



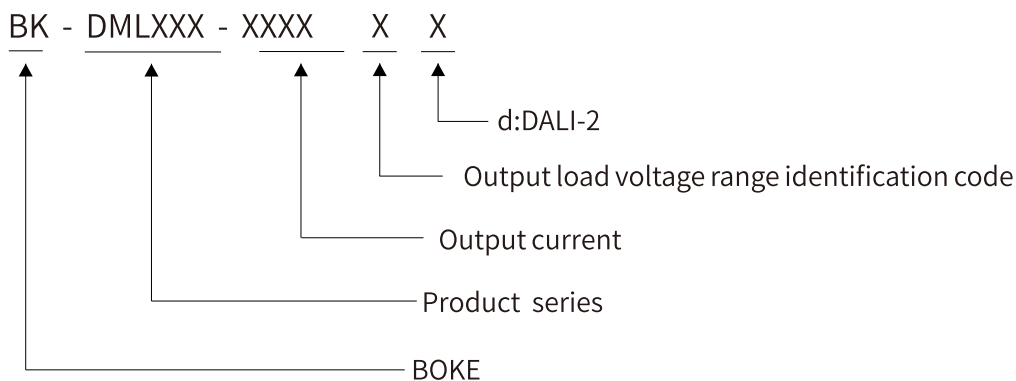
FEATURES

- 180-264VAC input
- Active PFC,efficiency $\geq 88\%$, THD $< 10\%$
- Patent technology,output current accuracy is 1%.
- Dimming range 1-100%.
- Dimming is smooth and flicker-free at any brightness,meets IEEE1789.
- Low smoke halogen-free rubber wires are optional for input and output
- Suitable for working at $-20-60^{\circ}\text{C}$
- Surge capacity : L-N : 2KV, L / N-FG : 2KV
- Aluminum metal housing design
- LED hot-plug in protection function.
- Power input on stand-by $< 0.3\text{ W}$,turn on delay time $< 0.5\text{ s}$,compatible with ERP.
- IP67 design for indoor or outdoor installation.
- Passed DALI-2, ENEC-TUV,CE,CCC certifications.
- 5 years warranty

APPLICATION

- LED outdoor lighting
- LED Industrial lighting
- LED rail-transit lighting
- LED Subway station lighting

MODEL CODE



ELECTRICAL SPECIFICATION				
MODEL	BK-DML022-XXXXAd			
OUTPUT				
DC current	500mA	550mA	600mA	
DC voltage range	24-42V	24-40V	24-38V	
Rated power	21W	22W	22.8W	
Voltage ripple & noise note.2	≤450mV(Vpp)	≤450mV(Vpp)	≤450mV(Vpp)	
Current ripple & noise	≤10mA(RMS)	≤10mA(RMS)	≤10mA(RMS)	
Constnt current ADJ. range	250-500mA	500-550mA	550-600mA	
Constant current accuracy	±1%	±1%	±1%	
Line regulation	±1%	±1%	±1%	
Load regulation	±1%	±1%	±1%	
DALI port input current	≤2mA			
INPUT				
Rated voltage	200-240VAC 200-240VDC			
Input AC/DC voltage range	180-264VAC 176-264VDC			
Frequency range	50-60Hz			
Power factor	PF>0.97 @ 230VAC/full load & PF>0.95 @ 230VAC/>50% load & PF>0.90 @ 230VAC/>30% load			
Total harmonic distortion	THD<10% @ 230VAC/full load & THD<15% @ 230VAC/>50% load & THD<20% @ 230VAC/>30% load			
Efficiency (Typ.)	88%			
Standby power note.3	<0.3W @ 230Vac			
Input current	<0.18A @ 230Vac			
Inrush current(Typ.)	See data table for details			
Max. No. of PSUs on 16A circuit breaker	See data table for details			
Turn on delay	<0.5s @ 230Vac			
PROTECTION				
Short circuit	Hiccup,recovers automatically after environment temperature declines			
Max output voltage	50V			
Over temperature	Hiccup,recovers automatically after fult condition is removed			
Protection function	Intelligent over-temperature derating output function&LED hot-plug in protection function.			
ENVIROHMENT				
Operation temperature	-20-60°C			
Operation humidity	10-90% RH,non-condensing			
Storagr tempera-ture/humidity	-40-80°C,5-95% RH			
IP class	IP67			
Vibration	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes			
Tc Note.5	Tc=90°C(Ta=60°C)			
MTBF	500000H,MIL-HDBK-217F(25°C)			
LIFETIME	See life curve for details			
STANDARDS & CERTIFICATE				
Certificate	CE-SUD ENEC			
Safety standards	EN61347-1/2-13,GB19510.1/14,EN62384,IEEE1789			
EMC emisson Note.4	Compliance to EN55015,GB17743,EN61000-3-2 Class C(≥30% load),EN61000-3-3			
EMC immunity	Compliance to EN61000-4-2,3,4,5,6,8,11,EN61547			
Withstand voltage	I/P-O/P:3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI:500VAC.			
Isolation resis-tance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH			
Leakage current	<0.7mA @ 240Vac			
Surge	DM 2KV, CM 2KV			
DALI standards	IEC62386-101,102,207			
ELSE				
Environmental protection	RoHS			

NOTE

- All parameter are measured at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF paralld capacitor.
- Stand-by power consumption is measured at dimmable off condition.
- 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.
- 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 temperture.

ELECTRICAL SPECIFICATION				
MODEL	BK-DML040-XXXXAd			
OUTPUT				
DC current	1000mA	1050mA	1100mA	
DC voltage range	24-42V	24-40V	24-38V	
Rated power	42W	42W	41.8W	
Voltage ripple & noise note.2	≤450mV(Vpp)	≤450mV(Vpp)	≤450mV(Vpp)	
Current ripple & noise	≤10mA(RMS)	≤10mA(RMS)	≤10mA(RMS)	
Constnt current ADJ. range	500-1000mA	1000-1050mA	1050-1100mA	
Constant current accuracy	±1%	±1%	±1%	
Line regulation	±1%	±1%	±1%	
Load regulation	±1%	±1%	±1%	
DALI port input current	≤2mA			
INPUT				
Rated voltage	200-240VAC 200-240VDC			
Input AC/DC voltage range	180-264VAC 176-264VDC			
Frequency range	50-60Hz			
Power factor	PF>0.97 @ 230VAC/full load & PF>0.95 @ 230VAC/>50% load & PF>0.90 @ 230VAC/>30% load			
Total harmonic distortion	THD<10% @ 230VAC/full load & THD<15% @ 230VAC/>50% load & THD<20% @ 230VAC/>30% load			
Efficiency (Typ.)	88%			
Standby power note.3	<0.3W @ 230Vac			
Input current	<0.3A @ 230Vac			
Inrush current(Typ.)	See data table for details			
Max. No. of PSUs on 16A circuit breaker	See data table for details			
Turn on delay	<0.5s @ 230Vac			
PROTECTION				
Short circuit	Hiccup,recovers automatically after environment temperature declines			
Max output voltage	63V			
Over temperature	Hiccup,recovers automatically after fult condition is removed			
Protection function	Intelligent over-temperature derating output function&LED hot-plug in protection function.			
ENVIROHMENT				
Operation temperature	-20-60°C			
Operation humidity	10-90% RH,non-condensing			
Storagr tempera-ture/humidity	-40-80°C,5-95% RH			
IP class	IP67			
Vibration	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes			
Tc Note.5	Tc=90°C(Ta=60°C)			
MTBF	500000H,MIL-HDBK-217F(25°C)			
LIFETIME	See life curve for details			
STANDARDS & CERTIFICATE				
Certificate	CE-SUD ENEC			
Safety standards	EN61347-1/2-13,GB19510.1/14,EN62384,IEEE1789			
EMC emisson Note.4	Compliance to EN55015,GB17743,EN61000-3-2 Class C(≥30% load),EN61000-3-3			
EMC immunity	Compliance to EN61000-4-2,3,4,5,6,8,11,EN61547			
Withstand voltage	I/P-O/P:3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC,I/P-DALI:500VAC.			
Isolation resis-tance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH			
Leakage current	<0.7mA @ 240Vac			
Surge	DM 2KV, CM 2KV			
DALI standards	IEC62386-101,102,207			
ELSE				
Environmental protection	RoHS			

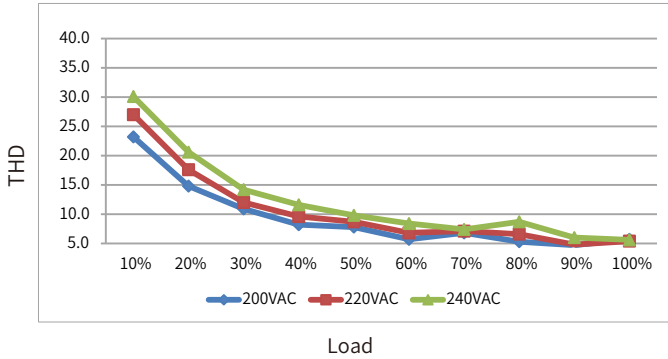
NOTE

- All parameter are measured at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF paralld capacitor.
- Stand-by power consumption is measured at dimmable off condition.
- 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.
- 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 tempreture.

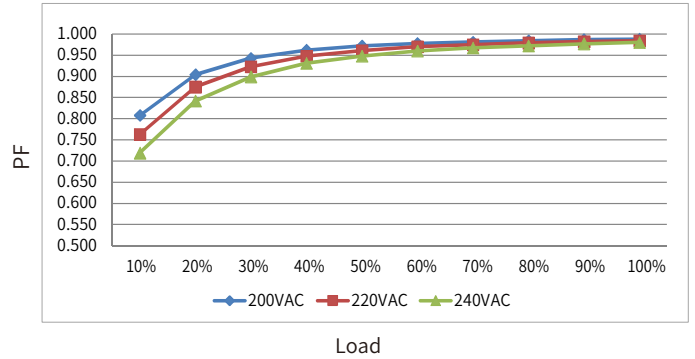
Electrical characteristics

BK-DML022-0600Ad Electrical characteristics

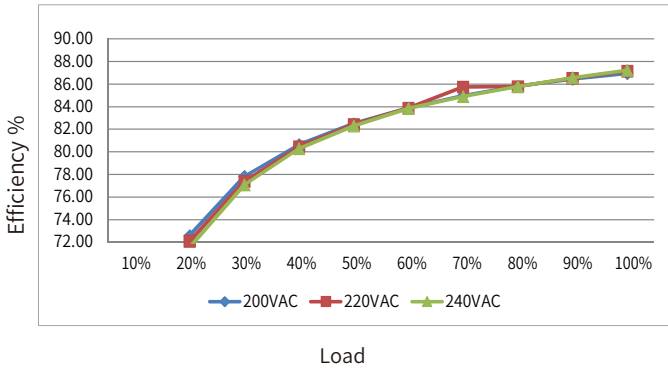
THD vs. Load



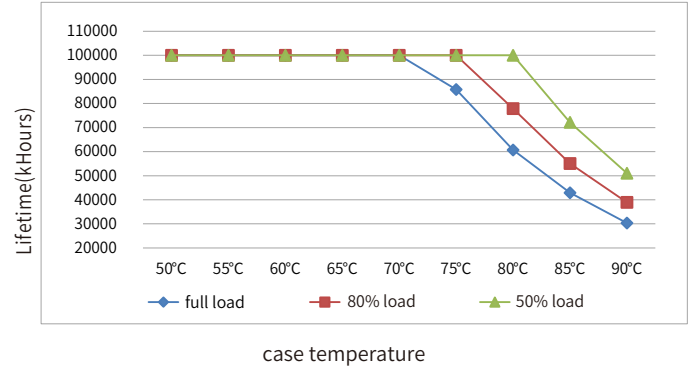
Power factor vs. Load



Efficiency vs. Load

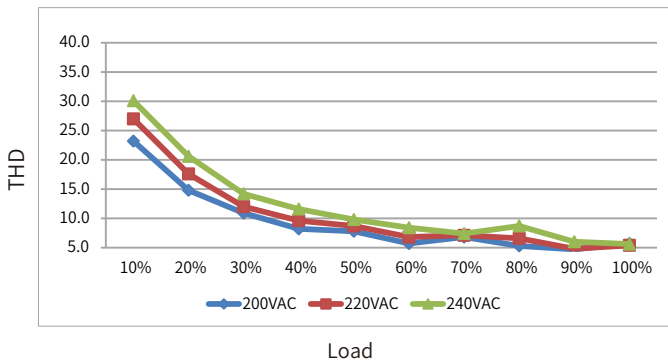


Lifetime vs. case temperature

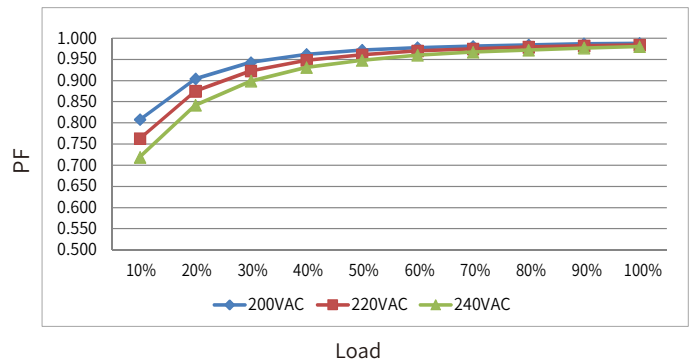


BK-DML040-1050Ad Electrical characteristics

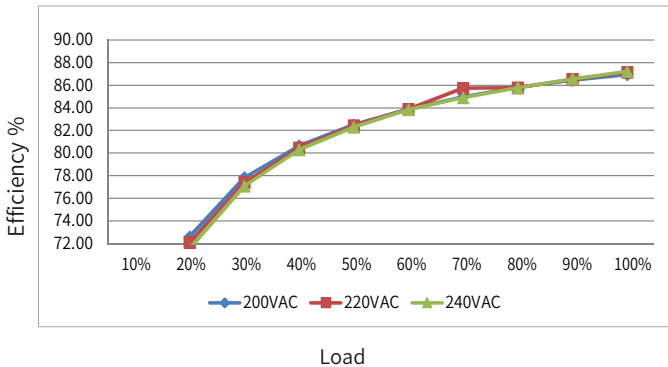
THD vs. Load



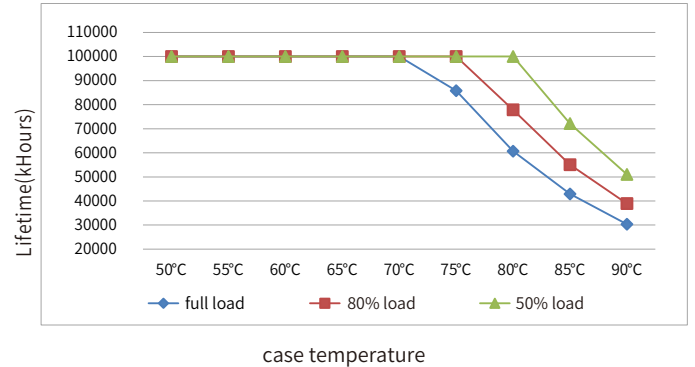
Power factor vs. Load



Efficiency vs. Load



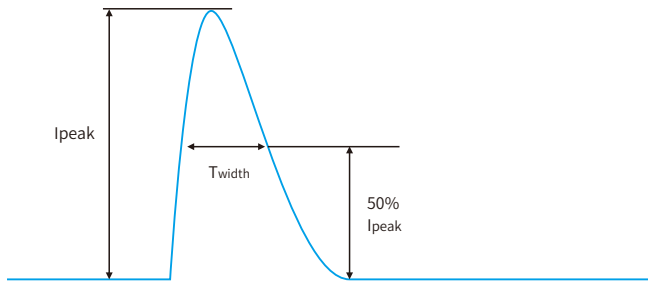
Lifetime vs. case temperature



Surge curve

DML022

Specification item	Value	unit	Condition
Inrush current Ipeak	3.28	A	Input voltage 230V
Inrush current Twidth	218	us	Input voltage 230V, width at 50% peak
Drivers/MCB 16A type B	≤42	PCS	



DML040

Specification item	Value	unit	Condition
Inrush current Ipeak	3.96	A	Input voltage 230V
Inrush current Twidth	190	us	Input voltage 230V, width at 50% peak
Drivers/MCB 16A type B	≤25	PCS	

MCB	Rating	Relative number of LED driver
B	10A	63%
B	13A	81%
B	16A	100%(stated in datasheet)
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Label

INPUT

- AC-L (Brown)
- AC-N (Blue)
- (Green/Yellow)

BOKE Dimmable Constant Current LED Driver
MODEL: BK-DML022-0600Ad
 INPUT: 200-240V ~ 50/60Hz 0.18A Max. λ:0.95
 OUTPUT: 24-38V = 600mA 22.8W 50VDC Max.
 For LED Modules use only
 MADE IN CHINA
 DONGGUAN BOKE LED DRIVERS CO.,LTD
 Address:Building H,Julong Industrial Park,Meitang
 Community,Huangjiang Town,523763 Dongguan,CHINA

OUTPUT

- DA / PROG+ (Brown)
- DA / PROG- (Blue)
- LED+ (Red)
- LED- (Black)

Flicker FREE

IP67

FELV

SELV

1...100% dimming

DALI

PROG

RoHS

CE

CCC

UL

M M

110

S/N: _____

INPUT

- AC-L (Brown)
- AC-N (Blue)
- (Green/Yellow)

BOKE Dimmable Constant Current LED Driver
MODEL: BK-DML040-1050Ad
 INPUT: 200-240V ~ 50/60Hz 0.3A Max. λ:0.95
 OUTPUT: 24-40V = 1050mA 42W 50VDC Max.
 For LED Modules use only
 MADE IN CHINA
 DONGGUAN BOKE LED DRIVERS CO.,LTD
 Address:Building H,Julong Industrial Park,Meitang
 Community,Huangjiang Town,523763 Dongguan,CHINA

OUTPUT

- DA / PROG+ (Brown)
- DA / PROG- (Blue)
- LED+ (Red)
- LED- (Black)

Flicker FREE

IP67

FELV

SELV

1...100% dimming

DALI

PROG

RoHS

CE

CCC

UL

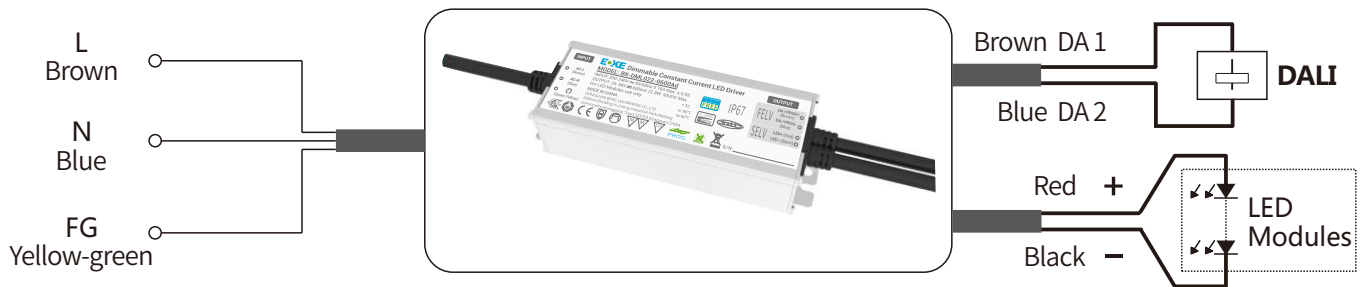
M M

110

S/N: _____

DALI dimming

Wiring



Note

- Standard DALI control line voltage range:9.5 V to 22.5 V,type 16V.
- The two DALI control lines are non-polar.
- Max. 64 DALI drivers per DALI control line.
- Supports star,tree,serial,parallel wiring,but does not support ring wiring.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.
- The maximum Distance length of the DALI control line is 300m at 2 x1.5mm².

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

Hot plug-in protection function

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

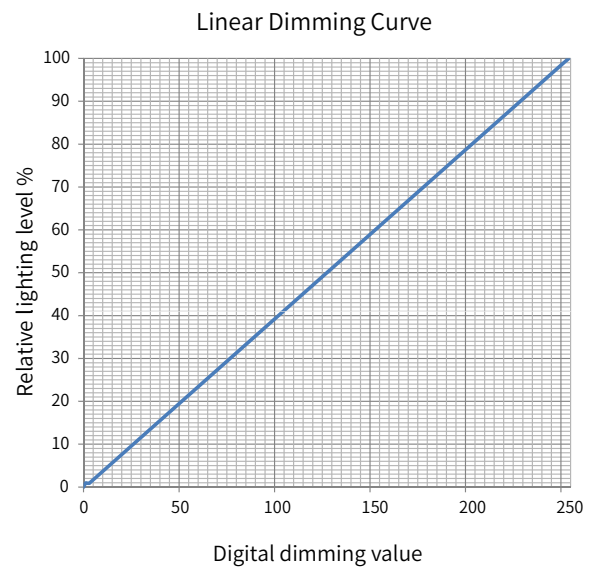
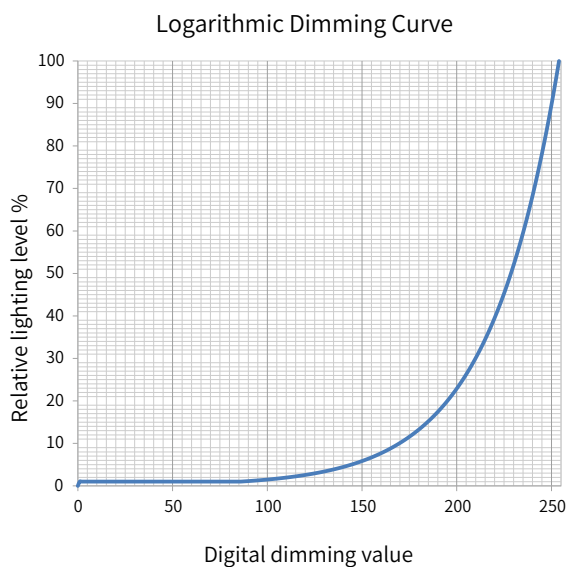
- 1.When the driver is powered on first and the LED is connected later.
- 2.When the driver is powered on,disconnected and connected again.

The LED can be activated in two ways

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

DALI:send “OFF” command first,then send “MAX” command.

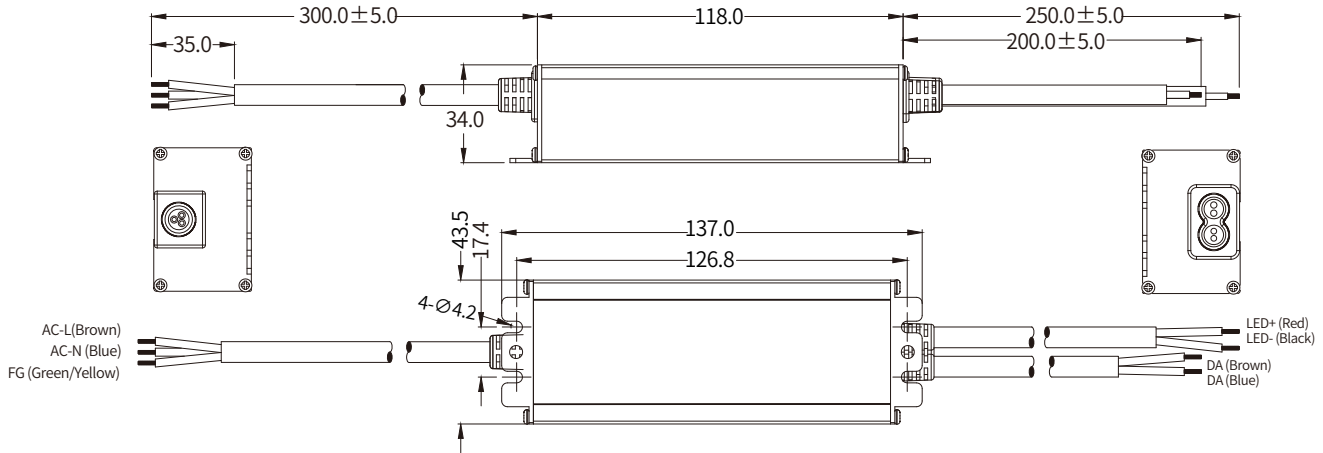
Dimming curve



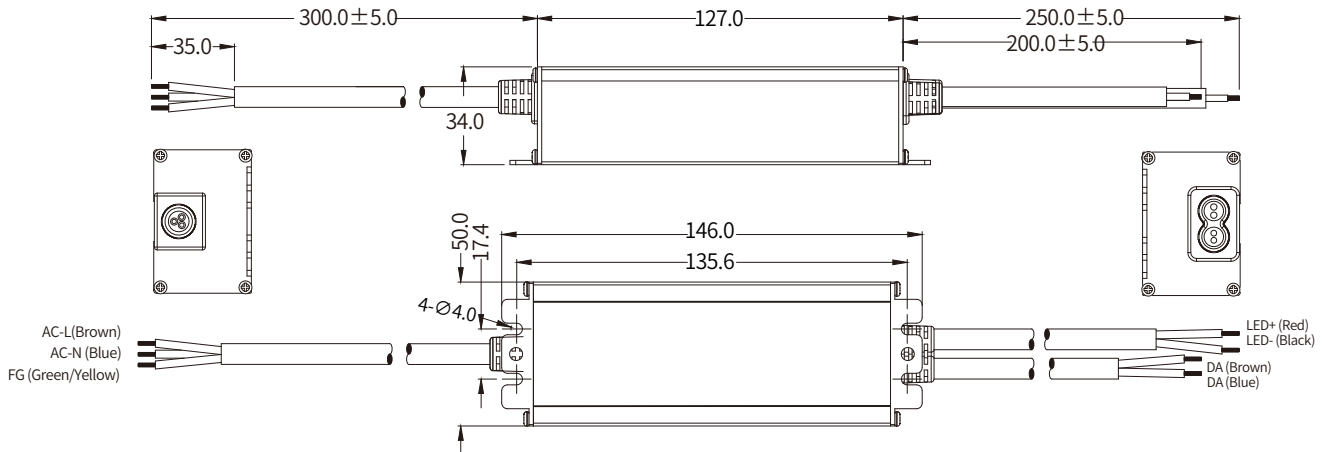
Note:Dimming curve can be selected by DALI configuration. It is logarithmic dimming by default

Mechanical Specification

DML022



DML040

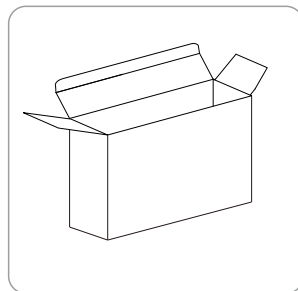


Port	Site	Specification	Cable size	Colour	Length	Strip length	Tinning	Note
INPUT	AC-L AC-N FG	H05RN-F SJOW	3*1.0mm ² 3*1.04mm ²	Brown+Blue+ Green/Yellow	300mm	35mm	10mm	
DIMMING	DA/PROG+ DA/PROG-	H05RN-F SJOW	2*0.75mm ² 2*1.04mm ²	Brown+Blue	200mm	35mm	10mm	
OUTPUT	LED+ LED-	H05RN-F SJOW	2*1.0mm ² 2*1.04mm ²	Red+Black	250mm	35mm	10mm	

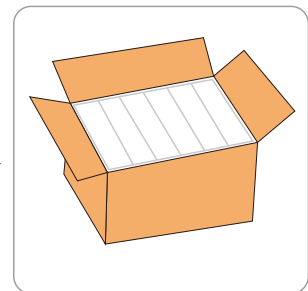
Product package



Product



Packaging



14pcs×2layer=28pcs/CIN
12pcs×2layer=24pcs/CIN

Product	Product size	Weight	Packaging size	pearl wool	Carton size	Packing	N.W	G.W
DML022	L137*W43.5*H34mm	0.39KG	L185*W38*H80mm	L370*W260mm	L390*W285*H180mm	28 pcs	11.0KG	13.5KG
DML040	L145*W50*H34mm	0.5KG	L200*W38*H80mm	L360*W220mm	L420*W250*H180mm	24pcs	12.0KG	14.5KG