

SPECIFICATION

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

Model No.: **KL60C-PDii; KL90C-PDii;**
 KL120C-PDii; KL150C-PDii;

Issue Date: **April 23, 2025**

CUSTOMER APPROVED

Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	NO ISO series		Design verification	2021-03-01
A1	NO ISO series	Add 150W, under design.		2021-09-24
A2	NO ISO series	Change wire diameter		2022-09-20
A3	NO ISO series	Change the logo		2024-08-17
A4	NO ISO series	Update Automatic circuit breaker		2025-01-06
A5	NO ISO series	Fix bug		2025-04-23

Specification for DALI 2 Dimmable LED Driver C.C. NO ISO series



- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Primary dimming with push button
- Built-in DALI interface DT6
- 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	NO ISO series	KL60C-PDii	KL90C-PDii	KL120C-PDii	KL150C-PDii			
	Operating Voltage	198-264VAC 50Hz /60Hz						
	Rated Input Voltage	220-240VAC 50Hz /60Hz						
	DC Input Voltage range	176-280VDC						
	Input Current	0.33A Max.	0.4A Max.	0.6A Max.	0.75A Max.			
	Input Inrush Current	<25A (Half current pulse width 100US) @230VAC						
	Power Factor	≥0.95 @230VAC （Full load）						
	Total harmonic distortion	Typical: 15% （@230Vac, 100% load）						
	Stand-by Power	≤0.5W （@230Vac when PUSH or DALI turn off）						
	Efficiency	93%Max. @230VAC （Full load）						
	Wiring Method	Push terminal, wire cross section:0.5-1.5mm ²						
	Automatic circuit breaker	KL60C-PDii (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	15	20	25	28	30	/
		type	C10	C13	C16	C20	C25	C32
		Number	23	32	38	48	60	75
		KL90C-PDii (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	10	15	15	20	25	/
		type	C10	C13	C16	C20	C25	C32
		Number	15	20	25	32	40	50
		KL120C-PDii (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	10	12	15	18	20	/
		type	C10	C13	C16	C20	C25	C32
		Number	12	16	20	25	30	40
		KL150C-PDii (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	8	10	12	15	18	/
		type	C10	C13	C16	C20	C25	C32
Number		10	13	16	20	25	32	

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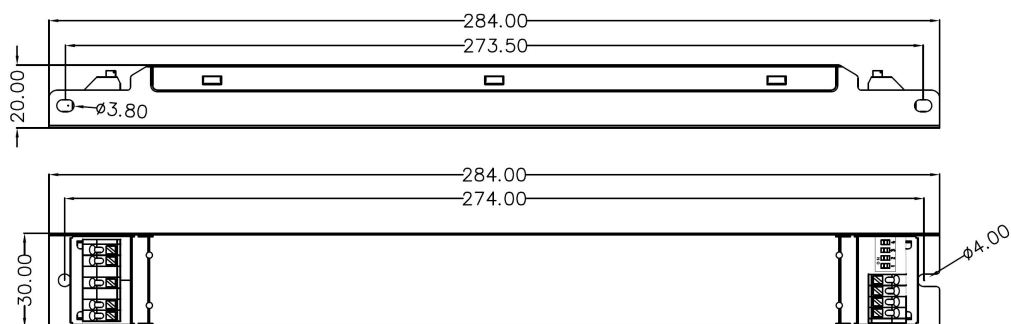
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Website: www.merrytek.com

Output	Operating mode	Constant Current			
	Load type	LED			
	Ripple requirement (Flickering or flickering-Free)	Flicker value: less than 2% for whole dimming range			
	Start up time	<1s (@230Vac)			
	No-load output voltage	430VDC Max.			
	Load output voltage range	80-300VDC	80-300VDC	80-300VDC	120-300VDC
	Full load output power	60W Max.	90W Max.	120W Max.	150W Max.
	Load output current	200mA(80-300V) 250mA(80-240V) 300mA(80-200V) 350mA(80-170V) 400mA(80-150V) 450mA(80-133V) 500mA(80-120V)	300mA(80-300V) 350mA(80-258V) 450mA(80-200V) 500mA(80-180V) 550mA(80-164V) 650mA(80-139V) 700mA(80-129V)	300mA(80-330V) 350mA(80-330V) 450mA(80-266V) 500mA(80-240V) 550mA(80-219V) 650mA(80-185V) 700mA(80-172V)	500mA(80-300V) 600mA(80-250V) 700mA(80-214V) 800mA(80-187V) 900mA(80-166V) 1000mA(80-150V)
	Constant current/voltage Precision	Constant Current Precision $\pm 5\%$			
	Wiring method	Push terminal, wire cross section:0.5-1.5mm ²			
Control Method	Primary PUSH Dimming	Primary PUSH dimming (Max.lead length: 20M)			
	Dimming Range	Primary PUSH & DALI dimming: 0%-100%			
	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	CE			
	Mains surge capability	1kV (@“L - N”) ; 2kV (@“L/N - PE”)			
Others	Degrees of protection	IP20			
	Type of protection	Class I			
	Installation type	Independent installation			
	Installation dimension	284x30*20mm			
	Blackout memory function	Yes, PUSH blackout memory			
	PUSH dimming synchronization	15 units Max.			
	Packaging requirement	white box+ Instructions Clapboard Outer Carton (K=A)			
	Weight	200g	220g	260g	270g
	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)



3. Wiring Diagram

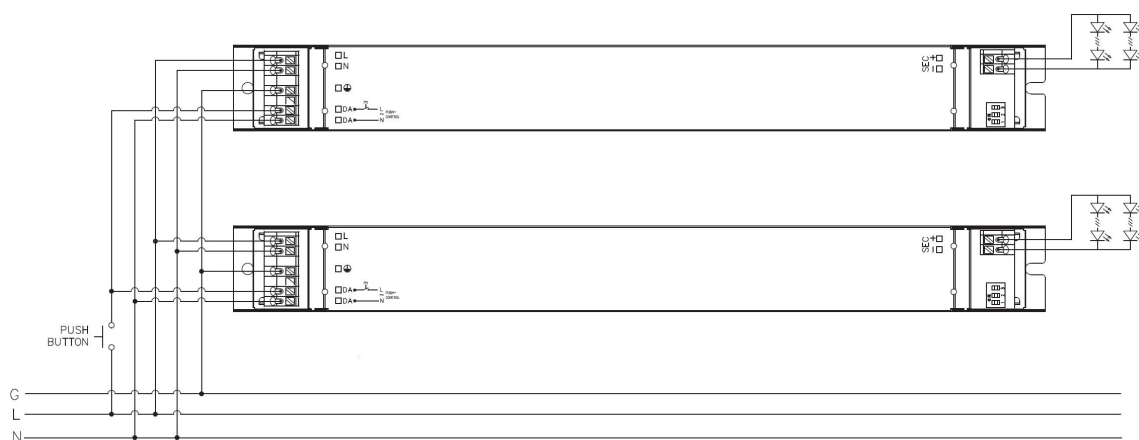


Fig. A Push Dimming

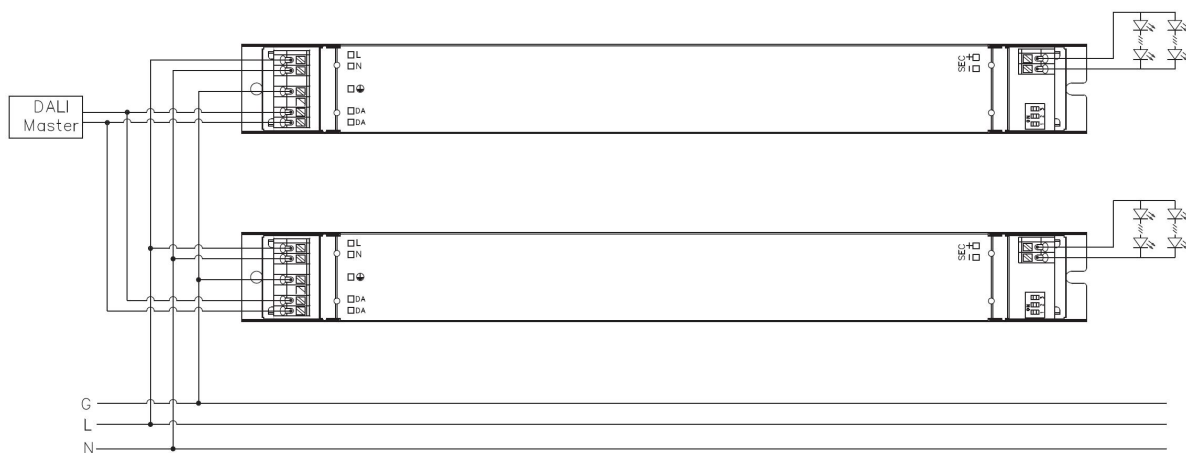
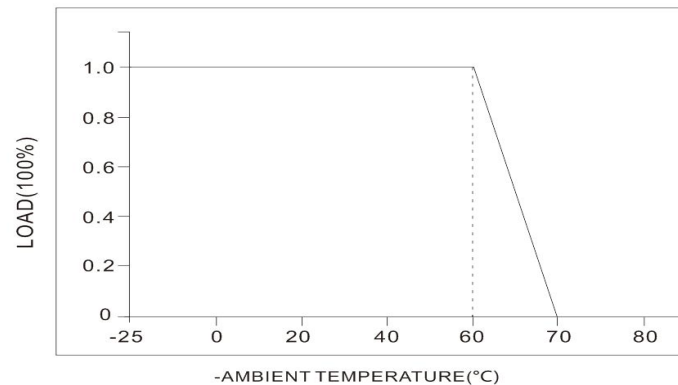
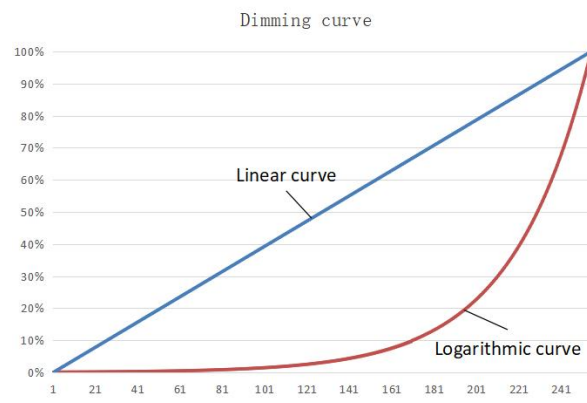


Fig.B DALI Dimming

4. Derating



5. Dimming curve



6. Current gear setting ●:ON ○:OFF (SEC1 SEC2)

1	2	3	KL60C-PDii	KL90C-PDii	KL120C-PDii	KL150C-PDii
–	–	–	200mA(80-300V)	300mA(80-300V)	300mA(80-330V)	500mA(80-300V)
ON	–	–	250mA(80-240V)	350mA(80-258V)	350mA(80-330V)	600mA(80-250V)
–	ON	–	300mA(80-200V)	450mA(80-200V)	450mA(80-266V)	700mA(80-214V)
ON	ON	–	350mA(80-170V)	500mA(80-180V)	500mA(80-240V)	800mA(80-187V)
ON	–	ON	400mA(80-150V)	550mA(80-164V)	550mA(80-219V)	–
–	ON	ON	450mA(80-133V)	650mA(80-139V)	650mA(80-185V)	900mA(80-166V)
ON	ON	ON	500mA(80-120V)	700mA(80-129V)	700mA(80-172V)	1000mA(80-150V)

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.
- 3) When the LED light board is aluminum substrate and access ground wire, there will be glow phenomenon after power off.