
DimmableLight:1 Device Template Version 1.01

For UPnP™ Version 1.0

Status: Standardized DCP

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Contents

1. OVERVIEW AND SCOPE.....	3
2. DEVICE DEFINITIONS	4
2.1. DEVICE TYPE.....	4
2.2. DEVICE MODEL	4
2.2.1. <i>Description of Device Requirements</i>	4
2.2.2. <i>Relationships Between Services</i>	4
2.3. THEORY OF OPERATION.....	5
3. XML DEVICE DESCRIPTION.....	6
4. TEST.....	7

List of Tables

Table 1: Device Requirements	4
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1. Overview and Scope

This device template is compliant with the Universal Plug and Play Architecture, Version 1.0 and Version 1.0 of the UPnP Standard Device Template.

DimmableLight:1 provides the following functionality:

- Switching the light source on or off
- Changing the intensity of the light source in intermediate steps
- Configuring and running ramping operations (optional)
- Providing definition of interaction between SwitchPower and Dimming service

This device template does not address:

- Definition of scheduled activities ("scenarios")

2. Device Definitions

2.1. Device Type

The following device type identifies a device that is compliant with this template:

urn:[schemas-upnp-org:device:DimmableLight:1](#)

2.2. Device Model

Products that expose devices of the type urn:schemas-upnp-org:device:[DimmableLight:1](#) must implement minimum version numbers of all required embedded devices and services specified in the table below.

Table 1: Device Requirements

DeviceType	Root	Req. or Opt. ¹	ServiceType	Req. or Opt. ¹	Service ID ²
DimmableLight:1	Root	R	SwitchPower:1	R	SwitchPower
			Dimming:1	R	Dimming
			<i>Non-standard services embedded by an UPnP vendor go here.</i>	<i>X</i>	<i>TBD</i>
<i>Non-standard devices embedded by a UPnP vendor go here.</i>	<i>TBD</i>	<i>X</i>	<i>TBD</i>	<i>TBD</i>	<i>TBD</i>

¹ R = Required, O = Optional, X = Non-standard.

² Prefixed by urn:[upnp-org:serviceId:](#).

2.2.1. Description of Device Requirements

The SwitchPower:1 service is required exactly once.

The Dimming:1 service is required exactly once.

2.2.2. Relationships Between Services

The optional specifications within the service Dimming:1 regarding "OnEffect" define a relationship between state changes of the service SwitchPower:1 and the Dimming:1. Please refer to the service description of the service Dimming:1 for detailed information.

2.3. Theory of Operation

The lighting control device is comprised of a Switch Power and a Dimming Service. The switching component is serially connected to the dimming component. The dimmer's settings will not be physically realized by the load until the switch is on.

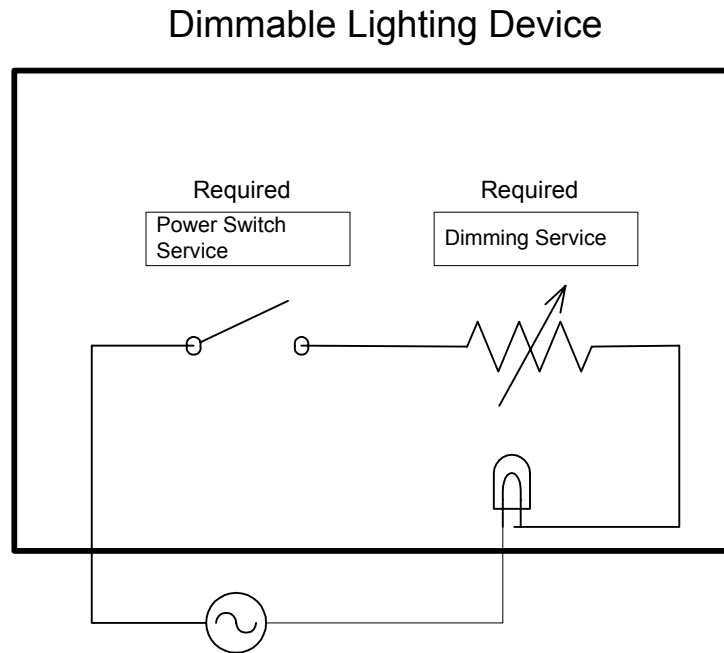


Figure 1: Graphical model of Dimmable Light Controller

The effect of the dimmer when the switch switches from "off" to "on" state is optionally programmable (*OnEffect*) and is triggered by the Switch Power Service's state. This means if the *Status* of the Switch Power Service switches from 0 to 1 then the *OnEffect* will be realized on the dimming component.

In *OnEffect* the default state of the dimming device is set. If *OnEffect* set to *OnEffectLevel* the *LoadLevelTarget* is set to *OnEffectLevel* when *Target* is changed to 1.

3. XML Device Description

```
<?xml version="1.0"?>
<root xmlns="urn:schemas-upnp-org:device-1-0">
  <specVersion>
    <major>1</major>
    <minor>0</minor>
  </specVersion>
  <URLBase>base URL for all relative URLs</URLBase>
  <device>
    <deviceType>urn:schemas-upnp-org:device:DimmableLight:1</deviceType>
    <friendlyName>short user-friendly title</friendlyName>
    <manufacturer>manufacturer name</manufacturer>
    <manufacturerURL>URL to manufacturer site</manufacturerURL>
    <modelDescription>long user-friendly title</modelDescription>
    <modelName>model name</modelName>
    <modelNumber>model number</modelNumber>
    <modelURL>URL to model site</modelURL>
    <serialNumber>manufacturer's serial number</serialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <iconList>
      <icon>
        <mimetype>image/format</mimetype>
        <width>horizontal pixels</width>
        <height>vertical pixels</height>
        <depth>color depth</depth>
        <url>URL to icon</url>
      </icon>
      XML to declare other icons, if any, go here
    </iconList>
    <serviceList>
      <service>
        <serviceType>urn:schemas-upnp-org:service:SwitchPower:1</serviceType>
        <serviceId>urn:upnp-org:serviceId:SwitchPower:1</serviceId>
        <SCPDURL>URL to service description</SCPDURL>
        <controlURL>URL for control</controlURL>
        <eventSubURL>URL for eventing</eventSubURL>
      </service>
      <service>
        <serviceType>urn:schemas-upnp-org:service:Dimming:1</serviceType>
        <serviceId>urn:upnp-org:serviceId:Dimming:1</serviceId>
        <SCPDURL>URL to service description</SCPDURL>
        <controlURL>URL for control</controlURL>
        <eventSubURL>URL for eventing</eventSubURL>
      </service>
      Declarations for other services added by UPnP vendor (if any) go here
    </serviceList>
    <deviceList>
      Description of embedded devices added by UPnP vendor (if any) go here
    </deviceList>
    <presentationURL>URL for presentation</presentationURL>
  </device>
</root>
```

4. Test

Testing of the UPnP functions Addressing, Discovery, Description, Control (Syntax) and Eventing are performed by the UPnP Test Tool v1.1 based on the following documents:

- ◆ UPnP Device Architecture v1.0
- ◆ The Device Definitions in chapter 2 of this document
- ◆ The XML Device Description in chapter 3 of this document
- ◆ The UPnP Test Tool device template test file: **DimmableLight1.xml**
- ◆ The template documents for the services referenced by this device, together with their respective UPnP Test Tool service template test files.