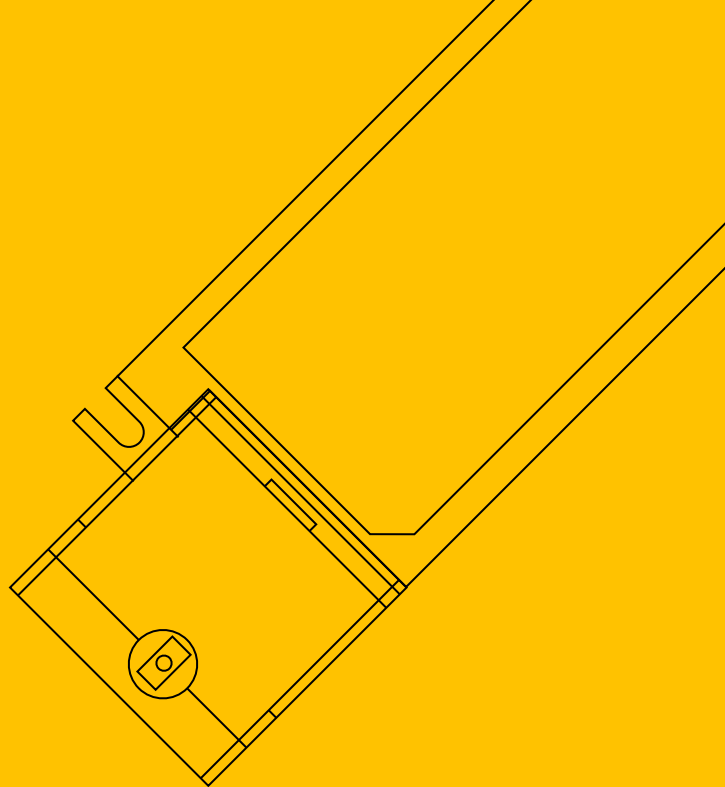




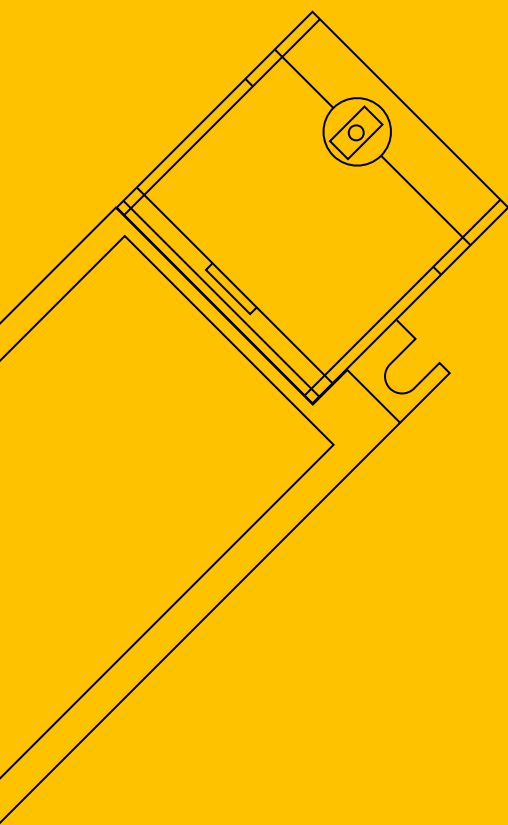
COLOSSUS[®]

Excellence inside

DATASHEET

ELS42IHIDT8421050N

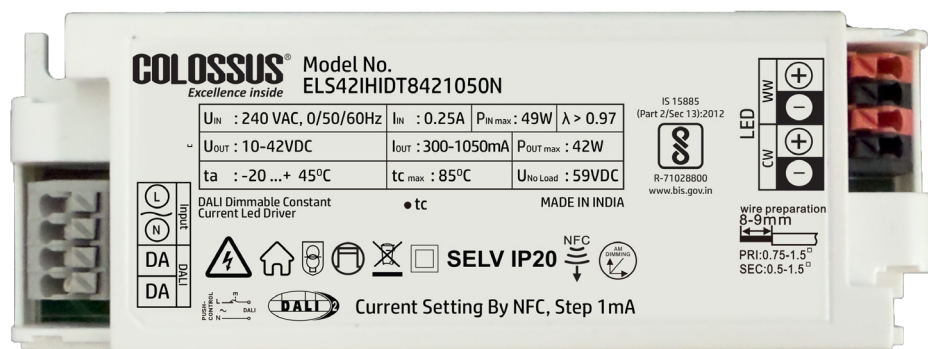
DALI- 2 DT8



Engineered with



Version: 01



*Image is for viewing purpose. Technical Data not to be drawn from above image.

Approval Markings:



Product Description

- DALI-2 Dimmable Constant Current Driver For Led Modules
- This driver is compatible with NFC for easy configuration.
- Configurable parameters (operating mode, channel mode, fade time, dimming curve, CLO, min-max levels, scenes, groups, etc.)
- Input Voltage 240VAC
- Output Ripple Current <5% (@ Full Load, <120 Hz) - Flicker Free
- High Efficiency >90% (@Full Load)
- Power Factor >0.97, THD<10%(@100%Load)
- For use in combination with Luminaries of Protection Class II.
- Protection against Abnormal Operating Conditions Like Short Circuit Protection, Open Voltage Protection, Overload Protection.
- Surge Protection 2KV
- Compatible with DALI-2 & PUSH Dimming
- Nominal Life Time: 1,00,000 hours @ tc = 45°C

Functions

- Seamless Control via DALI-2
- CCT & Dimming Control
- Energy Efficiency And Monitoring
- Compatible with DALI-2 accessories
- Application oriented operation for maximum compatibility

Benefits

- 1-100% Deep Dimming, Dim to Off
- Compatible with Sensors & PUSH Dim
- Low Standby Power
- Smooth Transition over wide range of CCT & Intensity

Applications



Commercial Spaces



Industrial Spaces



Residential Spaces



Hospitality

Technical Data

Mains Voltage Supply

Rated Voltage Range	240VAC
Rated Frequency	0/50/60 Hz
Max. Admissible Input Voltage Range(AC)	200-265VAC
Max. Admissible Input Voltage Range(DC)	180-280VDC
Total Harmonic Distortion (THD)	<10% (@Full Load)
Mains voltage withstanding capacity	300VAC for 8hrs (with overvoltage shutdown)

Output Data

Constant current

Output current tolerance	±5%
Max. Ripple output current(with LED Load)	<5% (@ Full Load, <120 Hz)
Max starting Time	<1s (@ Full Load by DALI System)

Interface And Dimming Operation

Dimming Interface	DALI Dimming
PUSH Dimming	PUSH dimming (Max. lead wire length:20m, sameport of DALI, Max parallel connections qty for Push-dim 15 PCS)
DALI Function	DALI dimming (Max. lead wire length:300m) logarithm or linear dimming curve selectable 251,252,253,CLO
Dimming Range	DALI dimming: 1%-100% ,Dim to off .

Power Factor

240V(@ Full Load)	>0.97
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Efficiency(typ.)

Full Load	>90%
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Protections

Open Circuit	<59VDC
Output Short Circuit Protection	YES
Overload Protection	YES

Technical Data

Connection Terminals	
Type	Push Terminal
PRI Wire Cross Section / Length	0.5 - 1.5 ² / 8-9mm
SEC Wire Cross Section / Length	0.5 - 1.5 ² / 8-9mm
DALI Wire Cross Section / Length	0.5 - 1.5 ² / 8-9mm

Wire Lengths	
Max. Wire Length To Led Module	<3m

Protection

Surge	2kV
High Voltage	300V

Temperatures (Operation)

Model No.	Ambient(ta)	Case (tc)
ELS42IHIDT8421050N	-20°C... +45°C	Max + 85°C

Product Specifications

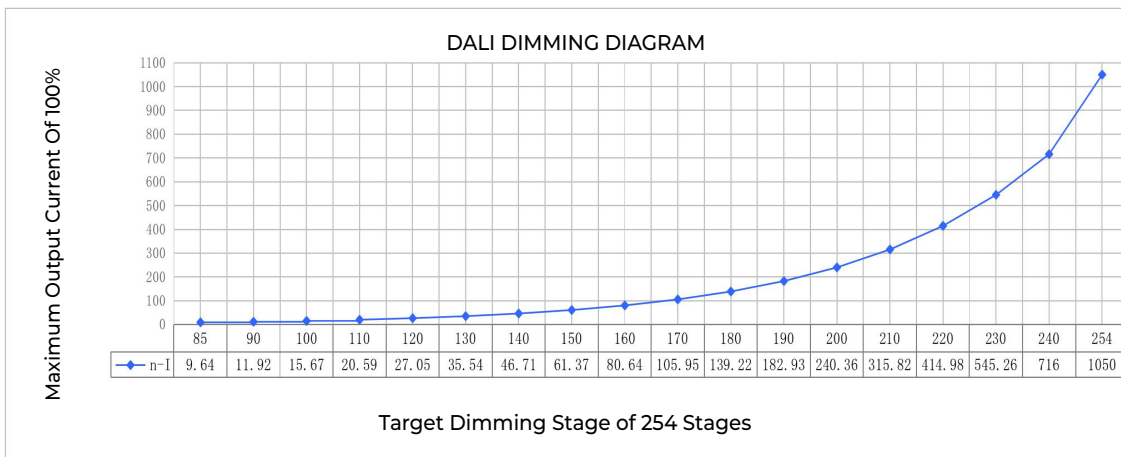
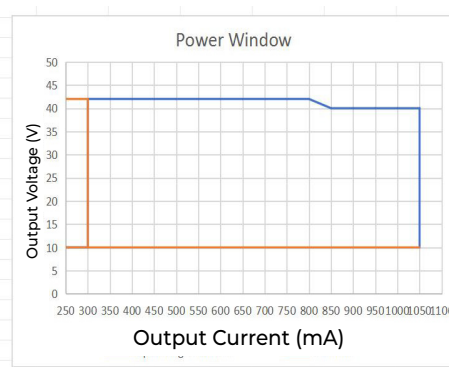
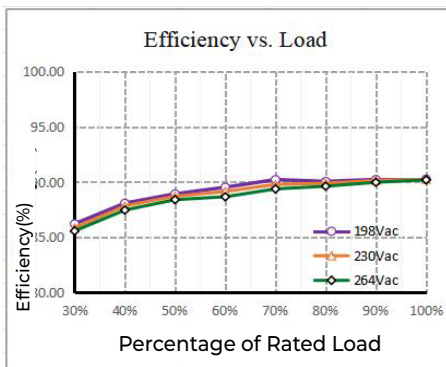
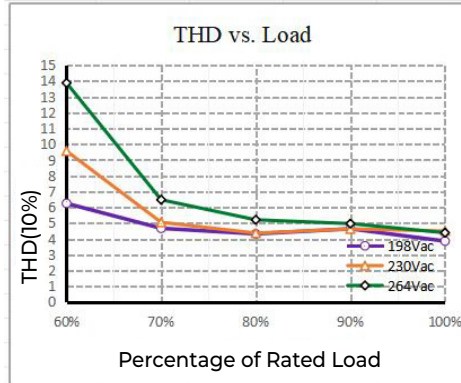
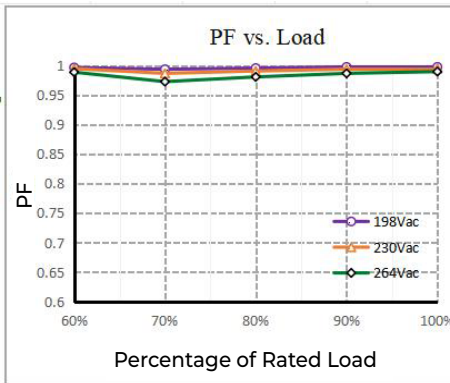
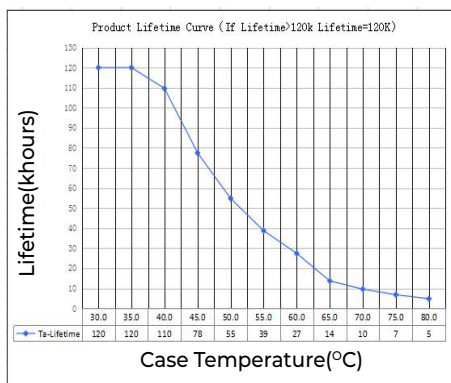
Model No.	Input Current (max)	Input Power (max)	THD	Power Factor	Efficiency	Output Current	Output Voltage	Output Power (max)
ELS42IHIDT8421050N	250mA	49W	<10%	>0.97	>90%	300-1050mA	10-42V	42W

All specifications with 240 VAC are nominal operation and 100% load.

LED Current Selection

Output Current Configurable via NFC		
Output Current	300-800mA	850-1050mA
Output Voltage	10-42V	10-40V
Output Power	3-33.6W	8.5-42W

Graphs

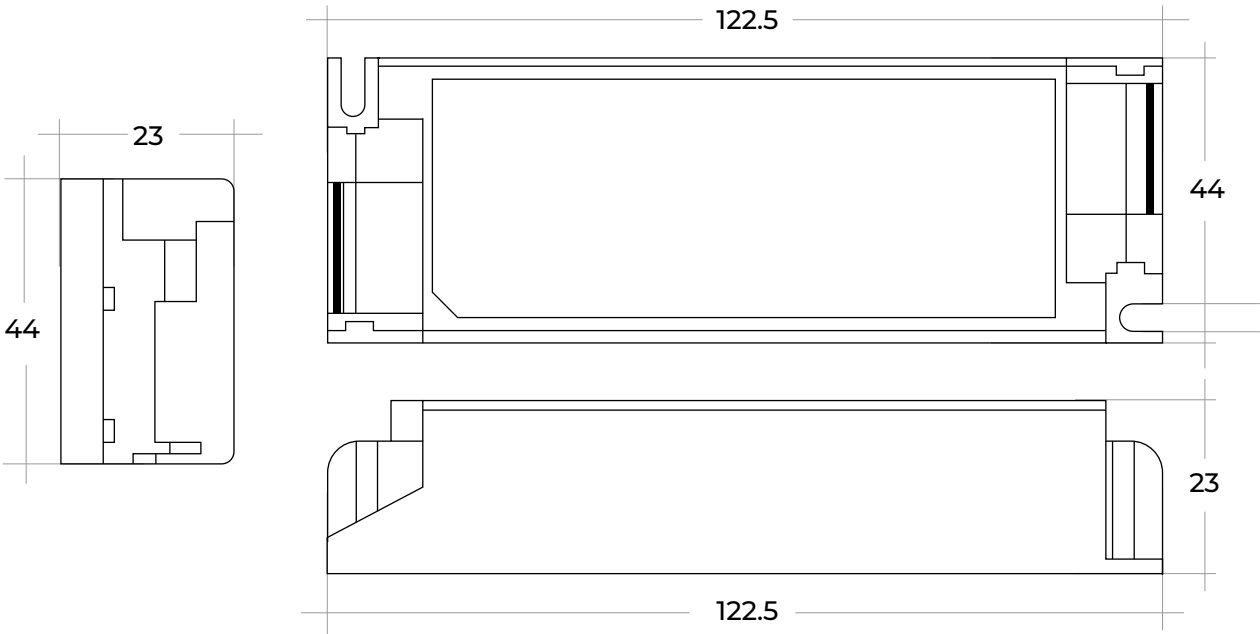


Housing Properties

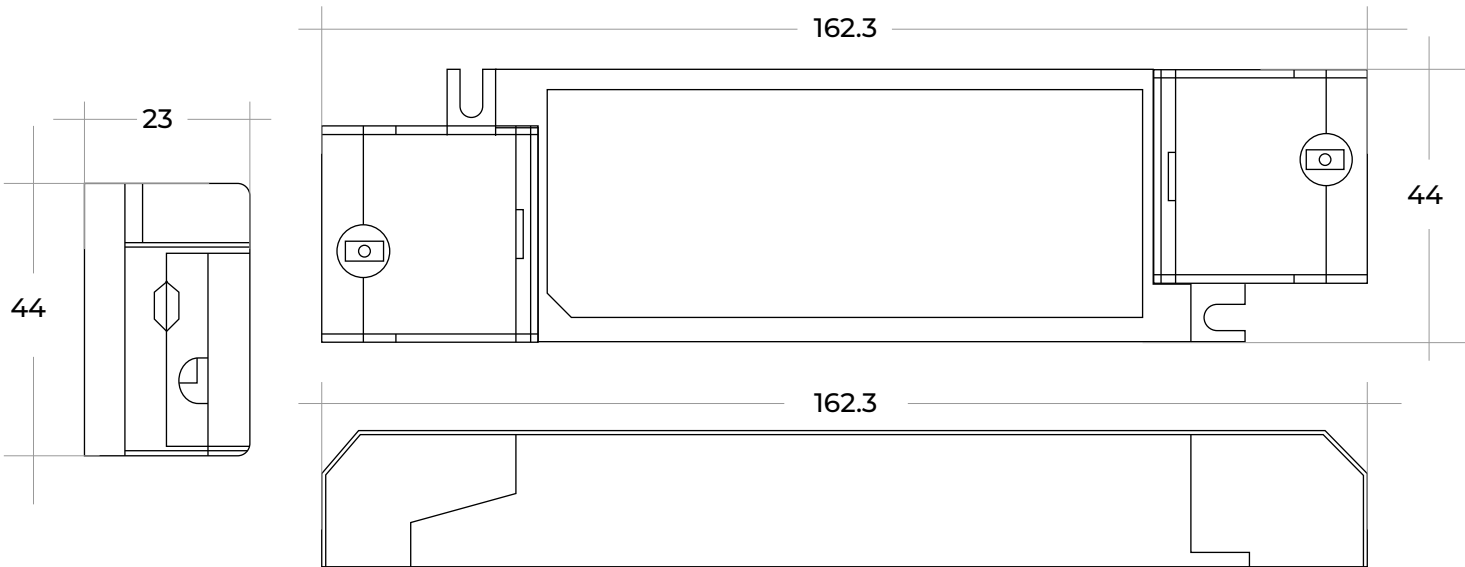
Degree of protection	IP20
Casing	Polycarbonate, White

Housing Dimensions

Built-in Type



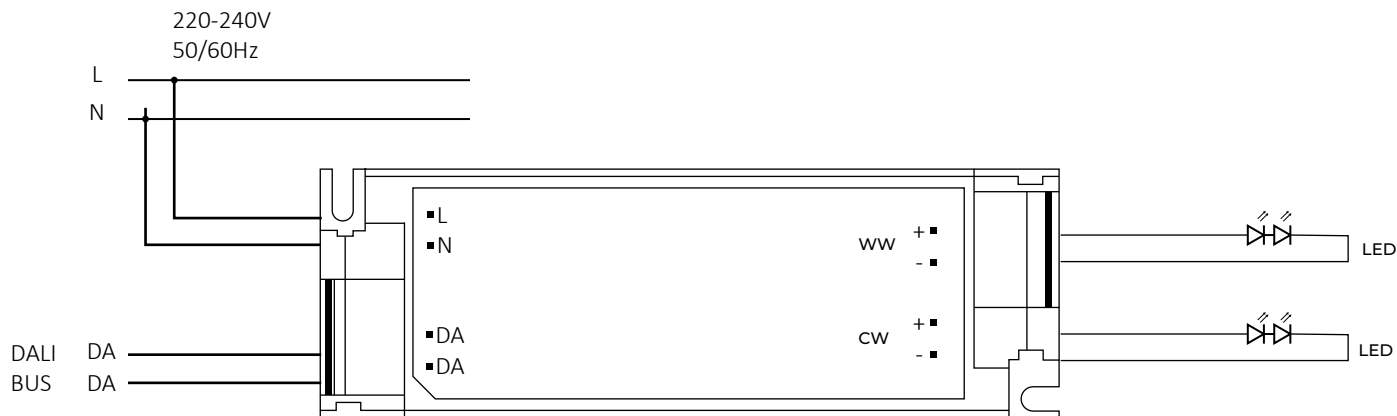
With End Caps



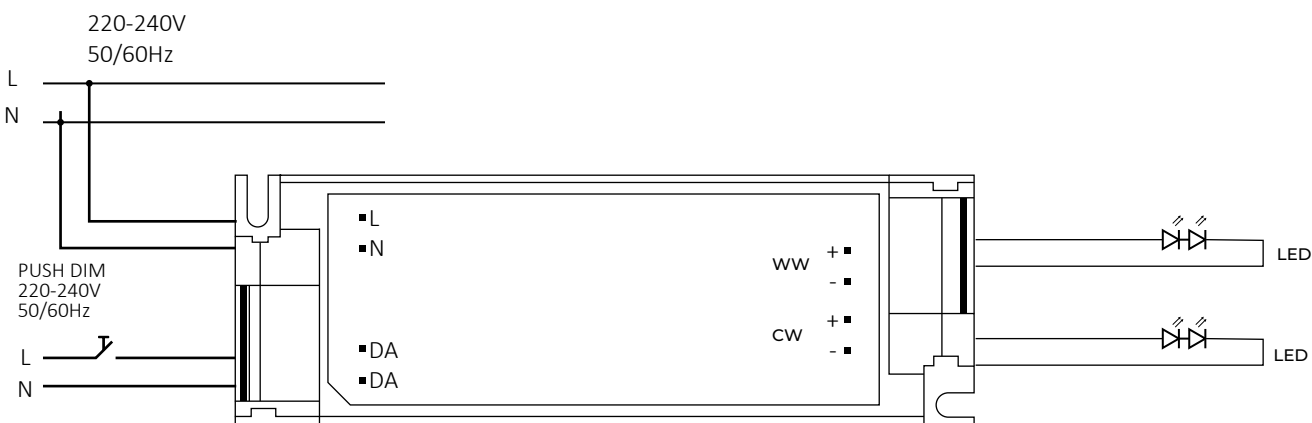
Dimensions (LxWxH)	Built-in - 122.5X44X23
	With End Caps - 162.3X44X23
Tolerance	± 1mm
Weight	170gm

Wiring Diagrams

• DALI Dimming



• PUSH Dimming



PUSH Dim Functions

Action	Action duration	Function
Short push	<0.6s	Turn on/off
Short push five Times	<3s	Quit Corridor mode
Long push	0.6-3s	Dimming up or down
Long push	10s	Sync all LEDs to be 50% brightness, and the dimming rate is changed to 3S
Long push	20s	Dimming rate is changed to 6S
Long push	>2mins	Enter Corridor mode - LED keep 100% brightness for 2mins.

Expected Lifetime

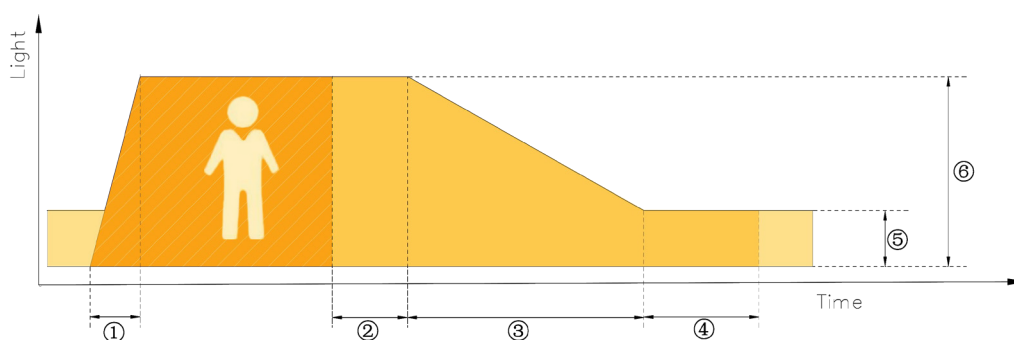
Lifetime	50,000 hours
Warranty	5 years

Logistics Data

Model No.	ELS42IHIDT8421050N
Weight (gm)	170gm

Capabilities

• Compatible with DALI Sensors



Adjustable Parameters:

- Fade-in Time: Time to ramp up to the presence value (default: 1s)
- Run-on Time: Duration the light stays at presence level after motion ends (default: 120s)
- Fade Time: Time to fade from presence to absence value (default: 32s)
- Switch-off Delay: Duration the absence value is held before turning off (configurable or disabled)
- Presence Value: Brightness when motion is detected (default: 100%)
- Absence Value: Brightness when no motion is detected (default: 10%)

This function offers flexible configuration to match specific usage scenarios and optimize lighting behavior in corridors and similar spaces.

• Constant Light Output (CLO)

The CLO function maintains consistent LED brightness over time by compensating for the natural decline in light output. It does this by gradually increasing the LED driver's output current based on a user-defined curve.

Users can define up to eight (time, level) data pairs. The driver then performs linear interpolation between these points to adjust current over the product's lifetime. CLO starts from a limited minimum current set during commissioning.

• Dimming curve

The DALI interface supports two dimming curves: logarithmic (default) and linear.

Users can select the desired dimming behavior based on application requirements, Settings can be changed via Colossus NFC App.