



## PRODUCT CALCULATION SHEET

<b>Brandname</b>	LSC
<b>Product description</b>	LSC SMART Globe G95 Gold Flex filament 220-240V 7W 600lm 1800-2700K E27 dimmable via app
<b>EAN Code</b>	8712879162605
<b>Product code</b>	3206548 (factory model number: DSD Vb-sF-WIFILIC-TY-CCT y3 z (921055) / G95-F-WIFILIC-TY-CCT 7W 600LM GOLD(1800-2700K))

Lamp type	Non directional (NDLS)
Main/non-mains	Mains
$\Phi_{use}$	600
$P_{on}$	7.0
$P_{ftm}$	1.000
CTLS (for Smart)	Yes
CCT (colour tuneable)	1800-2700K
CRI	80

Within directives (EU) 2019/2015 and (EU) 2019/2020 several calculations are required. This document provides the below mentioned calculations are provided:

1. Energy efficiency class calculation
2. Energy consumption calculation
3. Claimed equivalent incandescent lamp power calculation

### 1. Energy efficiency class calculations

The Energy efficiency class calculations of light sources as set out in Table 1, annex II from Regulation (EU) 2019/2015 on basis of the total mains efficiency  $\eta_{TM}$ , which is calculated by dividing the declared useful luminous flux  $\Phi_{use}$  (expressed in *lm*) by the declared on-mode power consumption  $P_{on}$  (expressed in *W*) and multiplying by the applicable factor  $F_{TM}$  of tables 2, annex II from Regulation (EU) 2019/2015.

$$\eta_{TM} = (\Phi_{use}/P_{on}) \times F_{TM} \text{ (lm/W)}$$

$$\eta_{TM} = (600/7,00) \times 1,000 = 85$$

The Energy efficiency class = F

*Table 1*  
**Energy efficiency classes of light sources**

Energy efficiency class	Total mains efficacy $\eta_{TM}$ (lm/W)
A	$210 \leq \eta_{TM}$
B	$185 \leq \eta_{TM} < 210$
C	$160 \leq \eta_{TM} < 185$
D	$135 \leq \eta_{TM} < 160$
E	$110 \leq \eta_{TM} < 135$
F	$85 \leq \eta_{TM} < 110$
G	$\eta_{TM} < 85$

*Table 2*  
**Factors  $F_{TM}$  by light source type**

Light source type	Factor $F_{TM}$
Non-directional (NDLS) operating on mains (MLS)	1,000
Non-directional (NDLS) not operating on mains (NMLS)	0,926
Directional (DLS) operating on mains (MLS)	1,176
Directional (DLS) not operating on mains (NMLS)	1,089

## 2. Calculation of the energy consumption

The weighted energy consumption ( $E_c$ ) is calculated in kWh/1000h as follows and is rounded up to two decimal places:

$$E_c = (P_{on} \times 1000h) \div 1000$$

Where  $P_{on}$  is the power corrected for any control gear losses in accordance with above.

The weighted energy consumption ( $E_c$ ) as printed on the energy label:

$$7 = (7,00 \times 1000) \div 1000$$

## 3. Claimed equivalent incandescent lamp power

For the non-directional light source, the equivalent wattage with an incandescent lamp is calculated and rounded up to 1W, based on Table 7, annex V from Commission Delegated Regulation (EU) 2019/2015. The intermediate values of both the luminous flux and the claimed incandescent lamp shall be calculated by linear interpolation between the two adjacent values.

The equivalent wattage for this non-directional light source is calculated as follows:

$$40 + (600 - 470) \times ((60 - 40) \div (806 - 470))$$

The equivalent wattage  $\approx 48W$

Table 7

**Equivalence claims for non-directional light sources**

<b>Rated light source luminous flux <math>\Phi</math> (lm)</b>	<b>Claimed equivalent incandescent light source power (W)</b>
136	15
249	25
470	40
806	60
1 055	75
1 521	100
2 452	150
3 452	200