

Requirements for self-ballasted LED A-lamps under incentive programme

Lamps qualifying for the market lift incentive are required to meet the energy efficiency, functional performance and product information requirements specified below.

Test reports must be made available demonstrating compliance (or performance above the stated requirement) for each of the stated parameters. It is expected that these should be standard photometry and/or other test reports, not requiring additional testing be done for this initiative i.e. existing test results that demonstrates compliance or superior performance can be used as supporting evidence.

Participating products will be subject to sampling and independent testing to confirm stated compliance / performance claims.

Energy efficiency requirement

Ref #	Metric	Requirements										
1	Lamp efficiency	Omnidirectional ¹ Min 90 lm/W Directional 80 lm/W										
2a	PF (power factor)	Omnidirectional with < 10W Min 0.8 >10W Min 0.9										
2b	Alternatively , Fundamental Power Factor (Also called Displacement Factor or Cos (φ ₁))	<table><tr><th>Rated Input Power P in W</th><th>Fundamental Power Factor</th></tr><tr><td>P ≤ 2W</td><td>Not applicable</td></tr><tr><td>2W < P ≤ 5W</td><td>≥ 0.4</td></tr><tr><td>5W < P ≤ 25W</td><td>≥ 0.7</td></tr><tr><td>P > 25W</td><td>≥ 0.9</td></tr></table>	Rated Input Power P in W	Fundamental Power Factor	P ≤ 2W	Not applicable	2W < P ≤ 5W	≥ 0.4	5W < P ≤ 25W	≥ 0.7	P > 25W	≥ 0.9
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P > 25W	≥ 0.9											

Functional requirements

Ref #	Parameter	Functional requirements
3	Colour Rendering Index (CRI)	Ra ≥ 80 or if reported as CRI for all 15 colours ≥ 70
4	1000 hour early failure test	LED lamps must operate for 150 minutes on and 30 minutes off for 400 cycles at ambient conditions.
5	Lumen maintenance (omnidirectional and directional lamps)	At 6000h > 86.70% of initial (based on L70 > 15,000h)
6	EMC emissions	Compliance with SANS 215 or CISPR15
7	EMC immunity standard	Compliance with SANS 61547 or IEC 61547
8	Warranty	<15000hrs – 2yrs >15000hrs – 3yrs (based on 3 hrs of use/day)

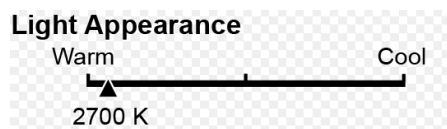
¹ Concessions are proposed for directional lamps, narrow beam angle, **high CRI** and ≤ **3000K** colour temperature

Ref #	Parameter	Functional requirements
9	RoHS	Compliant with RoHS and shall not contain any Mercury (0.0 mg Mercury)

Product information requirements.

The following information shall be clearly and prominently indicated on the packaging and in all other forms of product information:

- 1) Rated power in Watts
- 2) Rated initial luminous flux in lumens
- 3) Rated efficacy in lumens per Watt (lm/W)
- 4) Rated lifetime claim in hours
- 5) Rated correlated colour temperature (CCT) in Kelvin (K) combined with a sliding scale:



- 6) Statement on Dimmability – clearly state whether dimmable or not dimmable. If yes, then information on dimmer compatibility, or web link to this information.

Manufacturers are not required to provide an incandescent equivalency claim (i.e. "This lamp is as bright as a 60W incandescent" or "10W = 60W". However, if they do, then the equivalency shall be based on the table below which depicts the minimum initial luminous flux that is required to claim a specific incandescent lamp wattage equivalency:

Table of incandescent wattage equivalencies for LED lamps

Incandescent Wattage Equivalency [W]	Minimum Initial Luminous Flux [lm]	
	Omni-directional Lamps	Directional Lamps
15	150	130
25	250	210
40	500	430
60	800	680
75	1000	850
100	1500	1300
150	2500	2200
200	3500	3000

Note: The listed incandescent wattage equivalencies may be interpolated (e.g. 50 Watts) and extrapolated (e.g. 7 Watts) using the values in the given table