Datasheet DimmerLight

DimmerLight Lamp

Jeremy SAVONET

20/02/2013

This document shows technical characteristics of the simulated device DimmerLight.

VERSION

Version	Date	Description
V1.0	15/02/13	File creation
V1.1	18/02/13	Minor format correction
V1.2	20/02/13	Update sections : - Device properties - Electro-optical considerations - DimmerLight outline
V1.3	12/03/2013	Add interface name
V1.4	18/03/2013	Minor change on sentences Major change on properties table

General Description

DimmerLight can supply only one model of lamp which is a 100 Watts halogen. The radiation color is white monochromatic emission type.

The lamp power level can be adjusted between 0 and 1.0 which means into range of 0 Watt (lamp is off) and 100 Watts (completely turned on). We describe in section DimmerLight Lamp Outline methods linked to this device.

Device properties

Name	Value	Default Value	Type	Modifiable
power_level	[0-1.0]	0.0	Double	Yes
max_power	100.0	100.0	Double	No

Note: 0.0 means 0% of 100 Watts and 1.0 means 100% of 100 Watts. The max_power is fixed!

Electro-optical considerations

Here we describe the global functioning of the simulated device DimmerLight. We take into account physical consideration to compute the illuminance (expressed in Lux unit) returned by the device. We have considered that:

$$1\ Watt = 680.0\ lumens\ at\ 555nm$$

This conversion is only applicable at wavelength of 555 nm (maximum of sensibility for human vision).

Through the simple formula beside, we then compute the illuminance, function of the lamp power level:

$$Illuminance = \frac{power\_level * \max\_power * 680.0}{surface}$$

With:

- Illuminance [Lux]
- Power_level [pourcentage]
- Max_power [Watts]
- Surface [m²]

DimmerLight Lamp Outline

Hereafter we explain methods that can be useful for the user to control a dimmerLight lamp.

Interface: **fr.liglab.adele.icasa.device.light.DimmerLight**

getSerialNumber()	Get the device ID
getPowerLevel()	Get the power level in percentage
setPowerLevel(double level)	Set the power level of the lamp in percentage
getMaxPowerLevel()	Get the max power level of the lamp in Watts