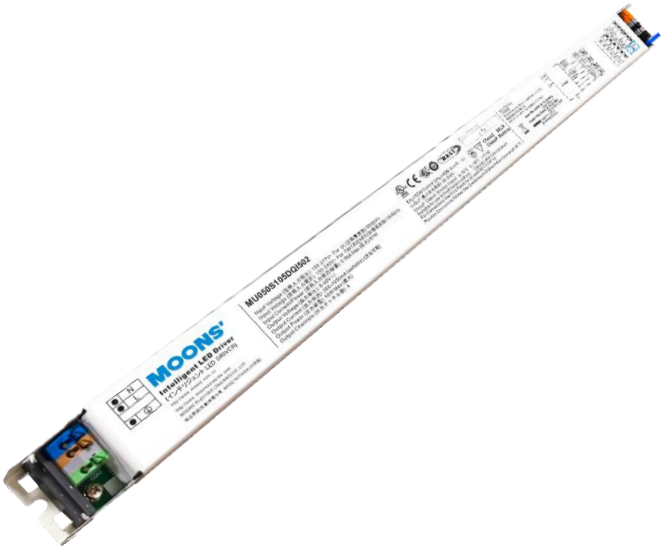
S Series Intelligent Driver



0.1% Deep Dimming
RGBW dimmable
Human Centric Lighting

Flicker Free
Meet :
CEC title 24 JA8 & JA10
IEEE PAR 1789-2015

■ 50W S Series-4 Channels DALI Driver-MU050S105DQI502

MOONS' 50W S Series 4 Channels LED Drivers are designed for DALI dimming application, the DALI dimming mode can be set to DT8 xy coordinate+Tc+RGBWAF, DT6 Solo mode , DT6 4ch mode.It is a wireless programmable LED driver with MOONS' Touch setting tool.

■ Main Characteristics

- 4 Channels, constant current driver
- Programmable operation window
- Low inrush current
- Standby power<0.5W
- 0.1% Dimming
- DT8 xy coordinate+Tc+RGBWAF, DT6 Solo mode , DT6 4ch mode
- 2 types of dimming curve(logarithmic/linear)
- 50W max each channel with total 50W load
- Flicker free for whole operation range
- DALI BUS power 15V/56mA

■ Benefits

- Application-oriented operating window for maximum compatibility
- Excellent dynamic response performance
- Exceptionally smooth fades

■ Applications

- Architecture, Art and Museum, Entertainment, Hospitality, Healthcare, Urban landscape

■ Certification

- Comply with IEC62386-101, 102,207, 209
- Comply with Energy Star 2.2
- Certificated :

c UL us LISTED E348796 Class2 ClassP CE ENEC 25 TÜV SÜD DALI 2

■ Electrical Specifications

Input	Efficiency (230Vac)	88% (Typical)
	Efficiency (120Vac)	87% (Typical)
	Voltage Range (Vac)	90~305
	Rated Input Voltage (Vac)	100~277
	Frequency Range (Hz)	50/60
	Power Factor	>0.9 at 100~277Vac 50/60Hz input, with 50%~100% load conditions
	THD	＜20% at 100~277Vac 50/60Hz input, with 50%~100% load conditions
	AC Current (Typical)	0.56A MAX. @120Vac, 0.29A MAX. @230Vac
	Inrush Current (Typical)	＜10A at 100~277Vac input 25℃ cold start at 100% condition
	Input Power (W)	66(MAX.)
	Standby Power (W)	＜0.5W @100Vac/50HZ, 230Vac/50HZ, 277Vac/60HZ
	Leakage Current (MAX.)	0.75mA MAX. @277Vac
Output	Output Voltage Range (VDC)	8~50
	Output Current Range (mA)	200~1050
	Rated Power (W)	50(MAX.)
	Output Channel Number	4
	Ripple Current	<15% at max. Iout (ripple=(pk-avg)/avg) Low frequency (<120 Hz) content <1%
	Current Tolerance	±5% at output current range
	Line Regulation	±1%
	Load Regulation	±3%
	Startup Time	540ms~660ms @ 120Vac/230Vac/277Vac for DALI 2.0
Dimming Port	DALI Bus Power Supply	15VDC ± 30%, < 56mA
	DALI Dimming	DALI dimming 0.1%~100%, Soft-on, Fade-to-Black ,optional dimming curve: logarithmic/linear
Dimming Mode	DALI Dimming	DT8 xy coordinate+Tc+RGBWAF, DT6 4 addresses mode,DT6 1 address mode
Protection	Open Circuit Protection (V)	58.5
	Short Circuit	Output current of power supply equals set current
	Over Temperature	Automatic recovery
Environment	Operating Temperature	-40~+50℃
	Operating Humidity	20~95%RH, non-condensing
	Storage Temperature	-40~+85℃
	Storage Humidity	10~95%RH
	Vibration	10~500Hz, 5G 12min/cycle, period for 72min each along X、Y、Z axis
	Ingress Protection Rating	IP20
Safety&EMC	Safety Standard	UL8750,UL1310 Class 2, CAN/CSA-C22.2 No.223-M91,EN61347-1, EN61347-2-13
	EMC Emission	FCC Part 15 ClassB,EN55015,EN61000-3-2 ,EN61000-3-3
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11,EN61547（Surge L,N-FG 2.5KV，L-N 2.5KV）
Others	Lifetime	＞50000 hours @Tc =77℃ at 100% load conditions
	MTBF	500000 hours, measured at full load, 25℃ ambient temperature SR-332 Issue 3
	Dimension (LxWxH mm)	438.8x30x21.7
	Weight(g)	396g

■ Dimming Performance

▪ Flicker Free

Meet :CEC title 24 JA8 & JA10, IEEE PAR 1789-2015

▪ Dimming Method

In the range of 250~1050mA,the current operates in continuous mode;
In the range of 0~250mA,the current operates in PWM dimming mode, and the PWM frequency 7.2KHZ.

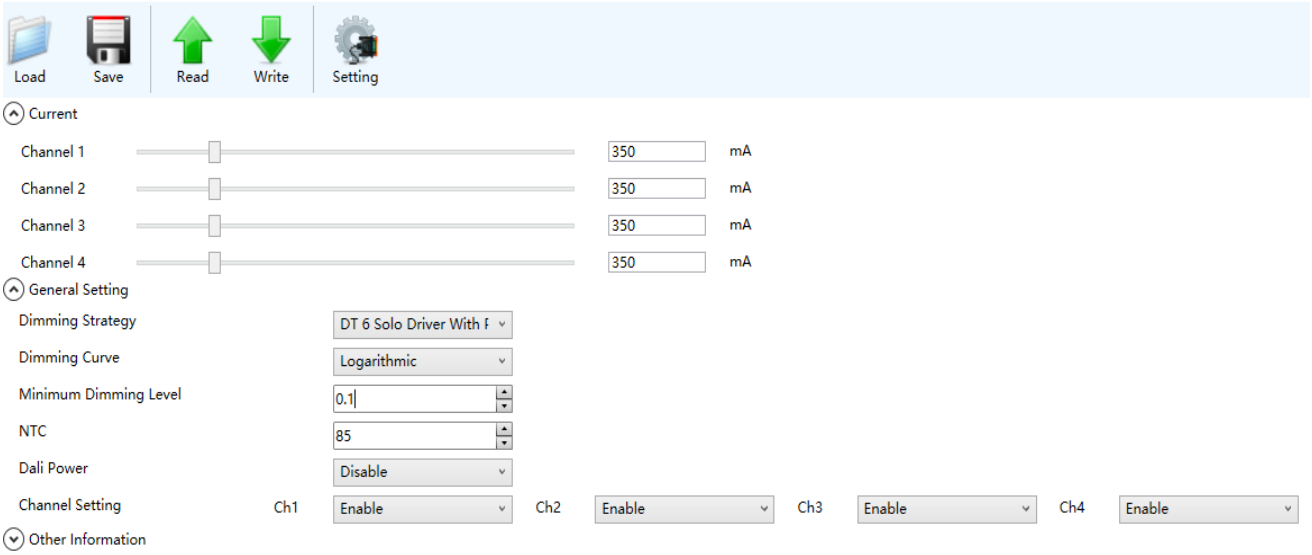
■ Porgrammable Performance

▪ Touch Setting

Program driver's parameters without cable. **Download Software**

▪ 1mA Current Programmable Step

▪ Default Factory Setting

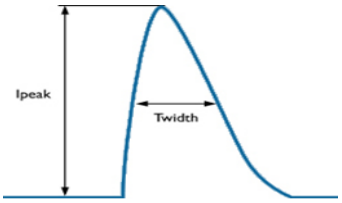


! GTIN-13 Code: 6971481491066

■ Inrush Current

▪ Ipeak & Time

Input Voltage	Inrush Current Ipeak	Inrush Current Time, measured 50% of Ipeak
120 Vac	1.92A	76us
230 Vac	4.44A	48us
277 Vac	4.8A	52us

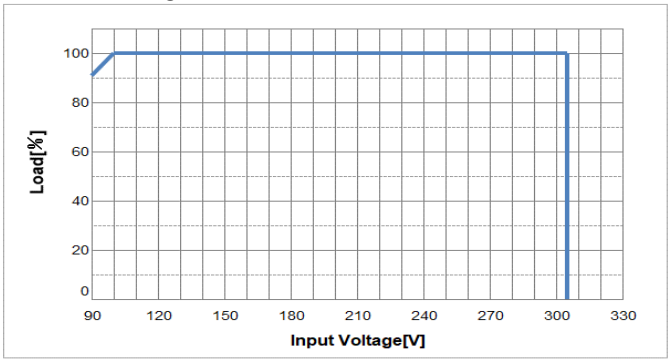


▪ Automaitc Circuit Breakers

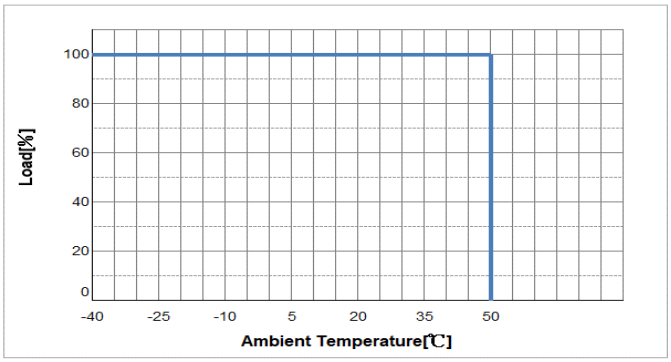
ACB Type	B10	B13	B16	B20	C10	C13	C16	C20
Number of LED Drivers @120Vac	16	21	26	32	16	21	26	32
Number of LED Drivers @230Vac	31	40	50	62	31	40	50	62
Number of LED Drivers @277Vac	36	47	58	72	36	47	58	72

■ Curve

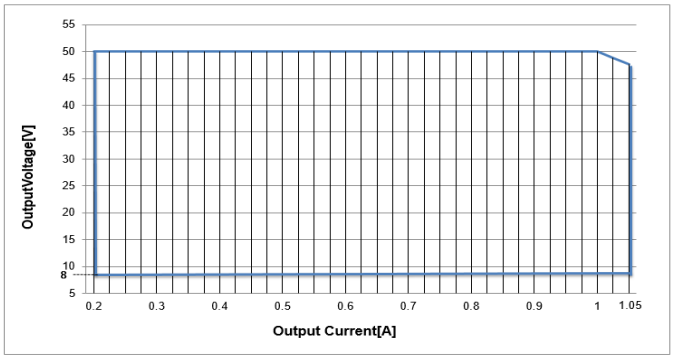
▪ Derating Curve



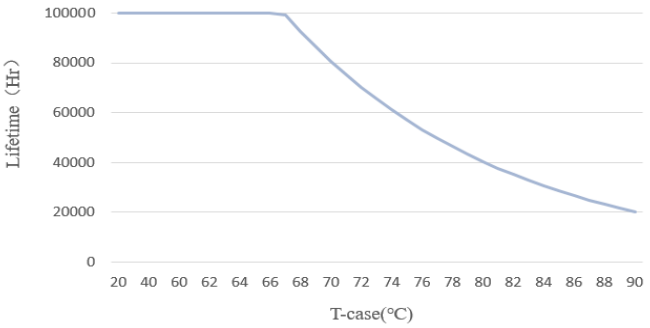
▪ Derating Curve



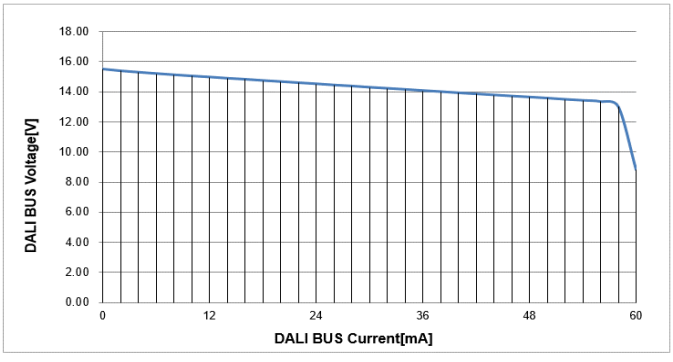
▪ V/I Curve(1CH for ref)



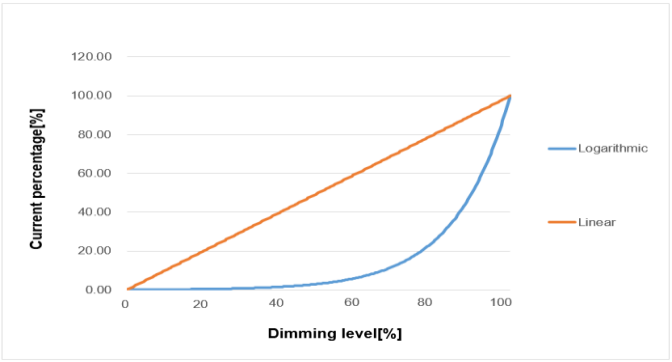
▪ Lifetime Vs Tc



▪ DALI Power Supply VI Curve

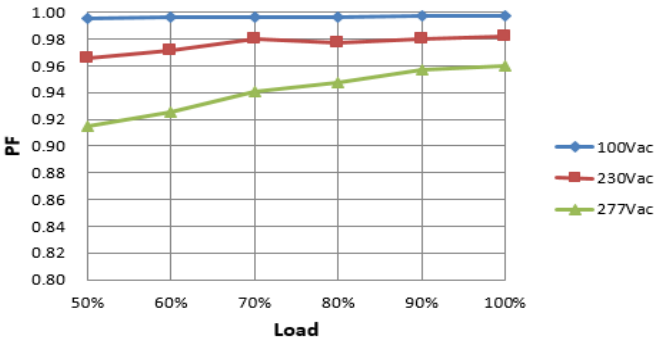


▪ Dimming Curve

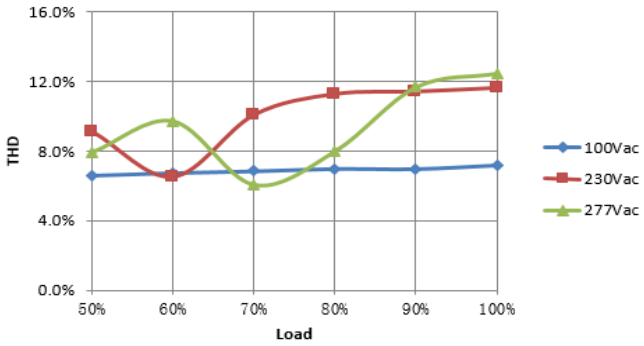


■ Curve

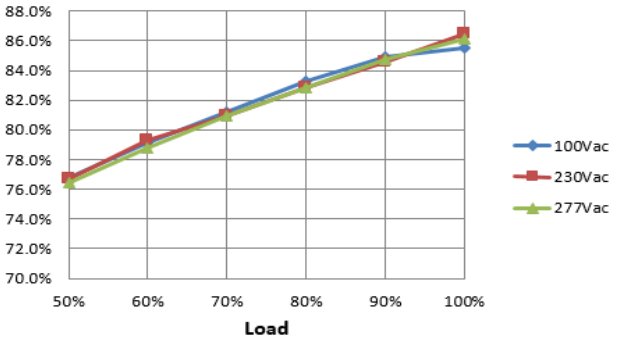
▪ PF VS Load Curve(250mA *4CH for ref.)



▪ THD VS Load Curve(250mA*4CH for ref.)

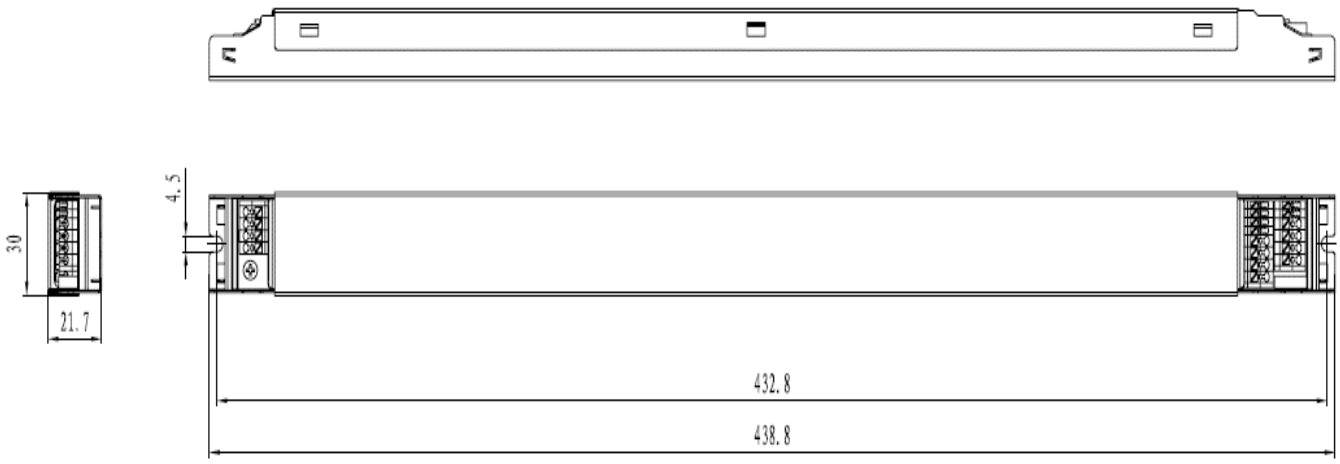


▪ Efficiency VS Load Curve(250mA*4CH for ref.)

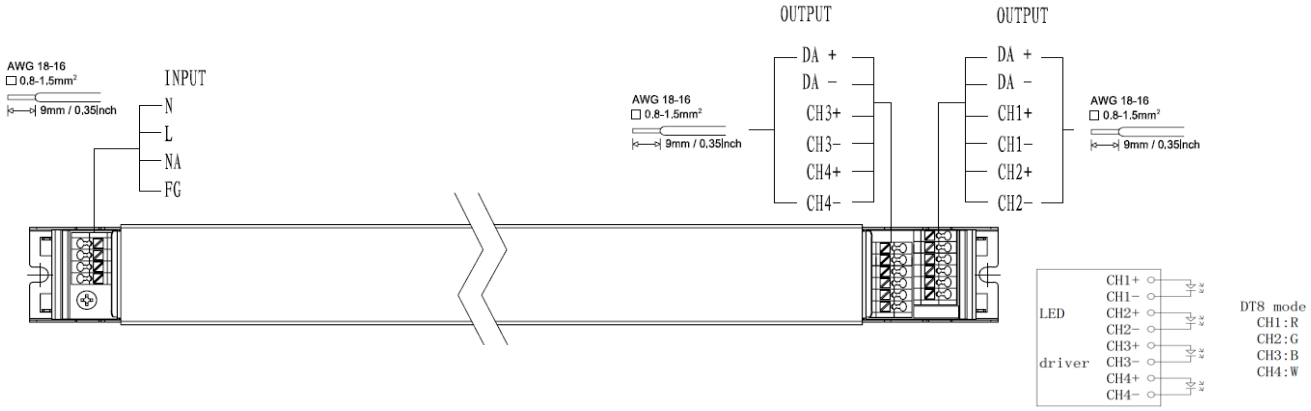


■ Mechanical Specification

▪ **Dimensions (Unit: mm)**



▪ **Ports**



! These terminals are intended for both solid and stranded wire.

! To remove wire, insert screwdriver into slot.

1. Multiple LED outputs cannot be connected in series to power an LED load with a forward voltage > 50V.
2. Multiple LED outputs cannot be connected in parallel to deliver a drive current that exceeds the maximum drive current that can be delivered by a single LED output.
3. Common-anode or common-cathode configurations are not acceptable.
4. Cross connecting multiple LED outputs of a LED driver may result in permanent damage to the LED driver itself and/or the LED light engine(s).

RoHS Compliance:
Our products comply with the European Directive 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.