

## LED Precise™ AR111

15W equivalent for 85 -100W  
Halogen products



DATA SHEET

### Product information

This new High CRI AaR111 range is replacement for 85-100W Halogen products. It is available in three colour temperatures and two beam angles with 90Ra Colour Rendering Index and R9 > 50 combine for excellent light quality and accurate reproduction of deep red colours.

### Features & Benefits

- 85-100W equivalent
- Total Lumens: up to 1000
- 25 000 hours solution (L70/B50)
- Three colour temperatures: 2700K, 3000K, 4000K
- A Energy Class
- Two Beam Angles : 25/40°
- Warranty: 2 years with maximum 8000 burning hours according to Tungfram Operations Kft. Standard Warranty conditions

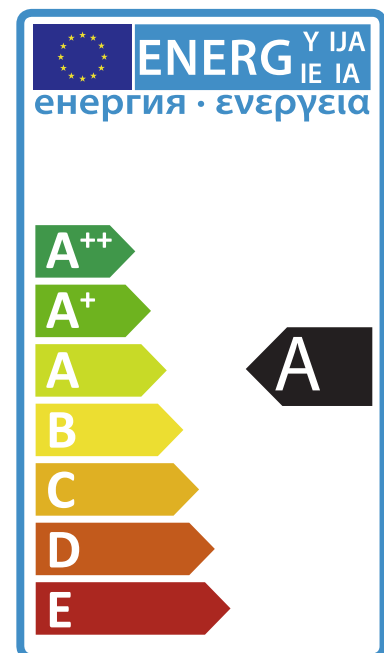
### Application areas



Hospitality



Retail



### IEC Standards

- EN 55015: Limits and methods of measurement of radio disturbance characteristics of electrical lighting  
 EN 61547: Equipment for general lighting purposed EMC immunity requirements  
 EN 61000-3-3: Limitation of voltage fluctuations and flicker in low voltage supply systems (equipment rated current ≤16A)  
 EN 61000-3-2: Limits — Limits for harmonic current emissions (equipment input current k 16 A per phase)  
 IEC 62471: Photo biological safety of lamps and lamp systems  
 IEC 60061: Lamp Caps and holders together with gauges for the control of interchangeability and safety

## Specification summary

Product Code	Product Description	Nominal/ Rated Power (W)	Repl Watt (W)	Nominal/ Rated Beam Angle (°)	Nominal/ Rated Lumens (lm)	Nominal/ Rated Useful Lumens (lm)	Rated Peak Intensity (cd)	CCT (K)	CRI	WEC (kwh/1000h)	Pack Qty
93094513	LED Precise R111 15W(90)Dim 927 25°	15,0	90	25	950	850	2000	2700	90	15,0	1/10
93094514	LED Precise R111 15W(85)Dim 927 40°	15,0	85	40	950	800	1400	2700	90	15,0	1/10
93094515	LED Precise R111 15W(90)Dim 930 25°	15,0	90	25	950	850	2000	3000	90	15,0	1/10
93094516	LED Precise R111 15W(85)Dim 930 40°	15,0	85	40	950	800	1400	3000	90	15,0	1/10
93094517	LED Precise R111 15W(100)Dim 940 25°	15,0	100	25	1000	900	2200	4000	90	15,0	1/10
93094518	LED Precise R111 15W(85)Dim 940 40°	15,0	85	40	1000	800	1400	4000	90	15,0	1/10

## Common attributes

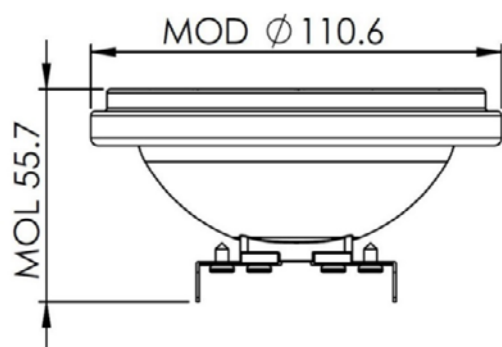
- Nominal/ Rated Life (L70/B50 hours): 25 000 Hrs
- Cap/Base: G53
- Nominal/Rated Beam Angle : 25/40°
- Input Voltage 12V
- R9>50
- Colour Rendering Index >90
- Start-up/Warm-up time: <100 ms
- Switching Cycles: 50 000
- Power factor: >0.85
- Lumen Maintenance Factor: 0.7
- Colour consistency: <6 SDCM
- A Energy Efficiency
- Dimmable

## Recommended operation temperature

- Ths Max 88°C



## Dimensions (mm)



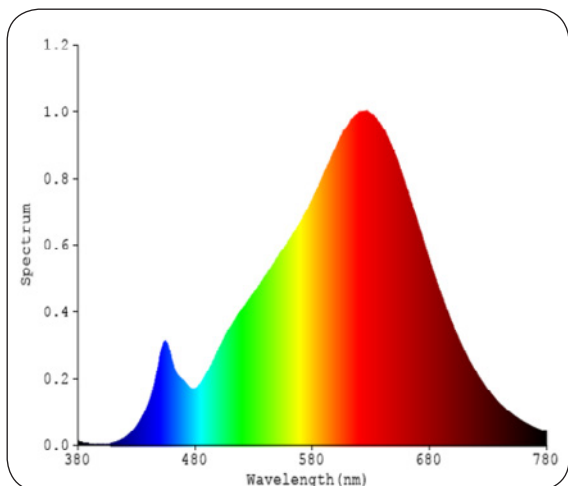
## Packaging image



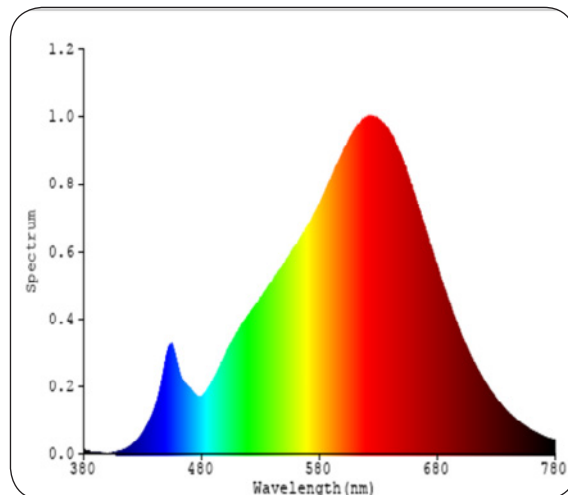
## Operation and maintenance

- Store and use the lamps the same way as traditional lamps.
- Check your fixtures are properly wired and don't deliver voltage spike to lamps causing overheating/failure.
- Ambient temperature range -20° C to 40°C
- Lamps should be kept free from contamination.
- Good condition of the lamp-holder contacts is important to ensure proper operation of lamp.
- Ensure lamp is cool before removing.
- Switch off mains supply before installing/removing lamps.
- Not for use in totally enclosed recessed fixtures.
- These LED Precise™ AR111 lamps are dimmable on most leading and trailing edge dimmers, for more information please check our website [www.tungsram.com/dimming-led](http://www.tungsram.com/dimming-led)

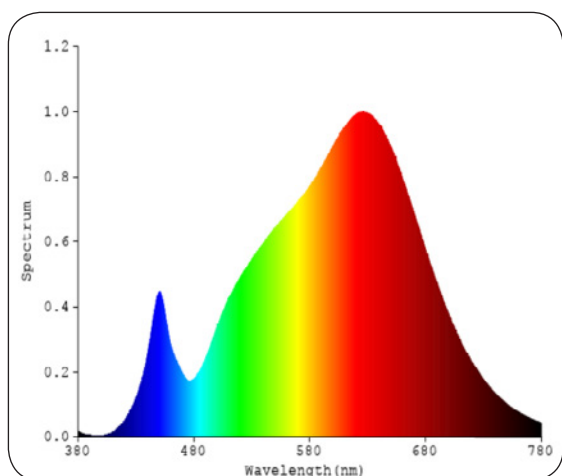
## Spectral distributions



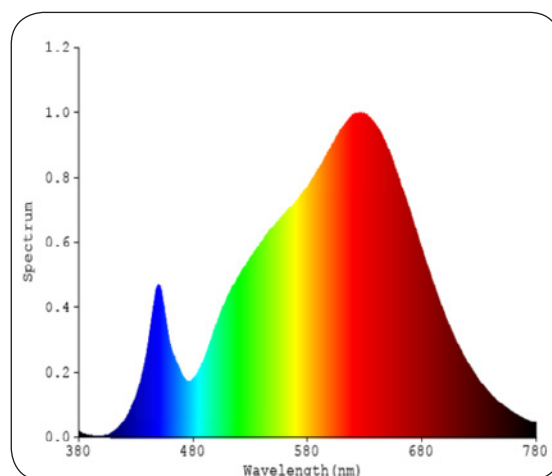
25° - 2700K



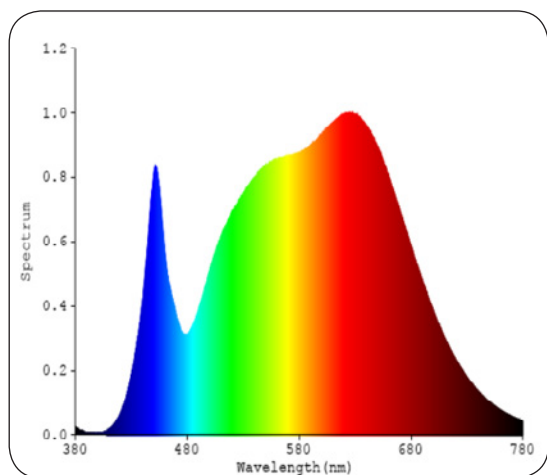
40° - 2700K



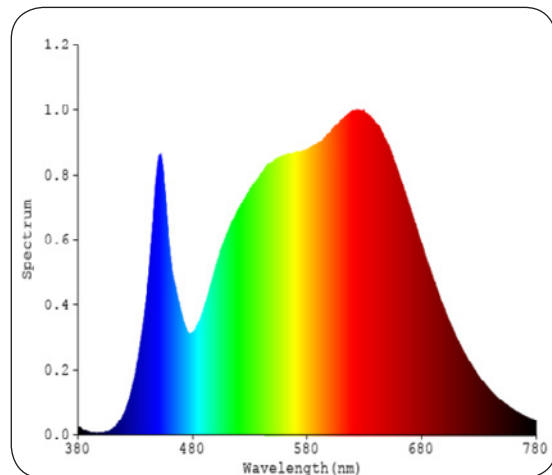
25° - 3000K



40° - 3000K



25° - 4000K



40° - 4000K

All values 180-400nm are 0