



KNX Direct lighting

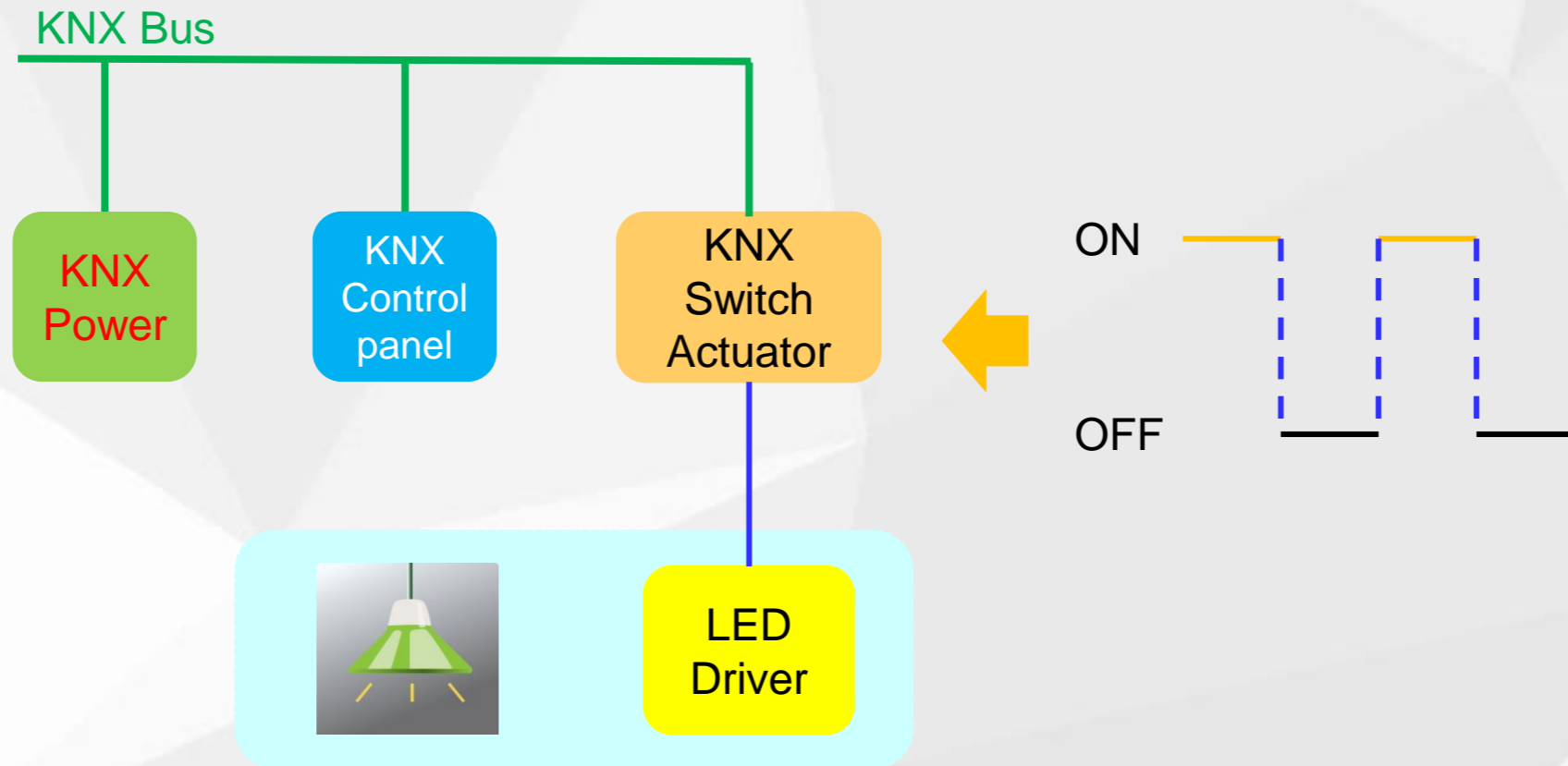


Outline

1. Existing KNX lighting control methods
2. MEANWELL Innovative methods
3. LCM-KN KEY Features
4. KNX direct Lighting control DEMO

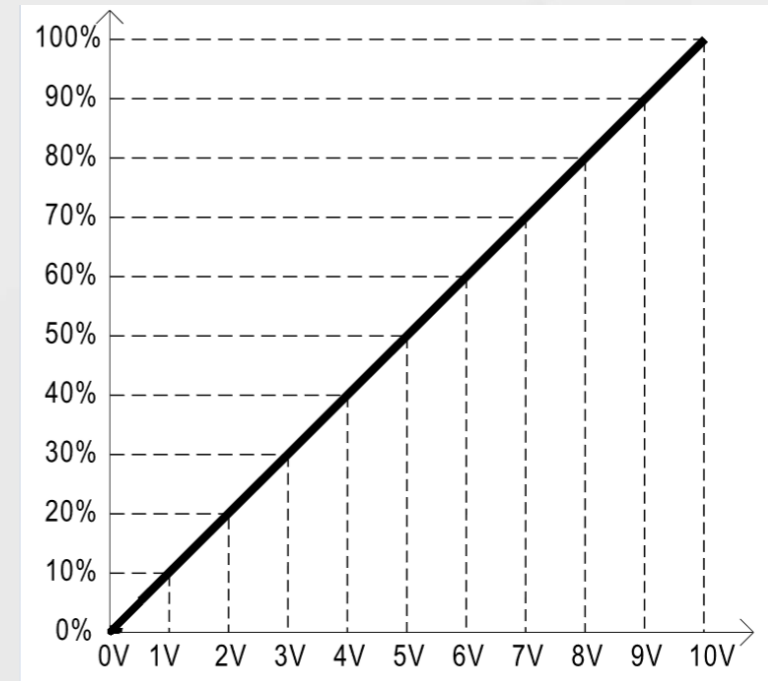
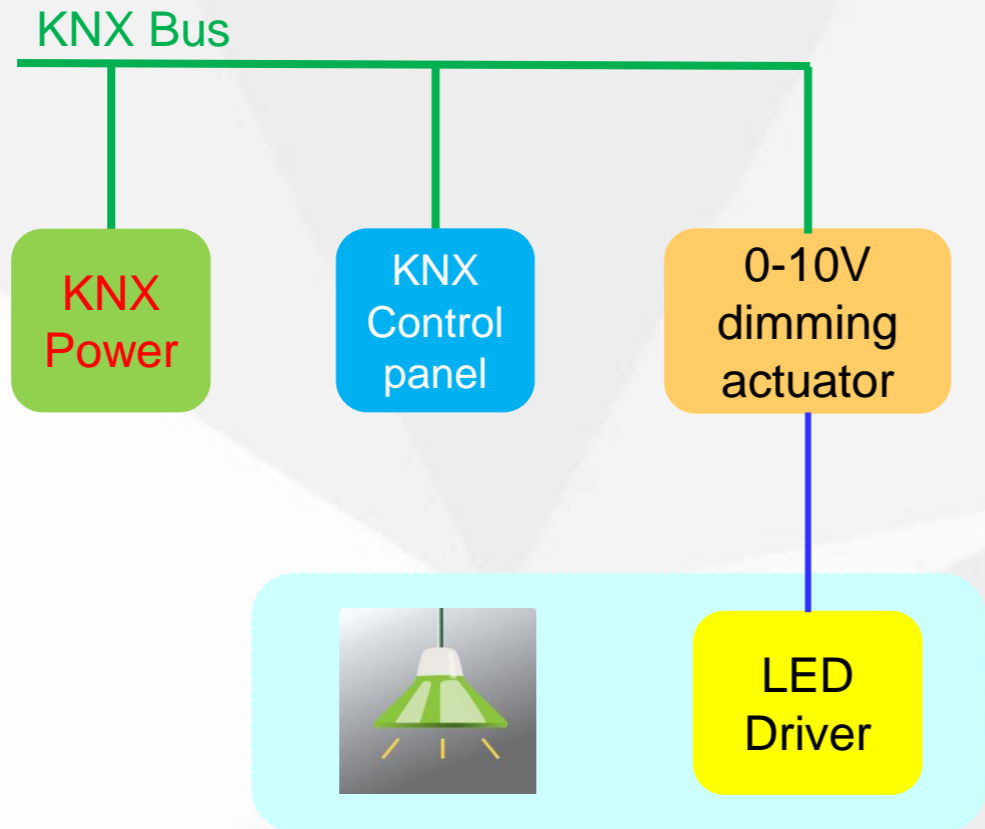
Existing KNX lighting control methods

- Switch actuator => normal ON/OFF control



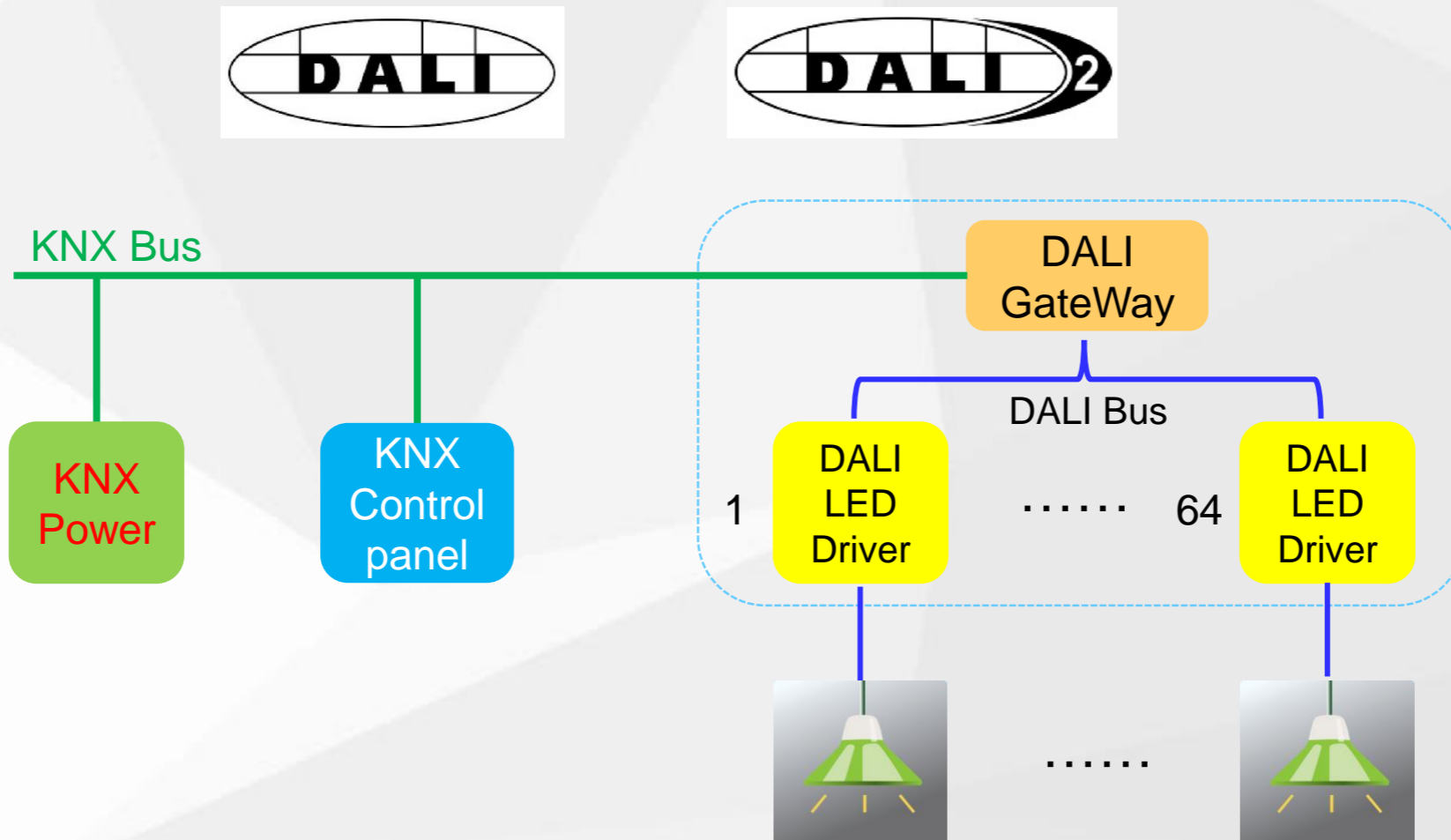
Existing KNX lighting control methods

- 0/1-10V dimming actuator => Analog dimming



Existing KNX lighting control methods

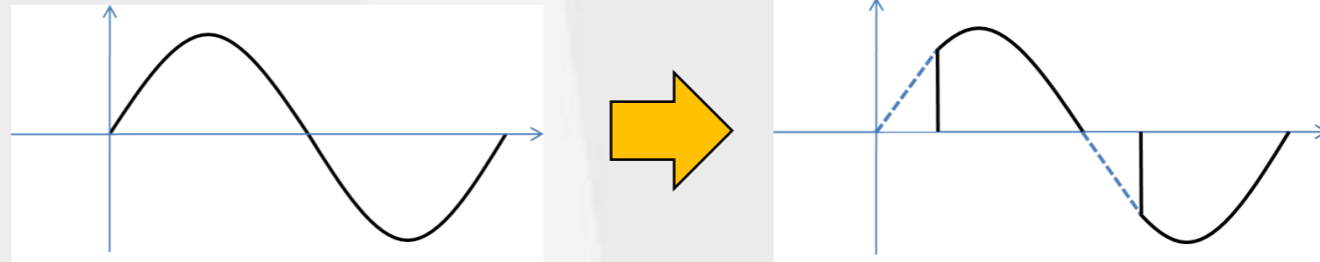
□ KNX DALI Gateway => Digital Dimming



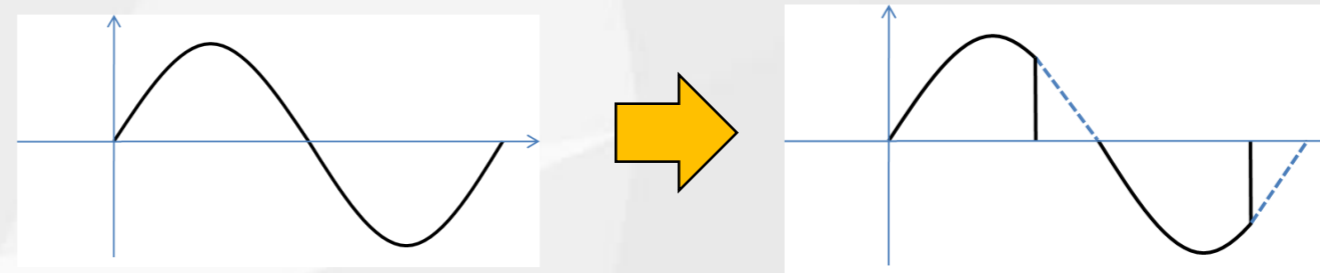
Existing KNX lighting control methods

□ TRIAC / MOSFET Dimming Actuator => Phase cut dimming

SCR leading edge cut :

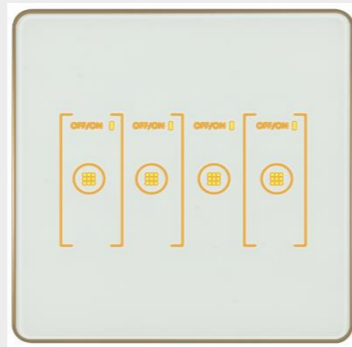


MOS trailing edge cut :



MEANWELL Innovative methods

Common features of existing control methods



KNX Control Panel

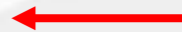


KNX actuator, example:

- ★ Switch actuator
- ★ 0-10V dimming actuator
- ★ Phase cut dimmer
- ★ DALI Gateway



AC/DC LED Driver



LED luminaire

MEANWELL Innovative methods

KNX dimming actuator/
DALI Gateway



+



AC/DC LED Driver



3 in 1



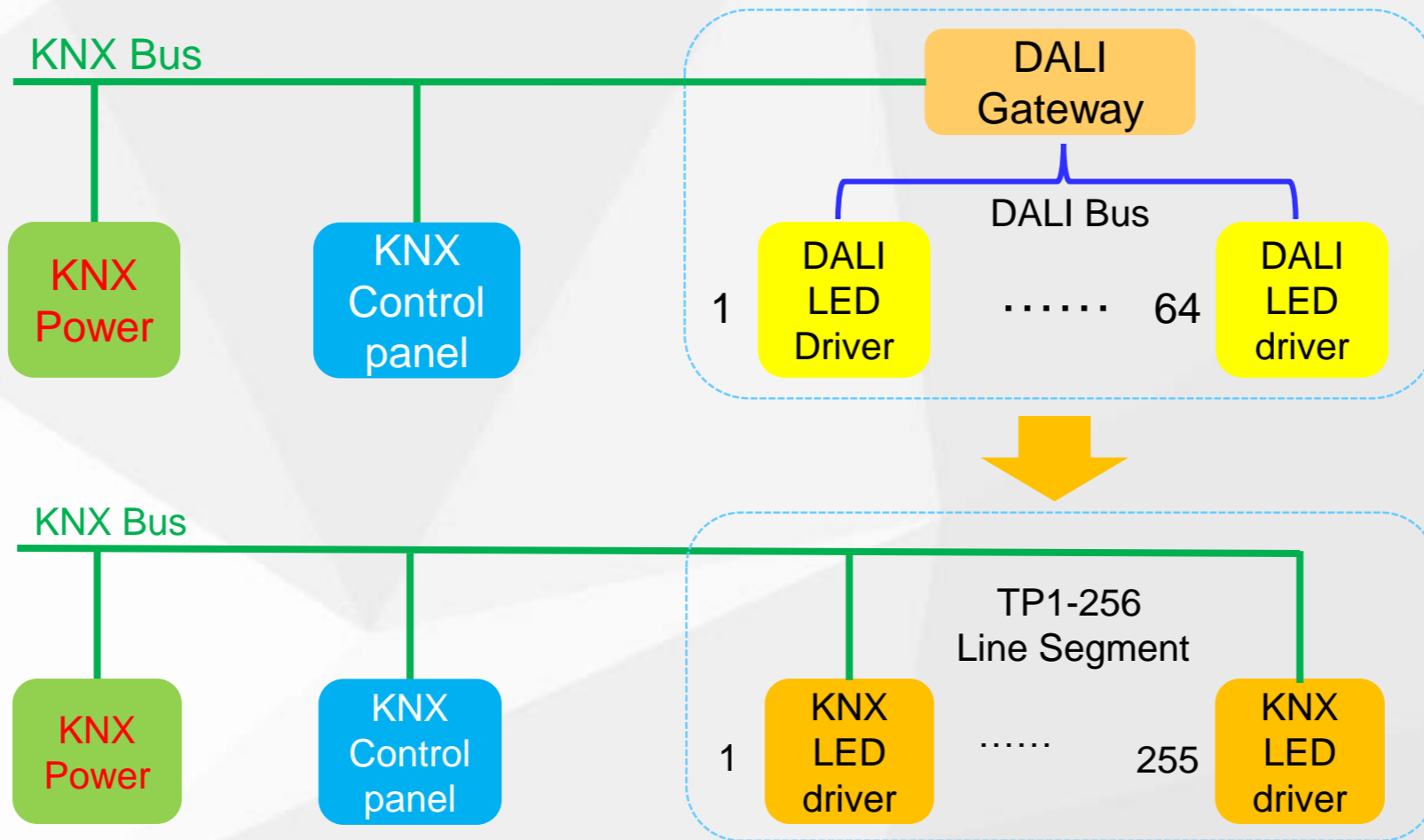
Industry
leader

KNX + AC/DC LED Driver (Constant Current type)

6 different current levels to choose from

MEANWELL Innovative methods

□ KNX LED Driver vs DALI Gateway + LED Driver



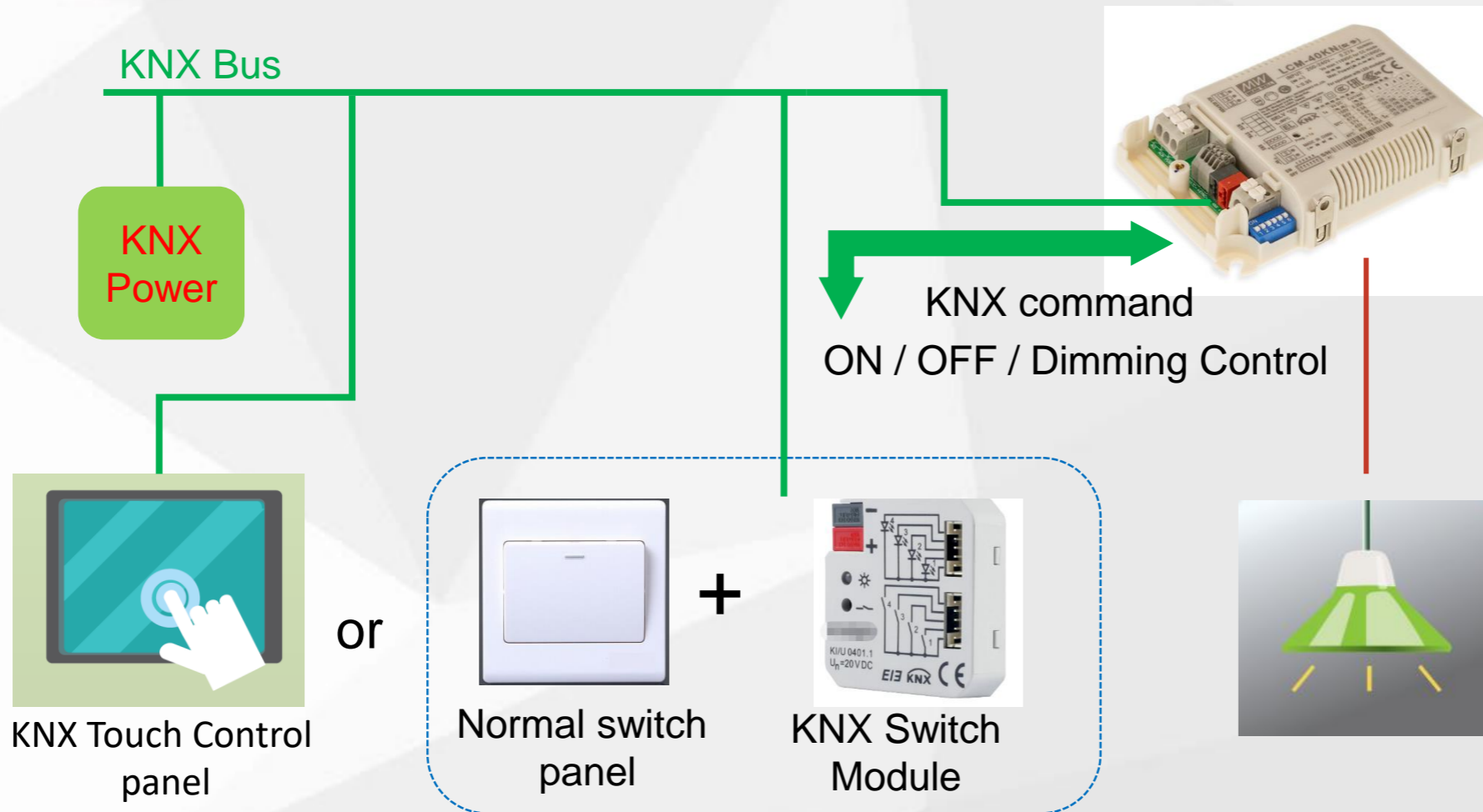
Features of KNX LED Driver

□ KNX LED Driver vs DALI Gateway + LED Driver

	KNX LED Driver	DALI Gateway + LED Driver
System cost	KNX direct, lower cost	Need DALI gateway, higher cost
Reliability	Each device is independent, single damage does not affect the normal operation of the system	DALI gateway failure, the entire lighting system is out of control
Compatibility	KNX ensures the compatibility	Different brands of DALI gateways have compatibility issues with DALI LED Driver
Number of nodes	255 (1 bus Line, TP1-256)	64 (1 DALI bus line)
Transmission distance	700m	300m
Communication rate	9600 bps	1200 bps
Configuration convenience	KNX Database(ETS)	KNX Database(ETS) + DALI setting
security	Expandable KNX Secure	None
Other	Ex: Operation time/ Power consumption	None

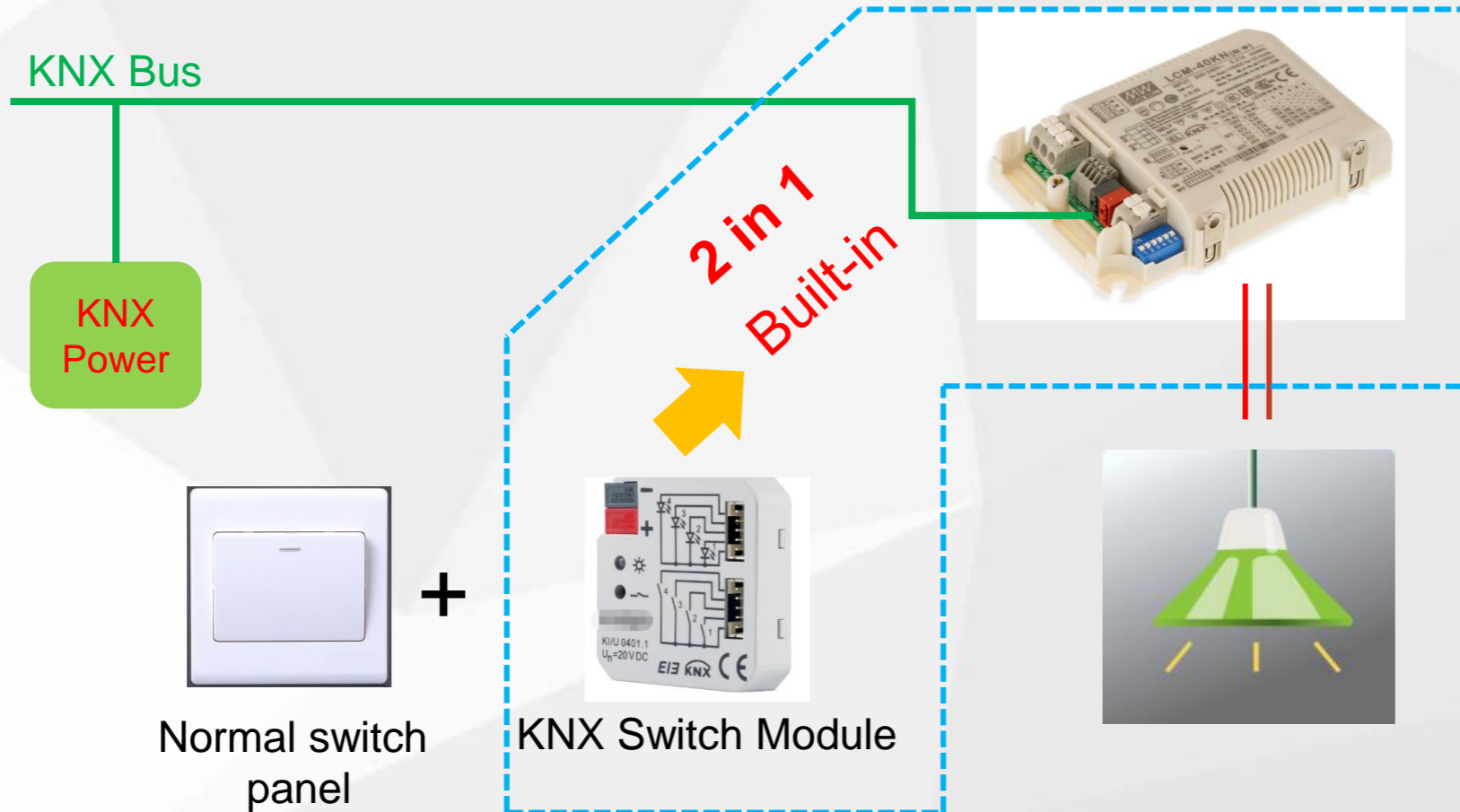
Features of KNX LED Driver

□ Traditional way of ON / OFF / Dimming control



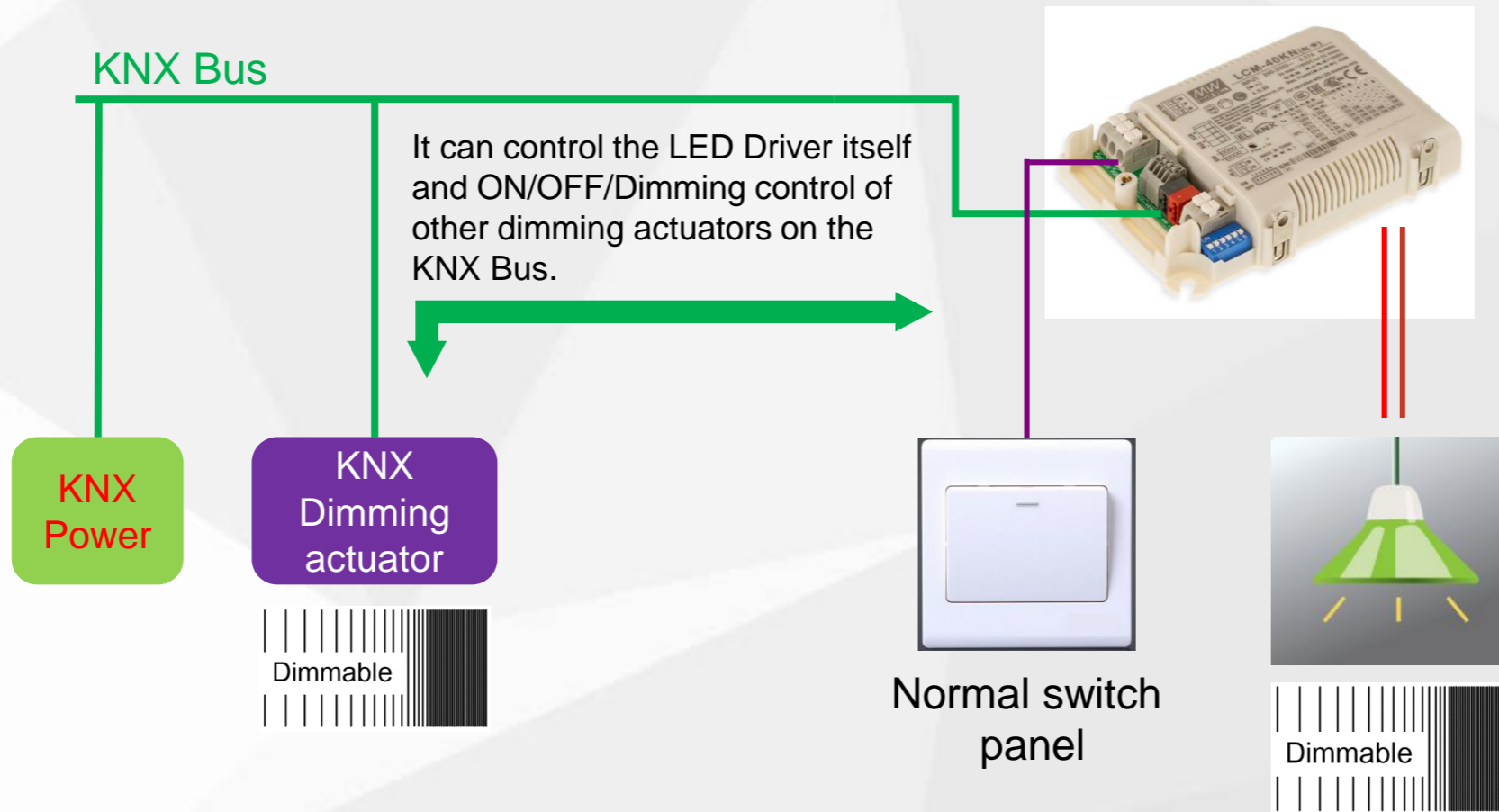
Features of KNX LED Driver

- KNX LED Driver built-in KNX push dimming interface



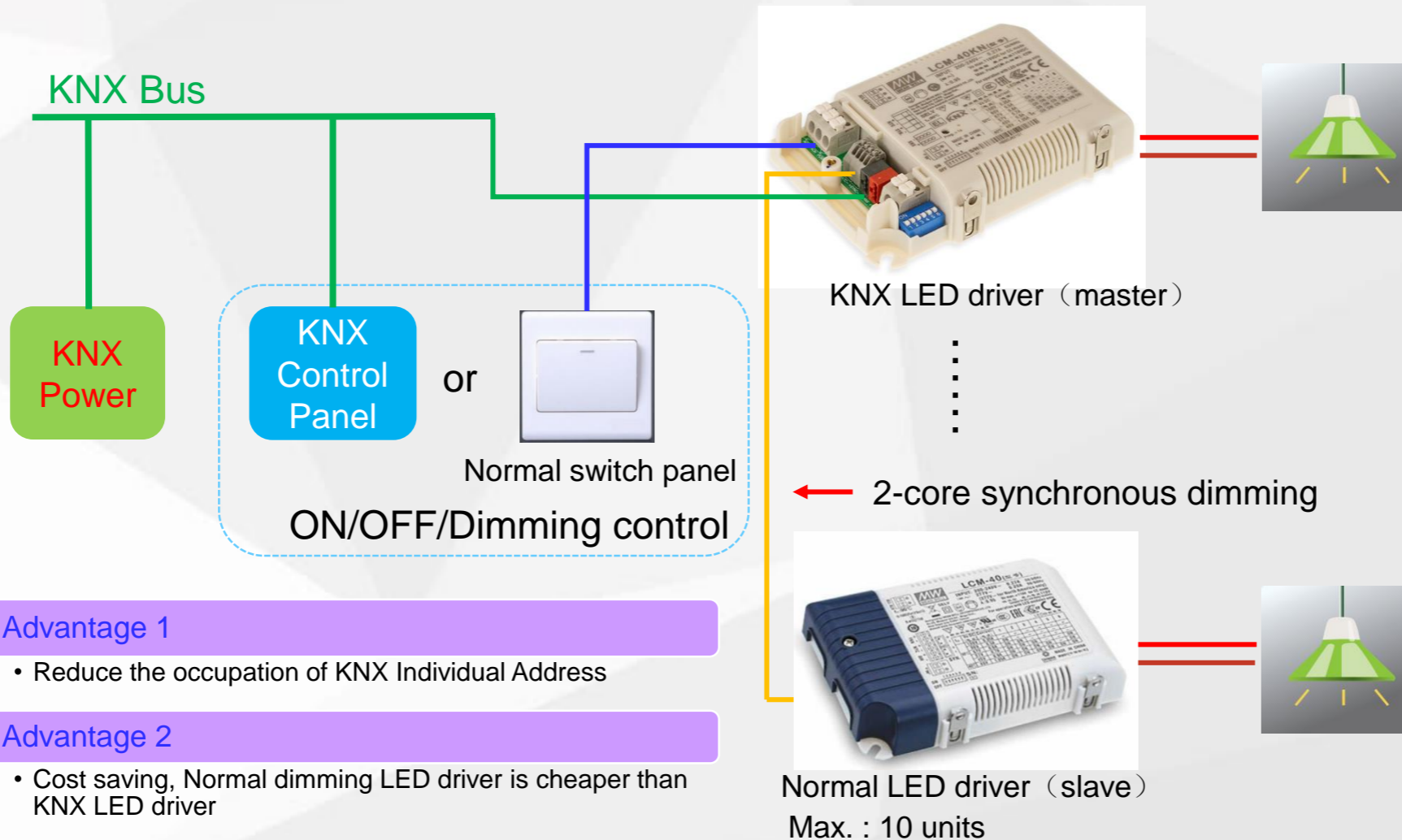
Features of KNX LED Driver

- Multifunction: Not only the LED Driver but also the dimming control module



Features of KNX LED Driver

- Support regional lighting synchronous dimming



Advantage 1

- Reduce the occupation of KNX Individual Address

Advantage 2

- Cost saving, Normal dimming LED driver is cheaper than KNX LED driver

Features of KNX LED Driver

- LED lighting decay issue

LUMEN

POWER

100%

90%

80%

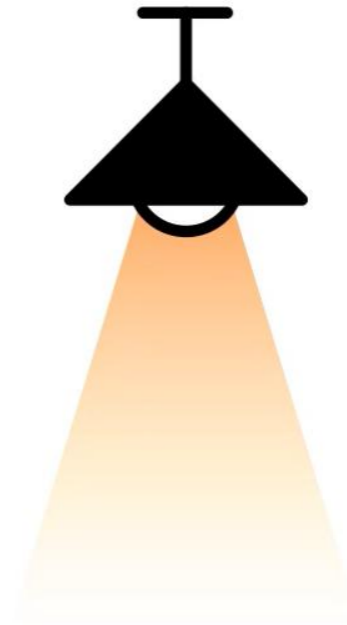
15000hrs

30000hrs

50000hrs

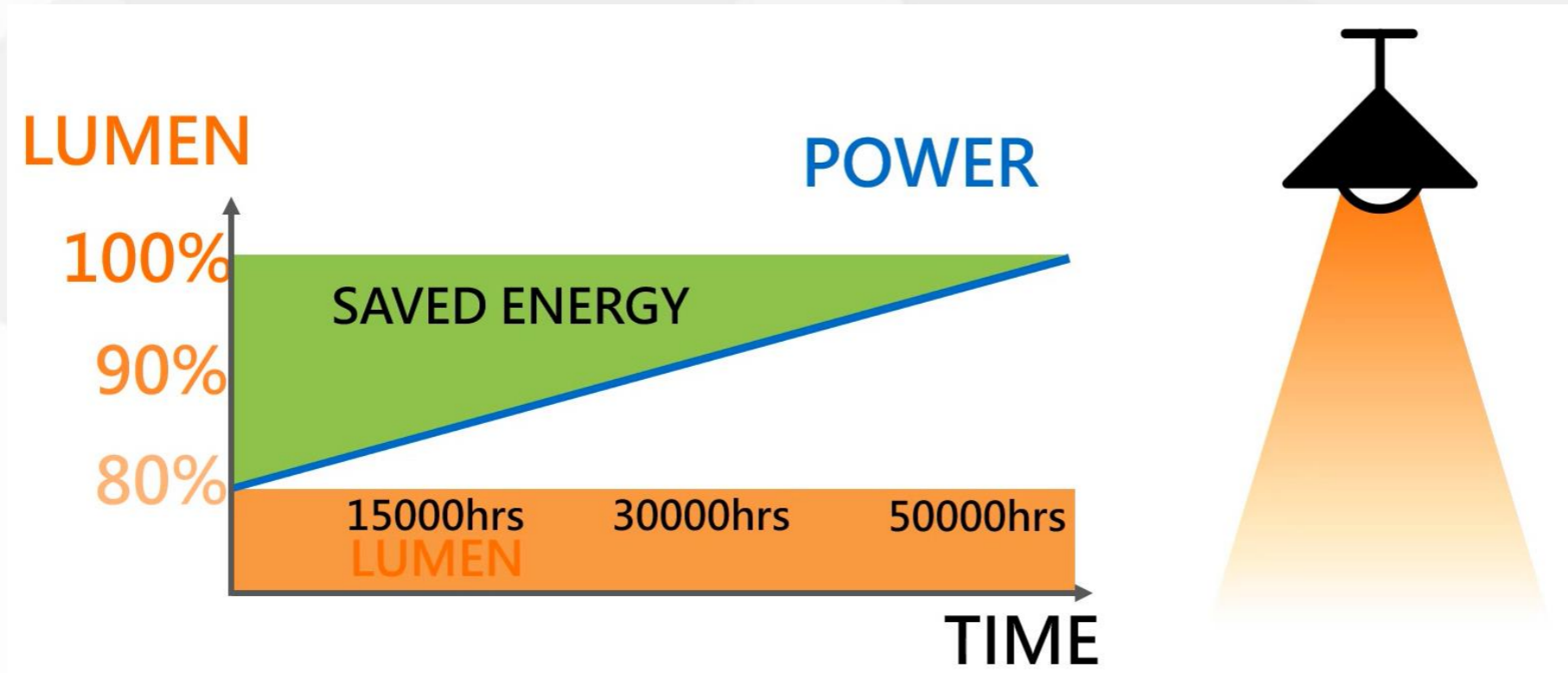
LUMEN

TIME



Features of KNX LED Driver

- With constant illumination management, overcome the impact of LED light decay, and energy saving and environmental protection



- ❖ Constant illumination management, can be set through ETS Database



CONFIDENTIAL



KNX direct Lighting control DEMO

1. Where to start

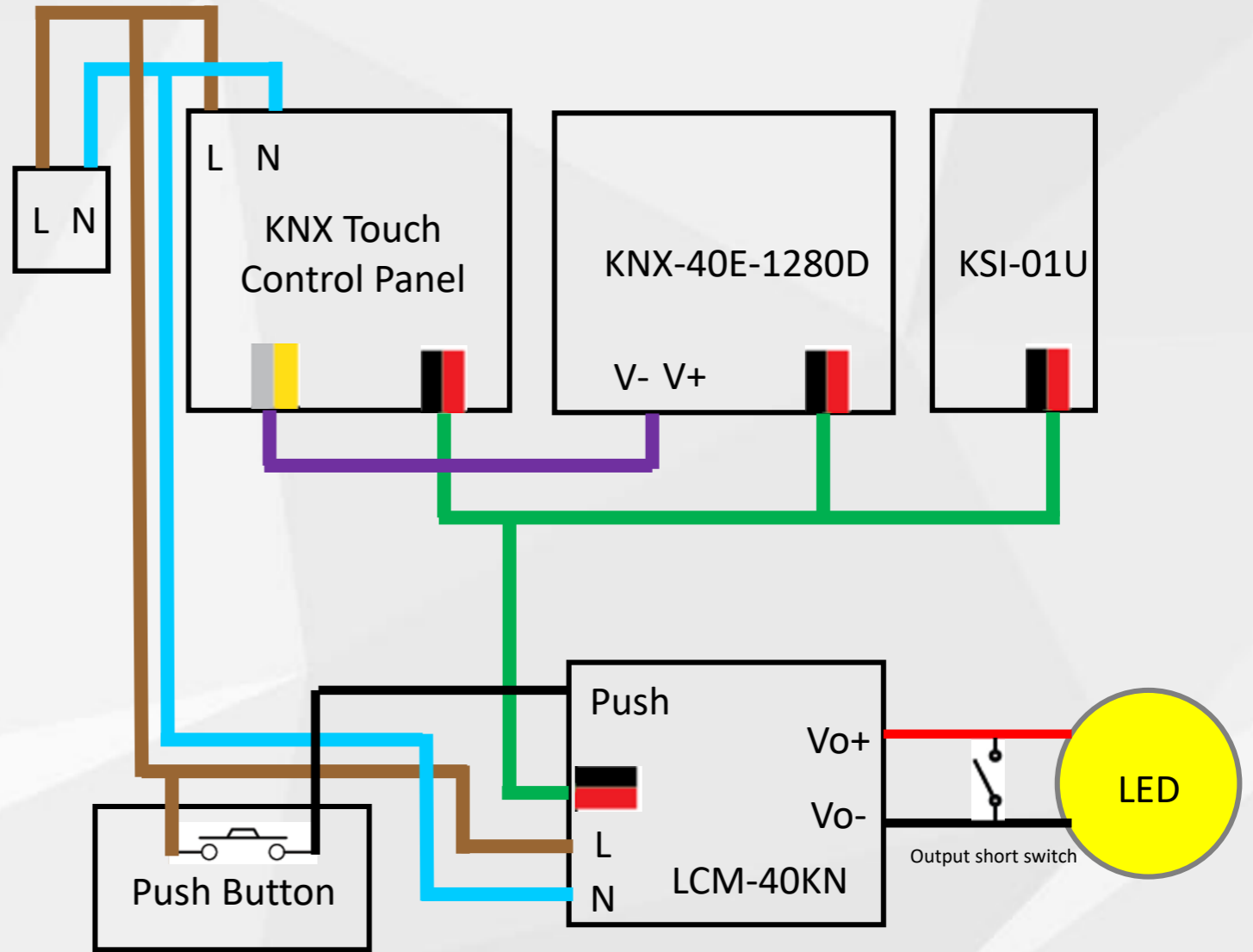
2. Actions

3. Tips

Hardware



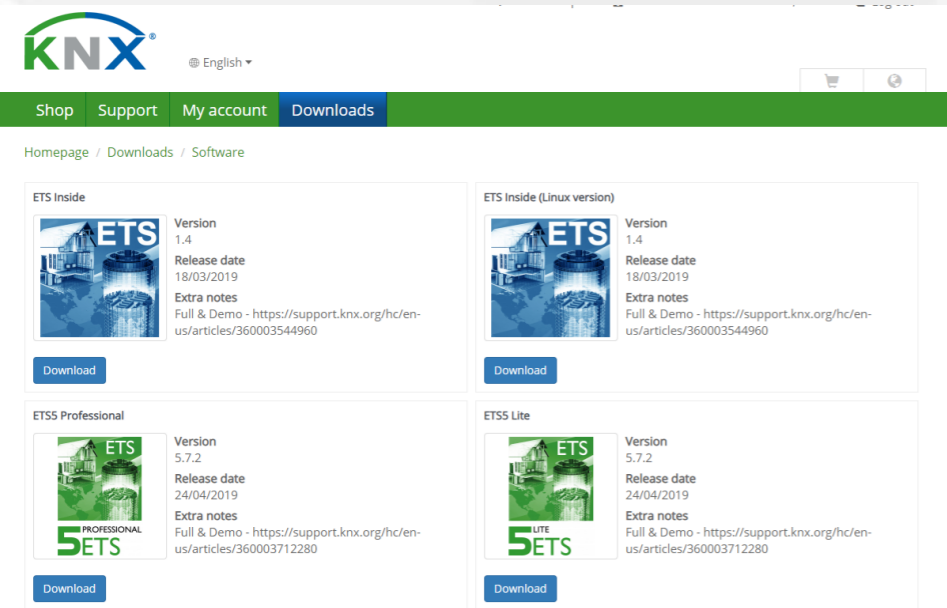
Schematic



Software

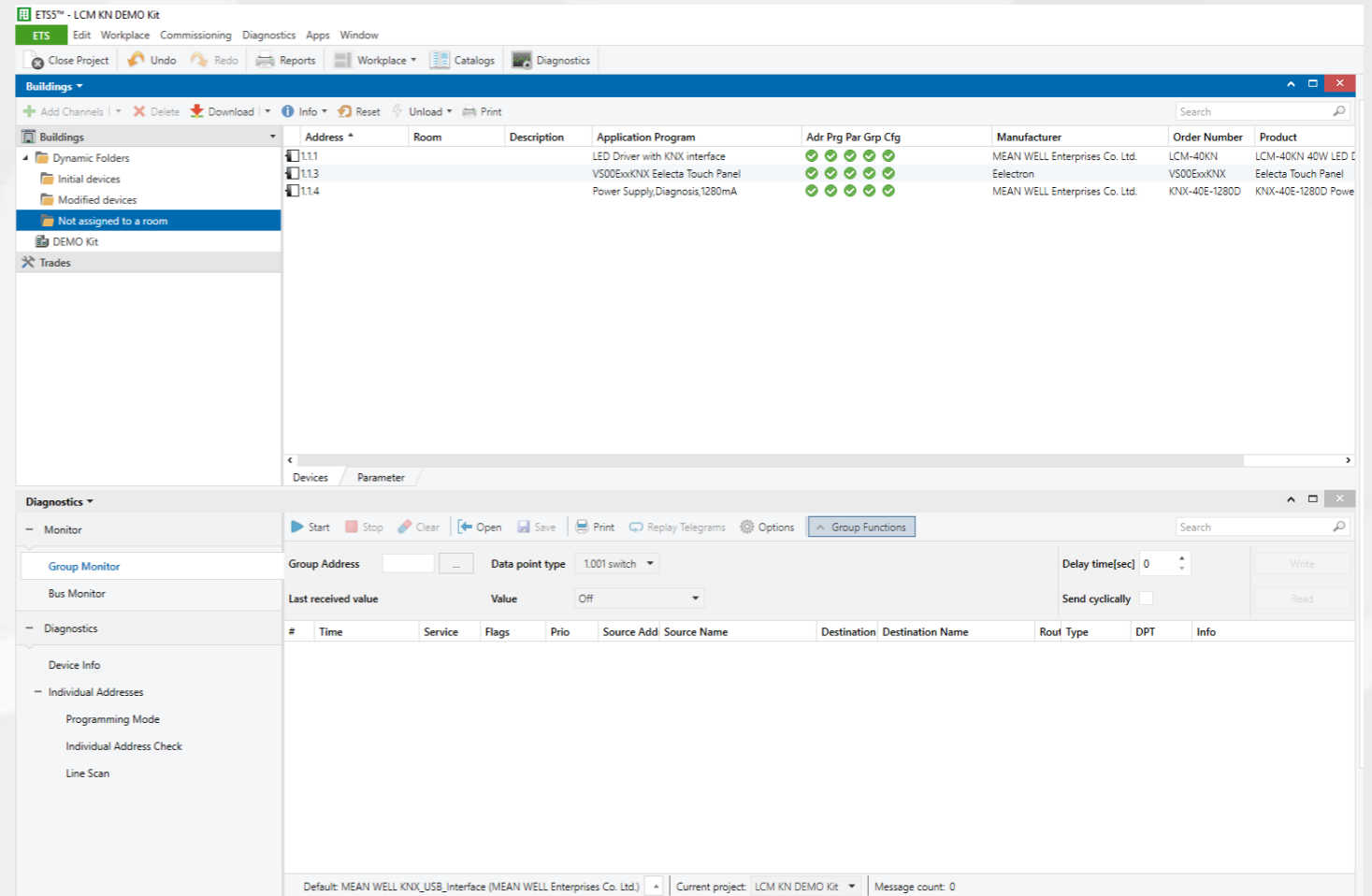
<https://www.knx.org/knx-en/for-professionals/index.php>

- Go to KNX Association official web-site
- Register
- download ETS software (Demo for free)



The screenshot shows the KNX Association website's 'Downloads' section. It features four download cards for different software versions:

- ETS Inside**: Version 1.4, Release date 18/03/2019. Includes a 'Download' button and a link to extra notes.
- ETS Inside (Linux version)**: Version 1.4, Release date 18/03/2019. Includes a 'Download' button and a link to extra notes.
- ETSS Professional**: Version 5.7.2, Release date 24/04/2019. Includes a 'Download' button and a link to extra notes.
- ETSS Lite**: Version 5.7.2, Release date 24/04/2019. Includes a 'Download' button and a link to extra notes.



The screenshot shows the ETS software interface for a project named 'LCM KN DEMO Kit'. The main window displays a table of building configurations:

Address	Room	Description	Application Program	Adr	Prg	Par	Grp	Cfg	Manufacturer	Order Number	Product
L1.1		LED Driver with KNX interface		✓	✓	✓	✓	✓	MEAN WELL Enterprises Co. Ltd.	LCM-40KN	LCM-40KN 40W LED D
L1.3		V500ExoKNX Eelecta Touch Panel		✓	✓	✓	✓	✓	Eelectron	V500ExoKNX	Eelecta Touch Panel
L1.4		Power Supply/Diagnosis1280mA		✓	✓	✓	✓	✓	MEAN WELL Enterprises Co. Ltd.	KNX-40E-1280D	KNX-40E-1280D Powe

The interface also shows a 'Diagnostics' panel with options for monitoring and device information.

Software

Application database for ETS


- ETS Online Catalog(end user can download without access MW website)
- Downloadable from MW website

settings

MEAN WELL Enterprises Co. Ltd.


	Security	Manufacturer	Name ^	Order Number	Medium Type	Application	Version
		MEAN WELL Enterprises Co. Ltd.	KDA-64	KDA-64	TP	KDA-64 Control	1.0
		MEAN WELL Enterprises Co. Ltd.	KNX IP TP Router	KSR-01IP	TP	IP Router	2.1
		MEAN WELL Enterprises Co. Ltd.	KNX USB-Interface	KSI-01U	TP		0.0
		MEAN WELL Enterprises Co. Ltd.	KNX-20E-640 Power Supply (230V/640mA)	KNX-20E-640	TP		0.0

Software



KNX Application Database

↓ Download




Smart Battery Charging Program Software V1

↓ Download

SPEC | REPORT | CERTIFICATE | OTHERS

ETS Application Database | Installation Manual | TECHNICAL NOTES



Application Database for ETS

14/Aug/2018

Actuator	Series	Version	ETS4/5	History
KAA-8R Universal actuators 8-fold	01	01	prod	--

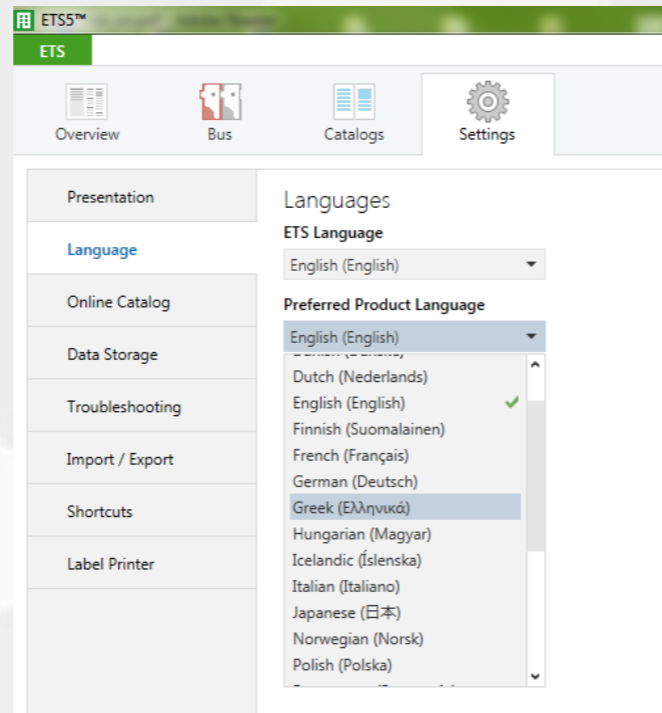
<https://www.meanwell.com/productCatalog.aspx>

<https://www.meanwell.com/webapp/product/search.aspx?prod=KNX-20E-640&pdf=S05YX0FwcGxpY2F0aW9uX0RhdGFhYXNlLnBkZg==&a=4>

Software

Application database for ETS

- MW KNX product will support:
English, German, Spanish, French, Italian, Dutch, Russian, Simplified Chinese...and many more!



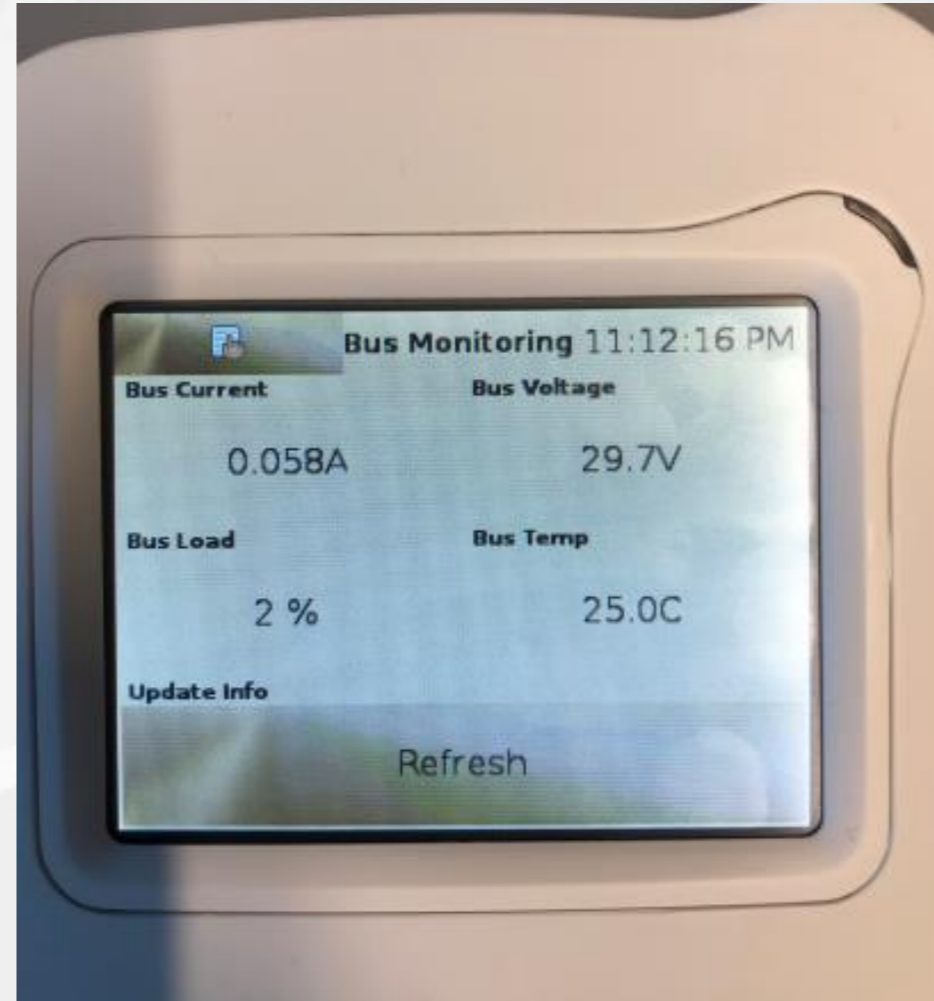
Actions

- Connected to the AC line Power on
- Use touch screen to Control
 - A. Light control**
 - Dimming
 - wattage consumption,
 - cumulative operation time,
 - output fault...etc
 - B. BUS monitoring**
 - Voltage,
 - Current ,
 - Load%
- Use PushDim to light control

Tips for Demo



Tips for Demo



Thank you!



Your Reliable Power Partner