

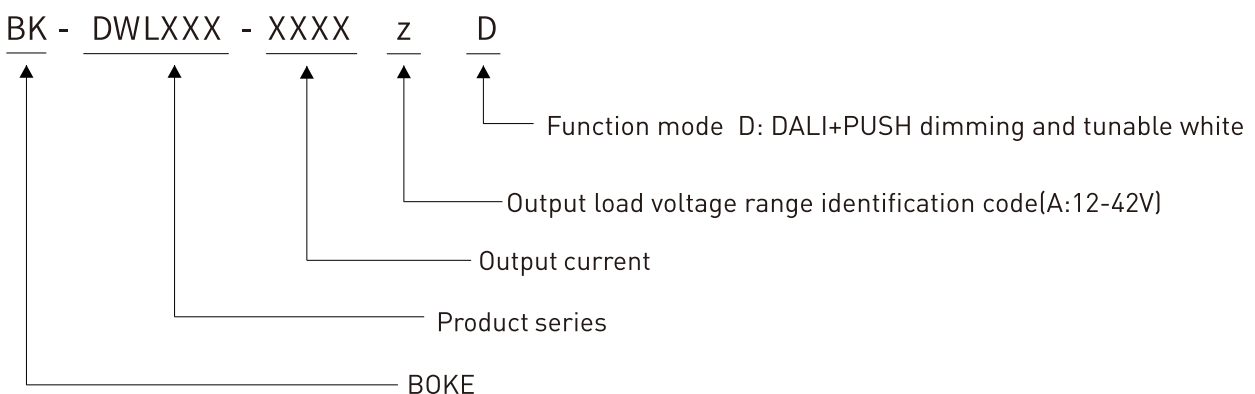
Features & advantages

- Dimmable constant current 2-channel LED driver with DALI DT8
- Support DALI dimming and tunable white function
- Support PUSH dimming and tunable white function
- Color temperature tuning is stepless and small tolerance
- Dimming range 1 to 100%
- Patent technology,output current accuracy is 1%.
- Flicker-free at any brightness, meeting the standard of Flicker-free(IEEE Std-1789-2015)
- Power input on stand-by <0.3W,turn on delay time <0.5s,compatible with ERP.
- Support LED hot-plug in protection function, support LED over-power protection function
- Compatible with ENEC TUV-CE RCM CCC DALI
- 5 years warranty

APPLICATION

- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED commercial lighting

MODEL CODE



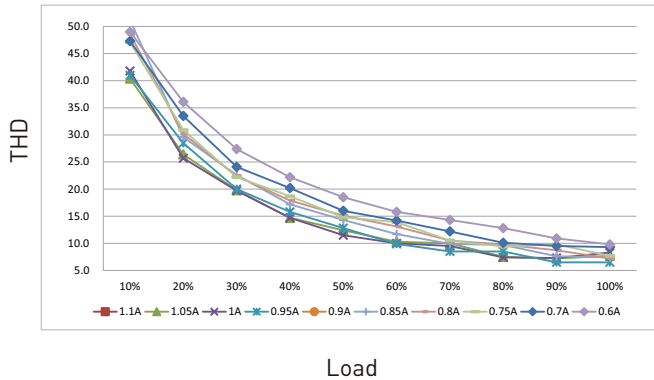
ELECTRICAL SPECIFICATION

MODEL	BK-DWL042-1050AD
OUTPUT	
Output current	0.6-1.05A
Output current ADJ. method	DIP S.W(10 level)
Output voltage range	12-42V
Output power	42W Max
Voltage ripple & noise (note.2)	≤200mV(Vpp)
Current ripple & noise (note.2)	≤10mA(RMS)
Output current accuracy	±1%
Linear regulation	±20mA
Load regulation	±20mA
No-load output voltage	50V
INPUT	
Rated input voltage	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Frequency range	47-63Hz
Power factor	>0.95 @230VAC & full load , >0.90 @230VAC & full load>50%
Total harmonic distortion	<10% @230VAC & full load , <20% @230VAC & full load>50%
Efficiency(Typ.)	88%
Standby power (note.3)	<0.5W
Input current	<0.3A
Inrush current(cold start)	See data table for details
Max. drivers under the MCB	See data table for details
Power on delay	<0.5s
DIMMING CONTROL FUNCTION	
DALI dimming	input voltage:9.5V to 22.5V,type 16V,current consumption:1.7mA
PUSH dimming	input voltage:180-264V 47-63Hz
Dimming method	Built-in DALI+PUSH dimming and color temperature,Automatic switch
Dimming range	1-100%
PROTECTION	
Short circuit	Hiccup,recovers automatically after environment temperature declines.
LED hot-plug in protection function	Hot plugging the LED when the driver is powered, the driver will turn off the output.
LED over power protection	When the LED string voltage exceeds the output voltage range, the drive will turn off the output.
ENVIROHMENT	
Operation temperature	-20-50°C
Operation humidity	10-90% RH,non-condensing
Storage temperature/humidity	-25-80°C,5-95% RH,non-condensing
IP class	IP20
Vibration	10-500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes
Tc [note.4]	Tc=85°C(Ta=50°C)
MTBF	500000H,MIL-HDBK-217F(25°C)
Life time	See life time curve table for details
Environmental protection	RoHS
EMC	
EMC emission (note.5)	EN55015,GB17743,EN61000-3-2 Class C,EN61000-3-3
EMC immunity	EN61000-4-2,3,4,5,6,8,11,EN61547
SAFETY	
Safety standards	EN61347-1/2-13,GB19510.1/14,EN62384
Flicker-free standard	IEEE1789
Certificate	CE-SUD ENEC CCC RCM
Withstand voltage	I/P-O/P:3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI:500VAC.
Surge	DM 2KV CM 2KV
Leakage current	<0.7mA @ 240Vac
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH
NOTE	1.All parameter are measured at 230VAC input,rated load and 25°C of ambient temperature. 2.Ripple & Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF paralld capacitor. 3.Stand-by power consumption is measured at dimmable off condition. 4.If this driver used for led lighting, the TC should not higher than TC showed on the driver when the lighting working on the highest rated working temperature. 5.The power supply is considers as a compent that wil be operated in combination with final equipment,since EMC performance will be affected by the complete installation the final equipment manufactures must re-quality EMC directive on the complete installation again.

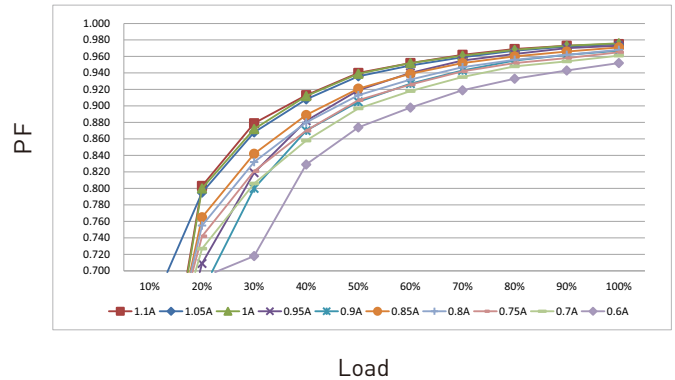
Electrical characteristics

BK-DWL-1100AD Electrical characteristics(42V/1.1A)

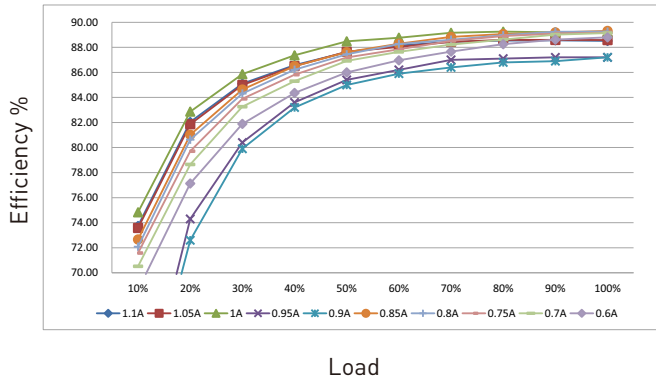
THD vs. Load



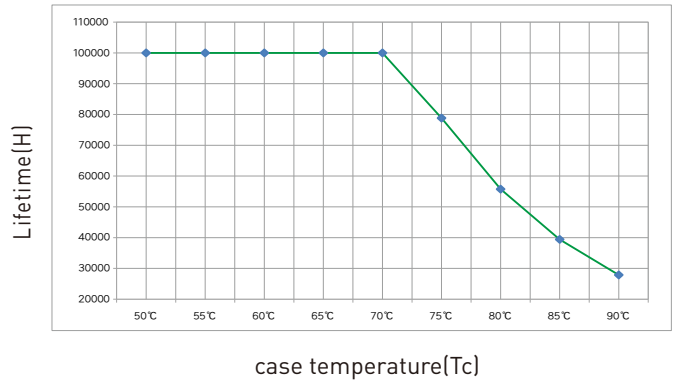
Power factor vs. Load



Efficiency vs. Load

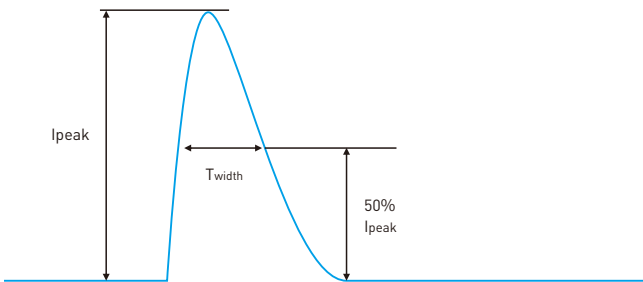


Lifetime vs. case temperature



Surge curve

Specification item	Value	unit	Condition
Rated current	8.25	A	Input voltage 230V(100% full load)
Inrush current Ipeak	8.25	A	Input voltage 230V
Inrush current Twidth	206	us	Input voltage 230V, width at 50% Ipeak
Drivers/MCB 16A type B	≤30	PCS	Input voltage 230V,ta=25°C



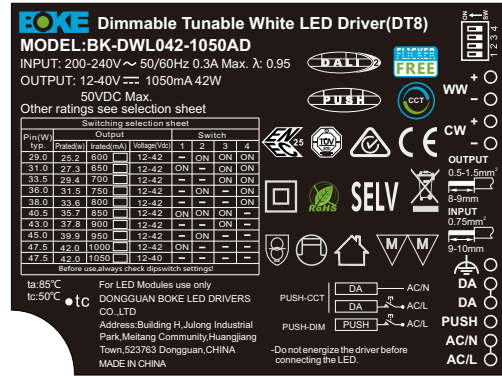
MCB	Rating	Relative number of LED driver	Drivers
B	10A	63%	18pcs
B	13A	81%	24pcs
B	16A	100%(stated in datasheet)	30pcs
B	20A	125%	37pcs
B	25A	156%	46pcs
C	10A	104%	31pcs
C	13A	135%	40pcs
C	16A	170%	51pcs
C	20A	208%	62pcs
C	25A	260%	78pcs

DIP S.W Select output current table

BK-DWL042-1050AD

PIN	Irated	Output Voltage	1	2	3	4
29.0W	600mA	42VDC		ON	ON	ON
31.0W	650mA	42VDC	ON	--	ON	ON
33.5W	700mA	42VDC	--	--	ON	ON
36.0W	750mA	42VDC	--	ON	--	ON
38.0W	800mA	42VDC	--	--	--	ON
40.5W	850mA	42VDC	ON	ON	ON	--
43.0W	900mA	42VDC	--	--	ON	--
45.0W	950mA	42VDC	--	ON	--	--
47.5W	1000mA	42VDC	ON	--	--	--
47.5W	1050mA ★	40VDC	--	--	--	--

Product label



Remark: ★ this current is factory default.

-- this channel is off.

LED hot plug-in protection function

In the following two cases, the LED driver will automatically turn off the output to protect the LED

- When the driver is powered on first and the LED is connected later.
- When the driver is powered on, disconnected and connected again.

The LED can be activated in two ways

- Through the ACinput port: disconnect the AC of the drive and power it again.
- Through dimming interface.

DALI: send "OFF" command first, then send "MAX" command.

PUSH: short press PUSH switch two times, then long press PUSH switch.

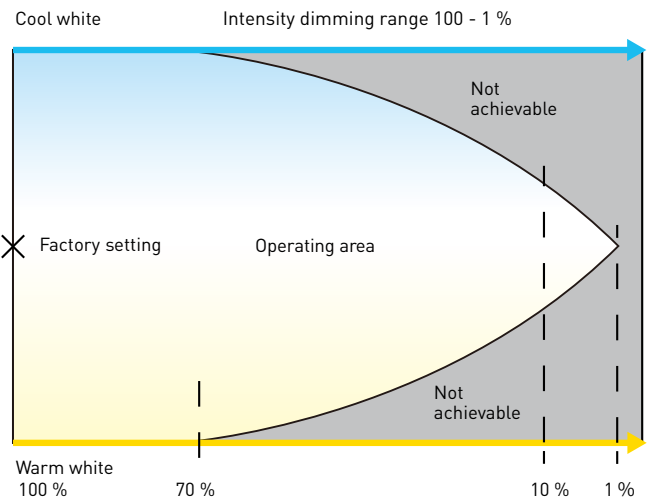
1-10V: turn the dimmer to the off position and then turn to the on position.

LED over-power protection

- When the connected LED string voltage exceeds the highest output voltage defined by the switch selection sheet, the driver will turn off the output.
- When the correct LED is connected, the drive will automatically resume output

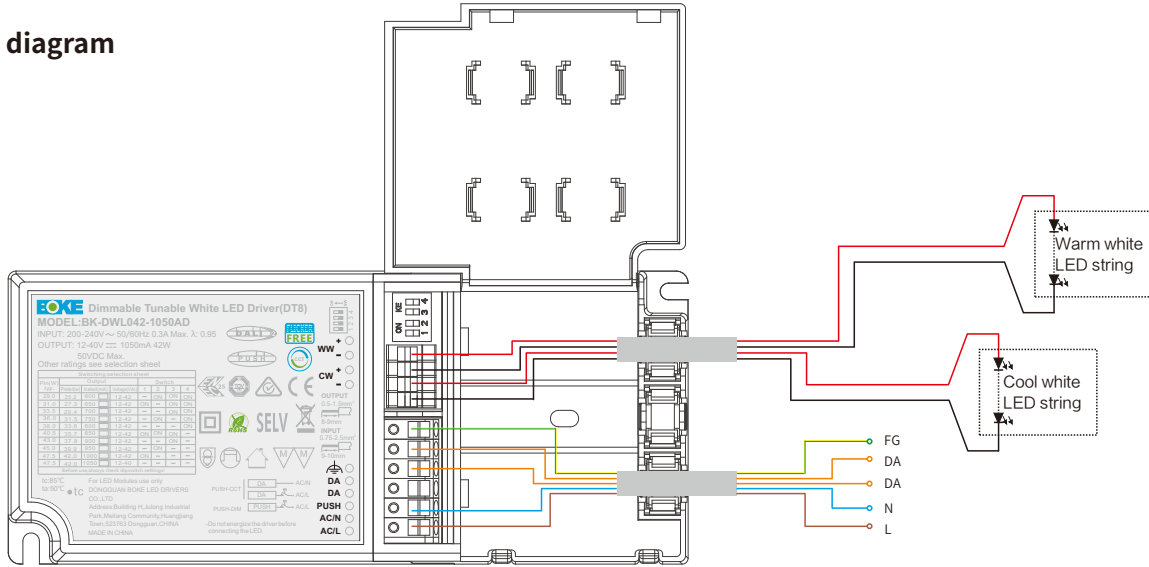
Tunable white functionality

- This driver has 2 output channels used to control the intensity and temperature of white color as well known as "Tunable White".
- These drivers respond to DALI type 8 (DT8) commands, which in practice means that they only have 1 common address for both output channels.
- The tunable white level of intensity and color temperature can be set either with a DALI command or by PUSH switch control.
- The driver will operate correctly once tunable white LED module parameters are programmed to the driver. Use the DALI tools for the parameter setting.
- The higher the brightness, the wider the color temperature range can be obtained.



DALI control

Wiring diagram



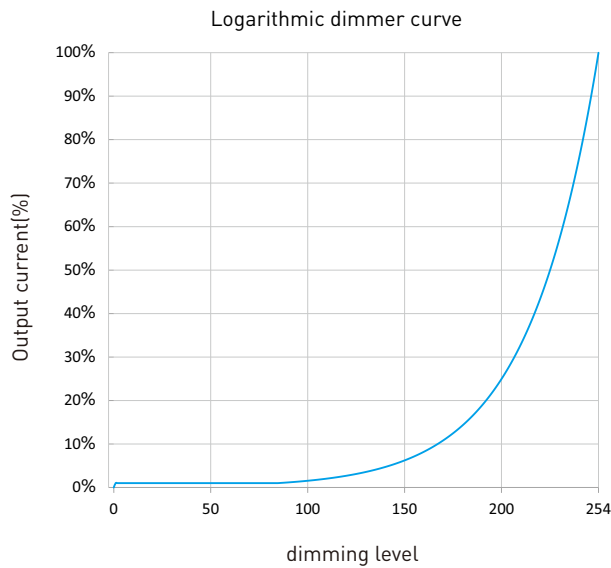
Note

- Standard DALI control line voltage range:9.5V to 22.5V,type 16V.
- The two DALI control lines are polarity-reversible.
- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at 2×15mm².
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.

Please refer to the table below

Cable size	Distance
2×0.50mm ²	max.100m
2×0.75mm ²	max.150m
2×1.00mm ²	max.200m
≥2×1.50mm ²	max.300m

Dimming curve

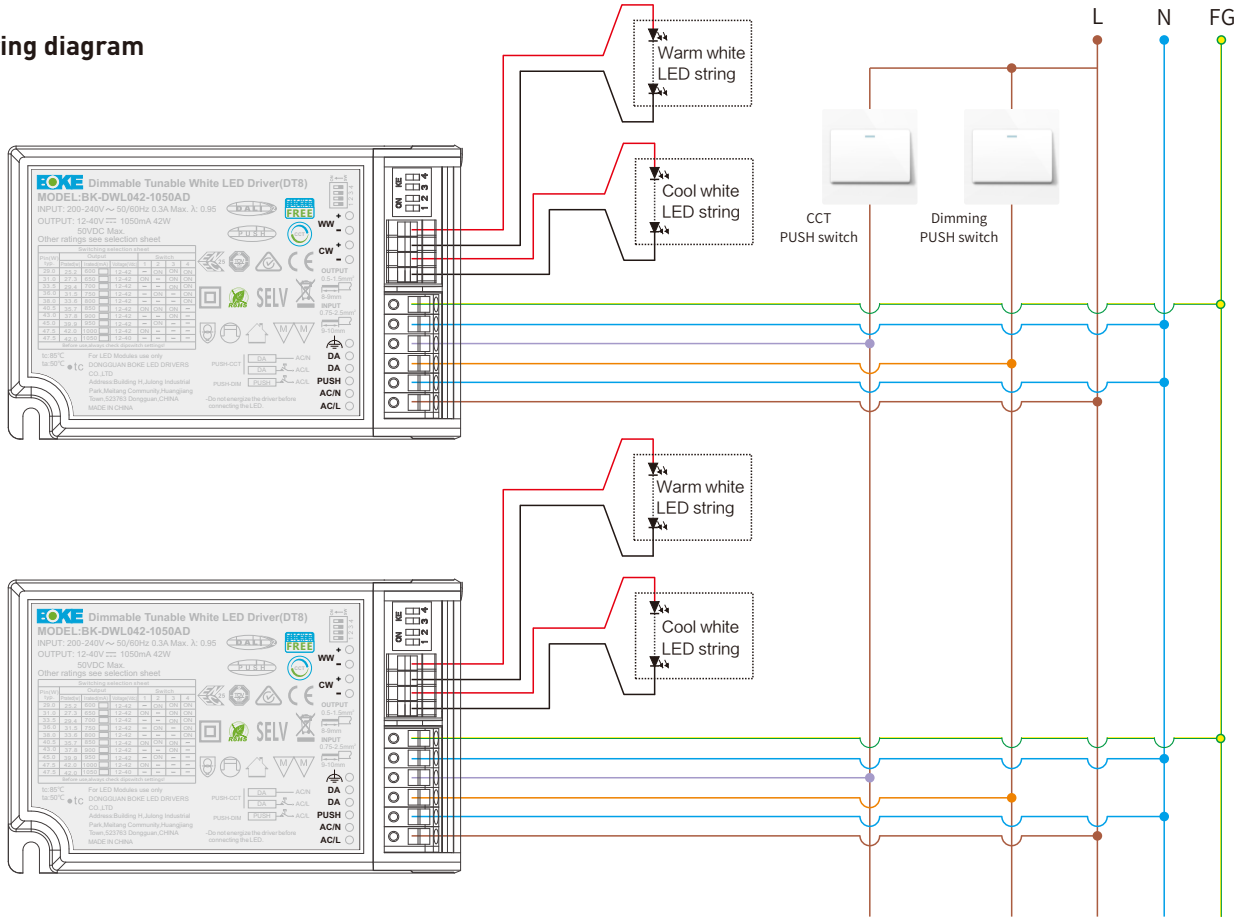


Note

The dimming curve can be selected by DALI configuration. The default is logarithmic dimming curve.

PUSH switch control

Wiring diagram



PUSH operating instructions for dimming

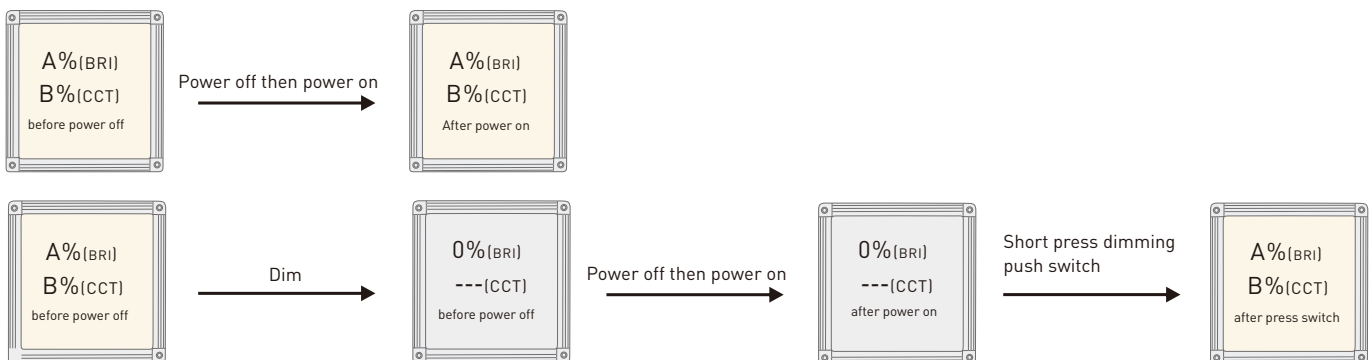
- Turn on or turn off: short press dimming PUSH switch for 0.2-1s.
- Stepless dimming : long press dimming PUSH switch for 1-6s, Press again to switch directions.

PUSH operating instructions for Color temperature

- Switch CCT level: short press CCT PUSH switch for 0.2-1s, 9 levels of color temperature can be switched.
- Stepless adjustment CCT: long press CCT PUSH switch for 1-6s, Press again to switch directions.

Power on status:

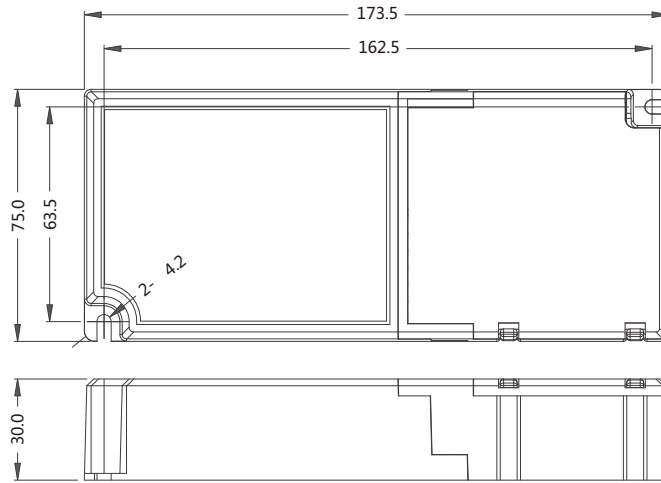
- After power on, the light state will be the same as the last lighting on state.
- If the light is on before the power is turned off, after turning the power back on, the brightness will be the same as the last time, and the color temperature will be the same as the last time.
- If the light is off before the power is turned off, the light will be turned off after the power is turned back on. You need to press the dimming PUSH switch for a short time to turn on the light. The brightness after lighting will be the same as the last time, and the color temperature will be the same as the last time.



Multiple drivers synchronize control operation

- Long press the dimming PUSH switch or CCT PUSH switch for more than 15 s, all drivers will output 100% brightness and the color temperature is natural white (middle of color temperature range).

Dimension and interface

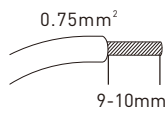


Unit:mm

INPUT

Pin Numbering	function	colour
1	FG	black
2	DA	gray
3	DA	gray
4	PUSH	gray
5	ACN	orange
6	ACL	orange

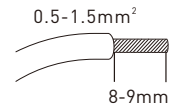
Input wire



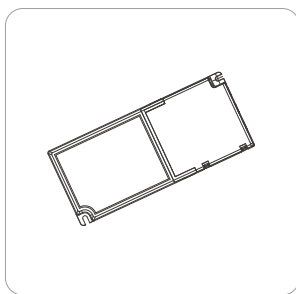
OUTPUT

Pin Numbering	function	colour
1	WW+	red
2	WW-	black
3	CW+	red
4	CW-	black

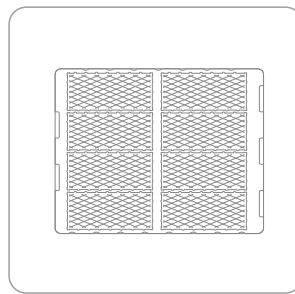
Output wire



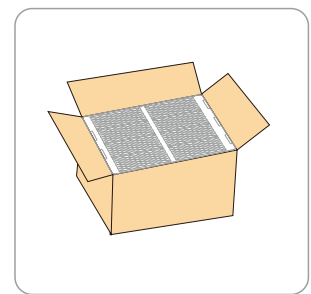
Product package



Product



Pearl wool



8pcs*4layer=32pcs/CTN

Model	Product size	Weight	Pearl wool	Flat card	Carton size	Qty/carton	N.W	G.W
DWL042	L173*W75*H30mm	225g	L435*W345*H36mm	L435*W335mm	L450*W350*H180mm	32pcs	7.2kg	8.5kg