



SPECIFICATION

Product Name: **DALI 2 Dimmable LED driver**

Model No.: **KL40C-PDiiV1**

Issue Date: **January 6, 2025**

CUSTOMER APPROVED	

Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	KL40C-PDiiV1 LED driver		Design verification	2019-11-08
A1	KL40C-PDiiV1 LED driver	fix bug		2023-06-08
A2	KL40C-PDiiV1 LED driver	fix bug		2023-09-20
A3	KL40C-PDiiV1 LED driver	Change the logo		2024-09-07
A4	KL40C-PDiiV1 LED driver	Update Automatic circuit breaker		2025-01-06

Specification for DALI 2 Dimmable LED Driver KL40C-PDiiV1 C.C.



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- Secondary dimming with 1-10V dimmer and potentiometer
- Built-in DALI interface DT6
- Supports 10V PWM dimming (3KHz-8KHz)
- Protection: short circuit / over temperature/ over voltage
- Derating current for over high ambient temperature
- Push dim with memory function
- 5 year warranty

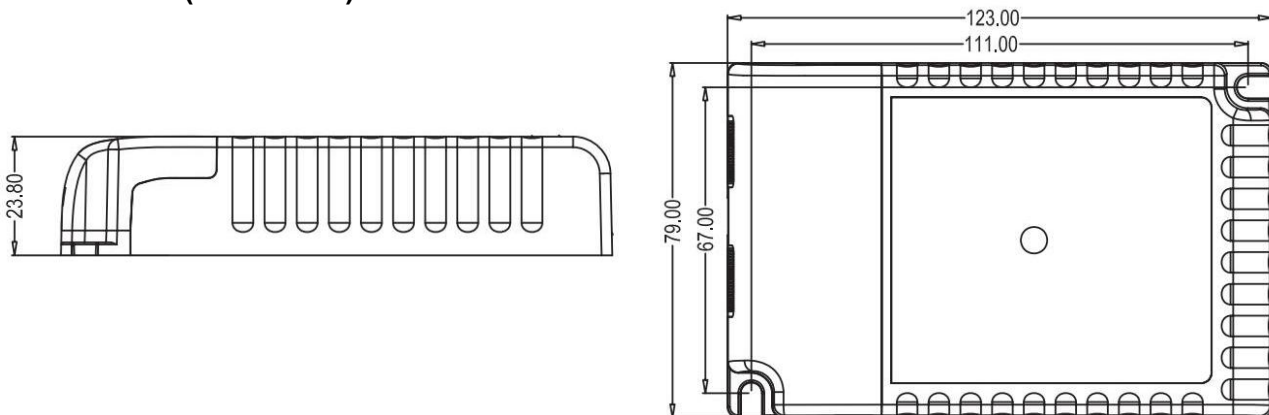
1. Parameters

Input	Operating Voltage	198-264VAC 50Hz /60Hz						
	Rated Input Voltage	220-240VAC 50Hz /60Hz						
	DC Input Voltage range	200-240VDC						
	Input Current	0.22A Max.						
	Input Inrush Current	<15A (Half current pulse width 100US) @230VAC						
	Power Factor	≥0.95 @230VAC (Full load)						
	Total harmonic distortion	Typical: 13% (@230Vac, 100% load)						
	Stand-by Power	≤0.5W (@230Vac when PUSH or DALI turn off)						
	Efficiency	86%Max. @230VAC (Full load)						
	Wiring Method	Push terminal, wire cross section:0.75-1.5mm ²						
	Automatic circuit breaker (Calculate current in the wire)	type	B10	B13	B16	B20	B25	/
		Number	20	25	30	45	50	/
type		C10	C13	C16	C20	C25	C32	
Number		35	48	55	70	90	110	
Output	Operating mode	Constant Current						
	Load type	LED						
	Flickering / Flickering-Free	Flicker value: less than 2% for whole dimming range						
	Start up time	<1s (@230Vac)						
	No-load output voltage	68VDC Max.						
	Load output voltage range	9-57VDC						
	Full load output power	40W Max.						
	Load output current	700~1200mA : For details<Current gear setting>						
	Constant current/voltage Precision	Constant Current Precision ±5%						
	Wiring method	Push terminal, wire cross section:0.75-1.5mm ²						

Control Method	Primary PUSH Dimming	Primary PUSH dimming (Max.lead length: 20M)
	1-10V Dimming	1-10V dimming (Port current<1MA) (Max.lead length: 20M)
	Dimming Range	Primary PUSH & DALI dimming: 0%-100% 1-10V dimming: 2%-100%
	Primary PWM Dimming	1-10V port PWM dimming (3KHZ-8KHZ)
	Potentiometer	Yes, 100kΩ
	DALI Dimming	DALI dimming (Max.lead length: 300M)
Exception Protection Requirements	Output over temperature protection	Yes, without self recovery function (Can be inquired)
	Output short circuit protection	Yes, without self recovery function (Can be inquired)
Operating Environment	Operating temperature/ humidity	-25℃~50℃ Humidity:85% (Non-condensing)
	Storage temperature/ humidity	-40℃~80℃, Humidity:10% - 95%
	Max. case temp (Tc)	85℃
Safety & EMC	EMC standard	EN55015 EN61547 EN61000-3-2 EN61000-3-3
	DALI protocol standard	IEC62386-102 IEC62386-207 DT6
	Safety standard	EN61347-1 EN61347-2-13
	Certification	ENEC SEMKO CB CE
	Withstand voltage	3750Vac, 5mA, 60s (Input "L N"- Output "SEC")
Others	Degrees of protection	IP20
	Type of protection	Class II
	Installation type	Independent installation
	Installation dimension	123*79*24mm
	Blackout memory function	Yes, PUSH blackout memory
	PUSH dimming synchronization	15 units Max.
	Packaging requirement	white box+ Instructions Clapboard Outer Carton (K=A)
	Weight	162g
	Life	5 years guarantee @Ta full load

Note: All parameters are tested at the input voltage of 230Vac and 25 degree environment unless specified.

2. Dimension (Unit: mm)



Shenzhen Merrytek Technology Co.,Ltd

No.17th Building, Dianda Guyuan Industrial Park, Mashantou, Matian, Guangming District, Shenzhen, China, 518106

Tel: +86 (0)755-2305 7253

Fax: +86 (0)755-2786 3012

Website: www.merrytek.com

3. Wiring Diagram

Fig. A Push Dimming

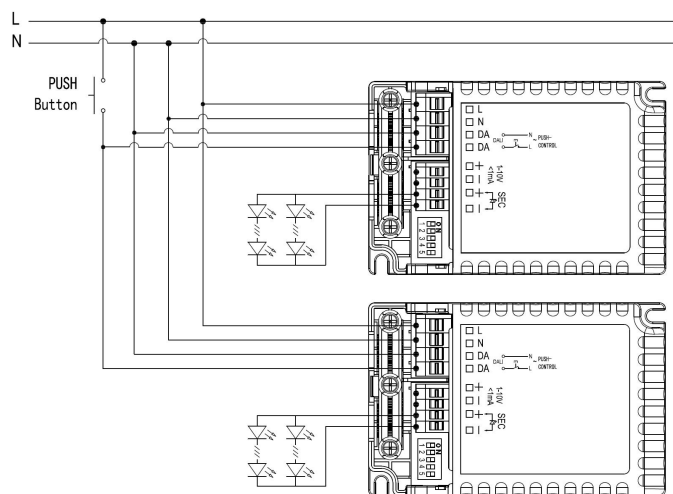


Fig.B DALI Dimming

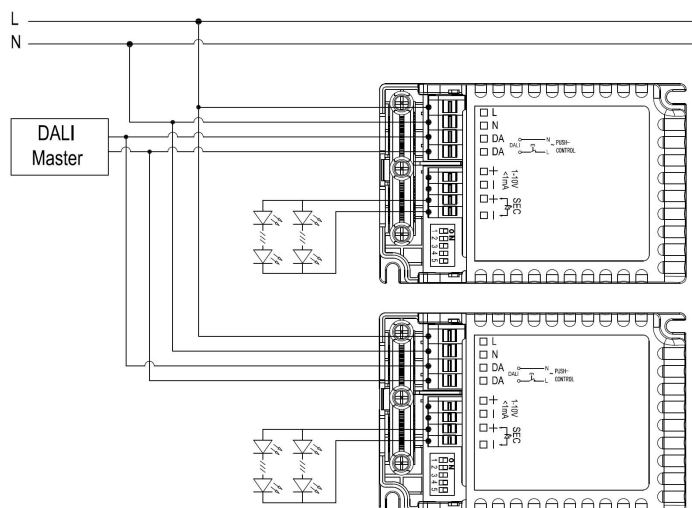
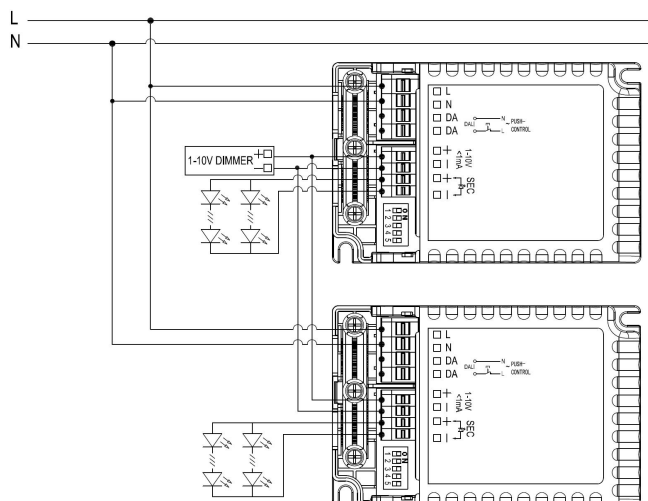
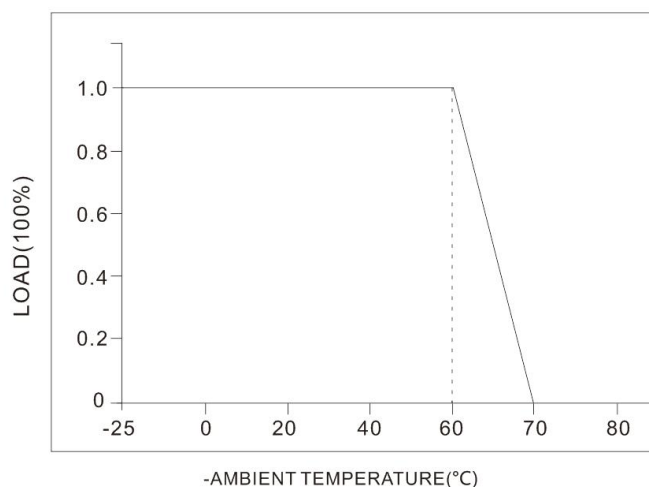


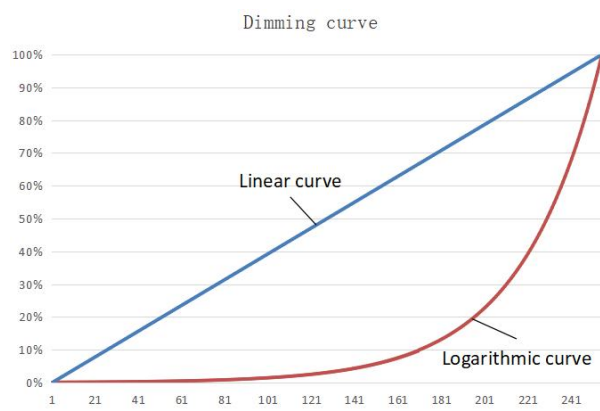
Fig. C 1-10V Dimming



4. Derating



5. Dimming curve



6. Current gear setting:

Current(mA)	DIP				Pomax (W)	Uout (V)
	1	2	3	4		
700	—	—	—	—	39.9	9~ 57
750	ON	—	—	—	40.5	9~ 54
800	—	ON	—	—	40.0	9~ 50
850	ON	ON	—	—	39.9	9~ 47
900	ON	—	ON	—	40.5	9~ 45
950	—	ON	ON	—	39.9	9~ 42
1000	ON	ON	ON	—	40.0	9~ 40
1050	—	—	ON	ON	39.9	9~ 38
1100	ON	—	ON	ON	39.6	9~ 36
1150	—	ON	ON	ON	40.3	9~ 35
1200	ON	ON	ON	ON	39.6	9~ 33

7. ON/OFF & Description of Dimming Operation

- A. Short press the PUSH switch (short press time 0.1S-1S), the LED driver will turn on or off.
- B. Dimming: Press and hold the PUSH switch (1S-8S), the LED driver can achieve dimming, brightening or dimming, the dimming range is 2-100%.
- C. Memory: PUSH dimming has dimming memory function.
- D. Dimming synchronization: The power connected to the same PUSH switch can be synchronized by pressing and holding the PUSH switch for longer than 15S
- E. DALI dimming mode: Connect the power supply to the DALI system, and it can be dimmed by the DALI host. The dimming range is 0-100%.

8. matters needing Attention

- 1) The LED string must be connected to the load before turning on the input power, otherwise the LED string may be damaged.
- 2) After the LED drive input is powered off, there will be a residual voltage at the output, which can be maintained for about 3 minutes.