, truly enhances the presentation of silver jewellery, adding sparkle to the items on display
- up to 80% energy saving compared with halogen lamps
- with low-voltage MR11 halogen lamps with GU4 socket
- lower maintenance costs
- ideal to create eye-catching displays (for example in jewellery stores)



Product	4 W
C (mm)	40
D (mm)	35
Weight (g)	26



Retail



Hospitality

Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot LV		Halogen		shape	intensity	angle			output		per	rendering	temp.
	W	W			cd	°	hours		lm	lm/W	pack	index	K
4-20W GU4 2700K 24D	4	20	GU4	MR11	580	24	25,000	No	140	35	12	>80	2700
4-20W GU4 4000K 24D	4	20	GU4	MR11	700	24	25,000	No	150	38	12	>80	4000



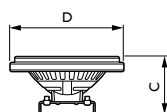
15 W

Features:

- lower energy consumption: 15 W → 75 W (12 V)
- dimmable* or non-dimmable versions available
- patented intelligent driver
- lifetime of 45,000 hours
- low energy consumption
- clearly defined beam spread
- UV- and IR-free light for less heat and protection for heat-sensitive objects

Benefits/applications:

- up to 80% energy saving compared with halogen lamps
- broad compatibility with transformers
- retrofittable
- for galleries, museums, exhibitions, lobbies, corridors, stairwells, washrooms, reception areas



Product	15 W
C (mm)	56
D (mm)	111
Weight (g)	114



Hospitality



Retail



Office



Supermarkets

Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot LV		Halogen		shape	intensity	angle					per	rendering	temp.
	W	W			cd	°	hours		lm	lm/W	pack	index	K
AR111 2700K 24D	15	75	G53	AR111	4560	24	45,000	Yes	830	55	6	>80	2700
AR111 2700K 40D	15	75	G53	AR111	1660	40	45,000	Yes	830	55	6	>80	2700
AR111 2700K 24D	15	75	G53	AR111	4560	24	45,000	No	830	55	6	>80	2700
AR111 2700K 40D	15	75	G53	AR111	1660	40	45,000	No	830	55	6	>80	2700

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



8 W

Delivering a warm, halogen-like accent beam, MASTER LEDspot MV is a perfect fit for spot lighting (track, corridors, lift lobbies, display cases and cabinets) in the hospitality industry. It is particularly suitable to public areas where the light is on 24/7, such as lobbies, corridors, stairwells. MASTER LEDspot MV delivers huge energy savings and minimizes maintenance cost without any compromise on brightness, enabling hospitality owners to achieve a return on their investment within one year.

These LEDspots are compatible with most existing fixtures with a GU10 holder and designed as a retrofit replacement for halogen or incandescent spots.

The dimmable version drives further efficiencies, while helping to create the desired atmosphere for environments where the right atmosphere needs to be created (e.g. bars and restaurants).



Retail



Hospitality



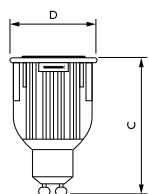
Office

Features:

- low energy consumption: 8 W → 50 W+ (230 V -240 V)
- dimmable*
- compatible with an extensive range of dimmers
- lifetime of 40,000 hours
- clearly defined beam spread
- UV- and IR-free light for less heat and protection for heat-sensitive objects

Benefits/applications:

- up to 80% energy saving compared with halogen lamps
- retrofittable
- lower maintenance costs
- suitable for indoor applications in open luminaires (with an open/free air gap of min. 10 mm)
- for accent and general lighting (e.g. hotels, shops and offices)



Product	8 W
C (mm)	80
D (mm)	50
Weight (g)	125



¹⁾ MASTER LEDspot MV 8-50 W+ provides High Performance Dimming

- broad dimmer compatibility supporting a wide range of normal phase-cut dimmers: wall box dimmers, panels, plug-in unit phase-cut dimming
- high dimming performance: smooth dimming curve, deeper dimming level, one to multiple lamps

8-50 W+ replaces 50 W halogen spots and reaches even higher light output (depending on the reference halogen lamp)

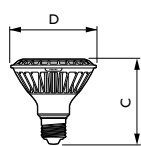
Application note:

To ensure high dimming performance the GU10 8 W should not be connected with other lamp types on the same dimmer ('mixed load')

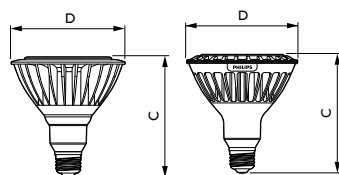
Technical specification

Product description		Wattage	Comparable	Socket	Beam	Beam	Lifetime	Dimmable*	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot MV			Halogen		intensity	angle			output		per	rendering	temp.
		W	W		cd	°	hours		lm	lm/W	pack	index	K
new	D 8-50W+ GU10 2700K 25D	8	50+	GU10	1800	25	40,000	Yes ¹⁾	430	54	6	>80	2700
new	D 8-50W+ GU10 2700K 40D	8	50+	GU10	900	40	40,000	Yes ¹⁾	430	54	6	>80	2700
new	D 8-50W+ GU10 3000K 25D	8	50+	GU10	1900	25	40,000	Yes ¹⁾	450	56	6	>80	3000
new	D 8-50W+ GU10 3000K 40D	8	50+	GU10	950	40	40,000	Yes ¹⁾	450	56	6	>80	3000
new	D 8-50W+ GU10 4000K 25D	8	50+	GU10	1900	25	40,000	Yes ¹⁾	450	56	6	>80	4000
new	D 8-50W+ GU10 4000K 40D	8	50+	GU10	950	40	40,000	Yes ¹⁾	450	56	6	>80	4000

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



Product	12 W
C (mm)	91
D (mm)	92
Weight (g)	290



Product	17 W OD	18 W
C (mm)	133	132.5
D (mm)	121.5	121.6
Weight (g)	525	530



12 W

17 W OD

18 W

Features:

- low energy consumption: 12 W → 75 W, 17 W → 100 W, 18 W → 100 W
- lifetime of 45,000 hours
- dimmable* (except PAR38 OD)
- UV- and IR-free light for less heat and protection for heat-sensitive objects
- free of mercury and hazardous materials

Benefits/applications:

- up to 80% energy saving compared to halogen lamps
- retrofittable and compatible with existing fixtures with E27 holder
- lower maintenance costs
- PAR30 and PAR38 for indoor use in open luminaires (ventilated, min. 10 mm free air gap)
- PAR38 OD for outdoor use (please check the packaging guidelines for outdoor installation requirements)
- especially suitable for public areas like lobbies, corridors and stairwells



Outdoor



Supermarkets



Office



Hospitality

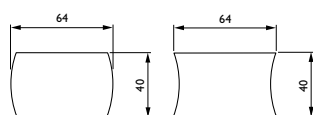


Retail

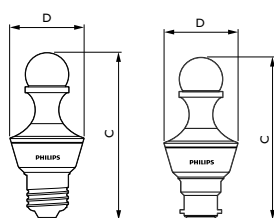
Technical specification

Product description	Wattage	Comparable	Socket	Bulb	Beam	Beam	Lifetime	Dimmable*	Lumen	Efficacy	Units	Color	Color
MASTER LEDspot		Wattage		shape	intensity	angle			output		per	rendering	temp.
	W	W			cd	°	hours			lm/W	pack	index	K
D 12-75W 2700K 230V PAR30S 25D	12	75	E27	PAR30S	2250	25	45,000	Yes	630	53	6	>80	2700
D 17-100W 2700K 230V PAR38 OD	17	100	E27	PAR38	3500	25	25,000	No	810	48	6	>80	2700
D 18-100W 2700K 230V PAR38 25D	18	100	E27	PAR38	3400	25	45,000	Yes	810	45	6	>80	2700

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



Product	Convex	Concave
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Product	7 W E27	7 W B22
C (mm)	102	102
D (mm)	45	45
Weight (g)	88	88



Features:

- low energy consumption: 7 → 40 W
- customizable lamp covers
- dimmable*
- lifetime of 25,000 hours

Benefits/applications:

- freedom to design your lamp with a choice of lamp covers
- dimming with validated leading edge dimmers
- 80% energy saving (short payback time)
- for indoor applications in open luminaires
- suitable for general lighting/ambiance creation in e.g. hotels, restaurants, shops and offices



Office



Hospitality



Retail

Technical specification

Product description	Wattage	Comparable incandescent Wattage	Socket	Beam angle	Lifetime	Dimmable*	Lumen output	Efficacy	Units per pack	Color rendering index
MASTER LEDbulb Designer	W	W		°	hours		lm	lm/W		
A) 7-40W E27 2700K Designer	7	40	E27	240	25,000	Yes	470	67	6	>80
B) Designer bulb lamp cover Convex shape	n.a.	n.a.	n.a.	n.a.	25,000	n.a.	n.a.	n.a.	6	n.a.
C) Designer bulb lamp cover Concave shape	n.a.	n.a.	n.a.	n.a.	25,000	n.a.	n.a.	n.a.	6	n.a.

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.

Designer bulb (A) + Convex shape (B)

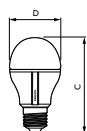


Designer bulb (A) + Concave shape (C)

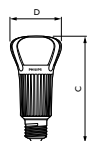
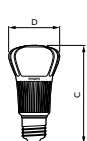


Important: always order a combination of A and B or A and C

Intellectual property number: 201120109172.4



Product	8 W E27
C (mm)	105.4
D (mm)	56.7
Weight (g)	138



Product	12 W E27	17 W E27
C (mm)	108	127.2
D (mm)	58	61
Weight (g)	182	224



Features:

- low energy consumption: 8 W → 40 W, 12 W → 60 W, 17W → 75 W
- dimmable*
- warm white light
- lifetime of 25,000 hours
- UV- and IR-free light

Benefits/applications:

- dimmable with validated leading edge dimmers
- up to 80% energy saving compared with traditional incandescent lamps
- easy (retrofit) replacement
- lower maintenance costs
- suitable for general lighting/ambiance creation in e.g. hotels, restaurants, shops and offices



Technical specification

	Product description	Wattage	Comparable incandescent Wattage	Socket	Bulb shape	Beam angle	Lifetime	Dimmable*	Lumen output	Efficacy	Units per pack	Color rendering index	Color temp.
	MASTER LEDbulb	W	W			°	hours		lm	lm/W			K
new	D 8-40W B22 2700K	8	40	B22	A60	>250	25,000	Yes	470	59	6	>80	2700
	D 8-40W E27 2700K	8	40	E27	A60	>250	25,000	Yes	470	59	6	>80	2700
	D 12-60W B22 2700K	12	60	B22	A60	>300	25,000	Yes	806	67	6	>80	2700
	D 12-60W E27 2700K	12	60	E27	A60	>300	25,000	Yes	806	67	6	>80	2700
new	D 17-75W B22 2700K	17	75	B22	A67	>300	25,000	Yes	1050	62	6	>80	2700
	D 17-75W E27 2700K	17	75	E27	A67	>300	25,000	Yes	1050	62	6	>80	2700

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



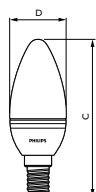
4W E14

Features:

- low energy consumption: 4 W → 15 W
- retrofittable with existing E14
- lifetime of 20,000 hours
- free of mercury and hazardous materials

Benefits/applications:

- warm white light
- up to 80% energy saving
- lower maintenance costs
- for indoor applications in open luminaires (open/free air gap of min. 10 mm)
- applications in hotels, restaurants, homes and historical buildings



Candle

Product	4W E14
C (mm)	101
D (mm)	35
Weight (g)	34



Hospitality



Retail

Technical specification

Product description	Wattage	Comparable incandescent Wattage	Socket	Bulb shape	Lifetime	Dimmable*	Lumen output	Efficacy	Units per pack	Color rendering index	Color temp.
Novallure	W	W			hours		lm	lm/W			K
D 4W E14 2700K 230V B35 CL	4	25	E14	B35	20,000	Yes	250	62	10	>90	2700

* With select dimmers please refer to the site www.philips.co.nz/lighting under "LED" for the latest information about dimming MASTER LED lamps.



MASTER LEDbulb Designer

MASTER LEDbulb Designer combines warm, incandescent-like light with customizable MASTER LEDlamp covers to offer design freedom in a simple retrofit LED bulb like never before. Ideal for open fixtures where the bulb is fully visible, it offers the excellent light performance, dimming and energy savings of MASTER LEDbulbs along with a uniquely customizable design. It is particularly suited to the hospitality and retail industry, where aesthetic design is especially important.



The elegant MASTER LEDlamp covers can be individually selected and installed by the user to match the surrounding décor, also as it changes over the extended lifetime of the lamp. The innovative lamp design ensures excellent light quality, and the broadly compatible dimmable driver helps create the desired ambiance while further improving efficiency.

First class halogen transformer compatibility thanks to intelligent electronics within low voltage LED Lamps



7 W / 10 W

MASTER LEDspots LV
MR16 GU5.3
Dimmable



4 W / 5.5 W / 6.5 W

MASTER LEDspots LV
MR16 GU5.3
Non-Dimmable



15 W

MASTER LEDspot LV
ARI11 G53
Dimmable & Non-Dimmable



4 W

MASTER LEDspot LV
MR11 GU4
Non-Dimmable

Philips designed a unique (patent protected) intelligent driver concept for low voltage (12 V) LED lamps, which enables broad compatibility with existing electronic and electromagnetic Halogen transformers. Therefore, Philips low voltage (12 V) LED lamps universally replace 12 V Halogen spot lamps with unique first class transformer compatible electronics.

Philips is the first to have fundamentally solved the ubiquitous challenge of making an extremely low energy consuming lamp work on the wide variety (hundreds of types worldwide) of standard 12 V Halogen transformers. The Halogen 12 V lamps are connected (alone or with a group of lamps) to Halogen transformers which have a typical load range from 20 W to 150 W and are powered in the range from one 20 W lamp to three 50 W lamps. For a simple plug and play replacement, low voltage LED lamps should work normally when connecting to such a Halogen transformer. This is not easy since most Halogen transformers require a certain minimum load of 20 W or higher to power the lamp and function properly. This patented electronics solution makes Halogen transformers perceive the lamp as

a normal Halogen lamp to operate normally, while only delivering the required low power to the LED lamp (e.g. 4 W MR16).

Not having the right driver (electronics) solution in LED lamps could result in compatibility issues with the existing installed base of transformers once these LED lamps are installed, such as:

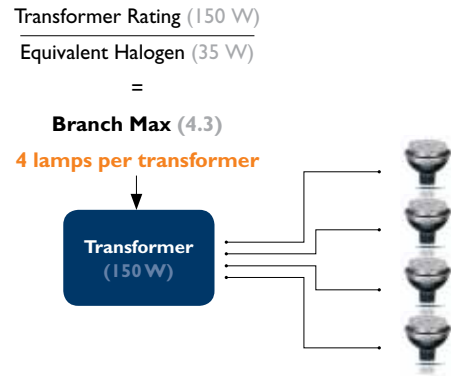
- Lamp not starting up
- Flicker in the light beam
- Transformer overheating or saturation, which can lead to shortened transformer lifetime
- Transformer replacement

Without dimmer

Calculation method of lamp number per transformer – without dimmer

To estimate how many LED lamps can be connected to an existing halogen transformer, the rated power of the transformer needs to be divided by the LED lamp replacement Wattage.

For example there is a 150 W transformer available, and the MR16 7 W (replacing a 35 W halogen lamp) is going to be installed. The calculation in this case is as shown

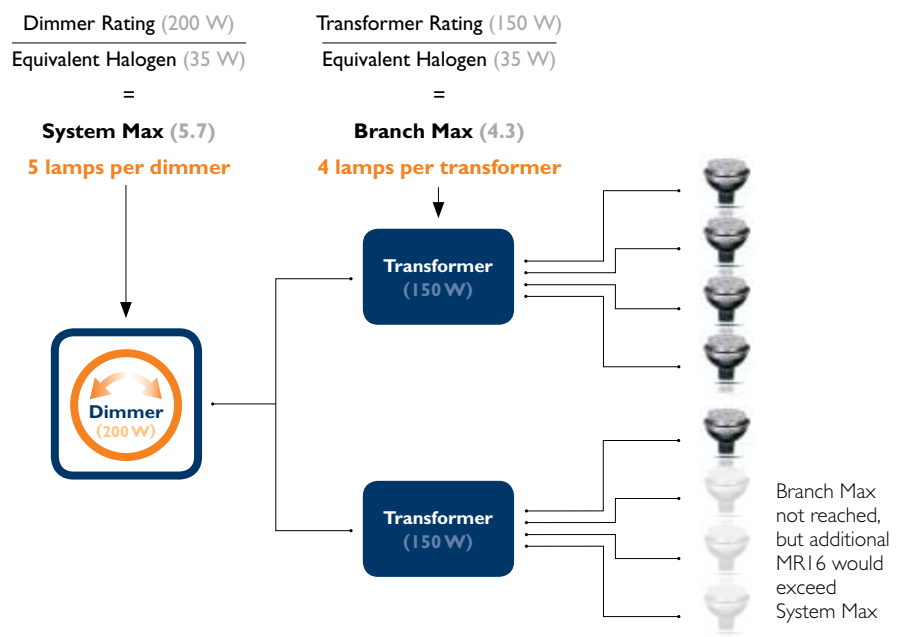


With dimmer

Calculation method of lamp number per transformer – with dimmer

In case dimmable low voltage LED lamps have to be connected to a dimmer, the following approach has to be followed:

- 1) Determine the max loading of both your transformer(s) and your dimmer: either in Watts (W) or Volt-Amps (VA).
- 2) Use the ratios below to determine a 'System Max' and 'Branch Max'
- 3) Limit total lamps you can install by 'System Max'...
- 4) ...and ensure transformer load is sufficient to allow for each individual 'Branch'



For more information on MasterLED lamps please see www.philips.co.nz/lighting under "LED"

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