



SPECIFICATION

Product Name: **Tuya Bluetooth Dimmable LED driver**

Model No.: **ML20C-B; ML20CC-B;**
 ML46C-B; ML46CC-B;

Issue Date: **January 6, 2025**

CUSTOMER APPROVED	



Version	Product Name / Product Model	Reason / content for change	Stage	Date
A0	Tuya Bluetooth LED driver		Design verification	2024-11-14
A1	Tuya Bluetooth LED driver	Update Automatic circuit breaker		2025-01-06

Specification for Tuya Bluetooth Dimmable LED Driver series C.C.



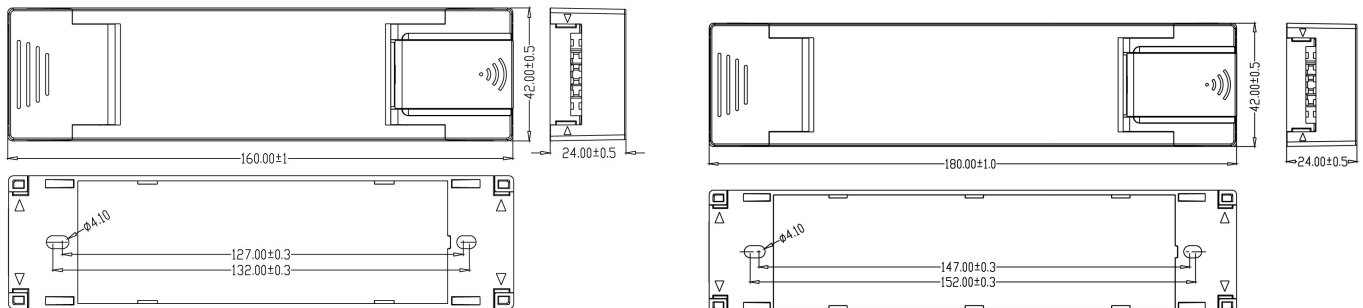
- Built-in Tuya Bluetooth module
- Flicker-free for whole dimming range
- Stand-by power below 0.5W
- Protection: short circuit / over voltage
- 5 year warranty

1. Parameters

	Series	ML20C-B	ML20CC-B	ML46C-B	ML46CC-B			
Input	Operating Voltage	198-264VAC 50Hz /60Hz						
	Rated Input Voltage	220-240VAC 50Hz /60Hz						
	DC Input Voltage range	200-240VDC						
	Input Current	0.13A Max.	0.12A Max.	0.26A Max.	0.26A Max.			
	Input Inrush Current (Half current pulse width 100US) @230VAC	<15A		<30A				
	Power Factor	≥0.95 @230VAC (Full load)						
	Total harmonic distortion	Typical: 15% (@230Vac, 100% load)						
	No-load power	≤0.5W						
	Stand-by Power	≤0.5W (@230Vac)						
	Efficiency (@230VAC Full load)	84%Max.		88%Max.				
	Wiring Method	Push terminal, wire cross section:0.5-2.5mm ²						
	Automatic circuit breaker	ML20C-B, ML20CC-B (Calculate current in the wire)						
		type	B10	B13	B16	B20	B25	/
		Number	25	35	45	55	65	/
		type	C10	C13	C16	C20	C25	C32
		Number	60	70	80	110	130	160
		ML46C-B, ML46CC-B (Calculate current in the wire)						
type		B10	B13	B16	B20	B25	/	
Number		20	25	30	40	50	/	
type		C10	C13	C16	C20	C25	C32	
Number		30	43	50	60	80	100	
Output	Operating mode	Constant Current						
	Load type	LED						
	Ripple requirement (Flickering or flickering-Free)	Flicker value: less than 5% for whole dimming range						
	Start up time	<1s (@230Vac)						

Output	No-load output voltage	60VDC Max.	65V DC Max.	70V DC Max.	70V DC Max.
	Load output voltage range	9-42VDC	9-50V DC	9-53VDC	9-53VDC
	Full load output power	20W Max.	20W Max.	46W Max.	46W Max.
	Load output current	300-700mA	250-400mA	600-1050mA	700-1050mA
	Constant current/voltage Precision	Constant Current Precision ±5%			
	Wiring method	Push terminal, wire cross section:0.5-1.5mm ²			
Control Method	Working frequency	5.0/2.4GHz 250Kbps			
	Transmitting power	+10dBm (Max.)			
	Transmission distance	>20m (Visible distance)			
Exception Protection Requirements	Output over voltage protection 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℃~45℃ 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			
	Safety standard	EN61347-1 EN61347-2-13			
	Certification	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			
	Dimension	160*42*24mm		180*42*24mm	
	Packaging requirement	PE bag+Clapboard+Outer Carton (K=A)			
	Weight	109±5g	118±5g	145±5g	145±5g
	Life	5 year @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

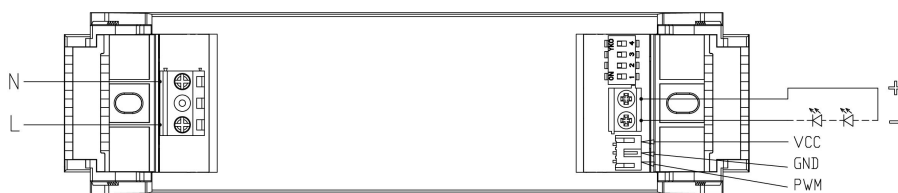


Fig.A Single output version



Fig.B Dual output version

4. Current gear Setting:

ML20C-B Current gear setting	1	2	3	4
300mA (9-42V)	-	-	-	-
350mA (9-42V)	-	-	-	ON
400mA (9-42V)	-	-	ON	-
450mA (9-42V)	-	-	ON	ON
500mA (9-40V)	-	ON	ON	-
550mA (9-36V)	-	ON	ON	ON
600mA (9-32V)	ON	-	ON	ON
650mA (9-30V)	ON	ON	ON	-
700mA (9-28V)	ON	ON	ON	ON

ML46C-B Current gear setting	1	2	3	4
600mA (9-53V)	-	-	-	-
650mA (9-53V)	-	-	-	ON
700mA (9-53V)	-	-	ON	-
750mA (9-53V)	-	-	ON	ON
800mA (9-53V)	-	ON	-	ON
850mA (9-53V)	-	ON	ON	-
900mA (9-50V)	ON	ON	-	-
950mA (9-48V)	ON	ON	-	ON
1000mA (9-46V)	ON	ON	ON	-
1050mA (9-44V)	ON	ON	ON	ON

ML20CC-B Current gear setting	Channel 2	1	2
	Channel 1	3	4
250mA (9-50V)		-	-
300mA (9-50V)		-	ON
350mA (9-50V)		ON	-
400mA (9-50V)		ON	ON

ML46CC-B Current gear setting	Channel 2	1	2	3
	Channel 1	4	5	6
700mA (9-53V)		-	-	-
750mA (9-53V)		-	-	ON
800mA (9-53V)		-	ON	-
850mA (9-53V)		-	ON	ON
900mA (9-50V)		ON	-	-
950mA (9-48V)		ON	-	ON
1000mA (9-46V)		ON	ON	-
1050mA (9-44V)		ON	ON	ON

5. Matters Needing Attention

- 1) When the LED lamp is connected to the LED driver, it is not allowed to disconnect and connect the LED lamp and the LED driver, otherwise the LED lamp may be damaged..
- 2) When using this product, please use it in accordance with the specifications. Failure may occur if it is used beyond the conditions of use of this product.
- 3) When using this product for networking, the same floor must be equipped with at least one gateway (horizontal transmission communication > 20 meters). If the same gateway is used on different floors, the communication is prone to abnormal situations such as code loss.
- 4) The Bluetooth module is assembled on the output side cover, which can be adjusted from 0-90 degrees for better communication.