

SPECIFICATION

Product Name:	DALI 2 DIMMADIE LED GRIVER			
Model No.:	KL25C-PDiiV			
Issue Date:	January 6, 2025			
С	USTOMER APPROVED			



Shenzhen Merrytek Technology Co.,Ltd.

Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	KL25C-PDiiV LED driver		Design verification	2024-06-05
A1	KL25C-PDiiV LED driver	Update Automatic circuit breaker		2025-01-06



Specification for DALI 2 Dimmable LED Driver KL25C-PDiiV C.C.



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- 1-10V dimming function
- Built-in DALI interface DT6
- Protection: short circuit / over temperature/ over voltage
- Derating current for over high ambient temperature
- Push dim with memory function

1. Parameters

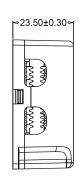
Rated supply voltage		Voltage range	198~264Vac 50Hz/60Hz						
Input current		Rated supply voltage	220~240Vac 50Hz/60Hz						
Inrush Current 8A (Half current pulse width 50us) @230VAC		DC voltage range	200~240Vdc						
Power factor >0.95 (@230Vac, 500mA/45Vdc, 100% load)		Input current	0.14A Max.@230Vac						
Total harmonic distortion		Inrush Current	8A (Half current pulse width 50us) @230VAC						
Stand-by power \$0.5W		Power factor	≥0.95 (@230Vac, 500mA/45Vdc, 100% load)						
Efficienc (@230Vac,100% load) 86%Max		Total harmonic distortion	Typical: 20% (@230Vac, 100% load)						
Wiring method	Input	Stand-by power	≤0.5W						
Loop-in&Loop-out quantity 30PCS (@230Vac)		Efficienc (@230Vac,100% load)	86%Max						
Automatic circuit breaker (Calculate current in the wire) type		Wiring method	Push terminal, wire cross section:0.75-1.0mm ²						
Automatic circuit breaker (Calculate current in the wire) Variable Varia		Loop-in&Loop-out quantity	30PCS (@230Va	;)				
Calculate current in the wire type			type	B10	B13	B16	B20	B25	1
Number 55 65 75 110 130 160		Automatic circuit breaker	Number	25	35	45	50	65	1
Operating mode Load type LED Flickering / Flickering-Free Start up time Load output voltage range Load output voltage range Load output current Full load output power No load output voltage Viring method Tentrol Method Output Control Dimming Range Constant current LED Flickering-Free Flickering-Free Flickering-Free Flickering-Free Flickering-Free Flickering-Free Flickering-Free Start up time 150 (@230Vac) 9-58Vdc Load output voltage range 150mA(9-58Vdc), 350mA(9-58Vdc), 550mA(9-45Vdc) 25W Max. 72Vdc Max. Push terminal, wire cross section:0.75-1.0mm² Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100%		(Calculate current in the wire)	type	C10	C13	C16	C20	C25	C32
Control Method Load type Load type LED Flickering / Flickering-Free Start up time <1s (@230Vac) 9-58Vdc Load output voltage range 150mA(9-58Vdc) ,350mA(9-58Vdc), 550mA(9-45Vdc) Full load output power 25W Max. No load output voltage 72Vdc Max. Output Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100%			Number	55	65	75	110	130	160
Plickering / Flickering-Free Flickering-Free Start up time		Operating mode	Constant current						
Start up time <1s (@230Vac) Load output voltage range 9-58Vdc Load output current 150mA(9-58Vdc) ,350mA(9-58Vdc), 550mA(9-45Vdc) Full load output power 25W Max. No load output voltage 72Vdc Max. Output 25W Max. Output current/voltage tolerance ±5% Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100%		Load type	LED						
Output Load output voltage range 9-58Vdc Load output current 150mA(9-58Vdc), 350mA(9-58Vdc), 550mA(9-45Vdc) Full load output power 25W Max. No load output voltage 72Vdc Max. Output Uitput current/voltage tolerance Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100%		Flickering / Flickering-Free	Flickering-Free						
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Full load output power No load output voltage Output Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100% Primary PUSH & DALI dimming: 0%-100%	Output	Load output voltage range	9-58Vdc						
No load output voltage 72Vdc Max. Output		Load output current	150mA(9-58Vdc) ,350mA(9-58Vdc), 550mA(9-45Vdc)						
Output Output current/voltage tolerance ±5% Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100% Primary PUSH & DALI dimming: 0%-100%		Full load output power	25W Max.						
Output Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100% Primary PUSH & DALI dimming: 0%-100%		No load output voltage	72Vdc Max.						
Wiring method Push terminal, wire cross section:0.75-1.0mm² Primary PUSH Dimming Primary PUSH dimming (Max. lead wire length: 20m) Primary PUSH & DALI dimming: 0%-100% Dimming Range	0.1.1	Output current/voltage tolerance	±5%						
Control Primary PUSH & DALI dimming: 0%-100% Method Dimming Range	Output	Wiring method	Push terminal, wire cross section:0.75-1.0mm ²						
Method Dimming Range Primary PUSH & DALI dimming: 0%-100%	Comtral	Primary PUSH Dimming	Primary PUSH dimming (Max. lead wire length: 20m)						
		Dimming Range							

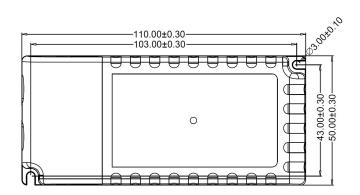


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	DALI function	DALI dimming (Max. lead wire length: 300m)				
Control	1-10V Dimming	1-10V				
Method	Output auxiliary power port	12Vdc, 0.1A Max.				
	Sensor Dimming port	1-10V				
Exception Protection	Output over temperature protection	Yes, reset power on to recover				
Requirements	Output short circuit protection	Yes, reset power on to recover				
	Operating temperature/ humidity	-25°C~50°C Humidity:85% (Non-condensing)				
Operating Environment	Storage temperature/ humidity	-40℃~80℃, Humidity:10% - 85% (Non-condensing)				
Environment	Max. case temp(Tc)	85℃				
	EMC standard	EN55015, EN61547, EN61000-3-2, EN61000-3-3				
	DALI standard	IEC62386-102, IEC62386-207				
Safety	Safety standard	EN61347-1, EN61347-2-13				
& EMC	Certification	CE				
		3750Vac, 5mA, 60s (Input "L N"- Output "SEC")				
	Withstand voltage	1500Vac, 5mA, 60s (Input "L N"- "PE")				
		500Vac, 5mA, 60s (Input "PE"- Output "SEC")				
	Degrees of protection	IP20				
	Type of protection	Class I				
	Installation type	Independent installation				
	Installation dimension	110*50*23.5mm				
Others	Memory function	Yes, (PUSH with memory function)				
	PUSH dimming synchronization	15 units Max.				
	Packaging requirements	PE bag + white-box + Instruction+clapboard+outer carton (K=A)				
	Weight	140±5g				
	Life	5 years @Ta 100% load				
Note: All parame	eters are tested at the input voltage	of 230Vac and 25 degree environment unless specified.				

2. Dimension (Unit: mm)







3. Wiring Diagram

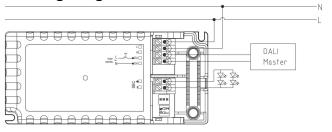


Fig. A DALI Dimming

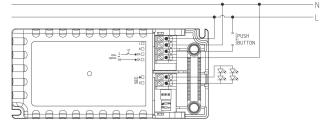
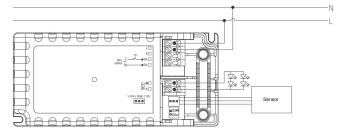


Fig.B Push Dimming



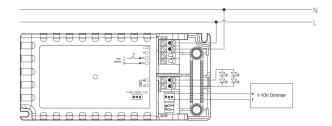
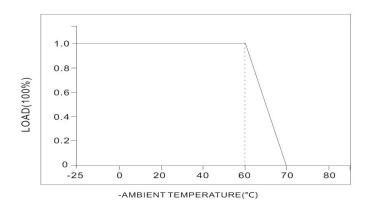
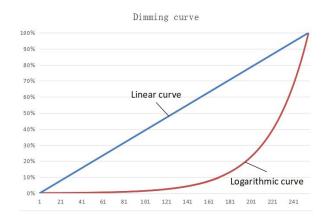


Fig. C Sensor or 1-10V Dimming

4. Derating



5. Dimming curve





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6. Current gear setting: ●: ON O: OFF

Current gear setting	1	2
550mA (9-45Vdc)	•	•
350mA (9-48Vdc)	•	0
150mA (9-48Vdc)	0	0

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.