MU050I180AQI4

Features

- 1 LED channel,100% dimming Output Current can be set to from 200mA to 1800mA
- Soft light Dimming Range 0.1%~100%
- Support Isolated 0~10V Dimming
- Dim-to-off with Standby Power<0.3 W
- Constant Power Maximum is 50W
- Auxiliary Output Voltage 12V,MAX Output Current 150mA
- Protection: OTP, SCP, NLP,OPP
- Mode of wiring: Single-ended wiring
- UL Class 2,IP20
- 5-year warranty

130 × 76 × 30mm

Electrical Specifications

Rated input voltage range	100 - 277 V
Maximum input voltage range	90 - 305 V
Input voltage frequency	50 / 60 Hz
Leakage current	<750uA
Output voltage range	8 - 50 V
Output current	200-1500mA
The 12V constant voltage fan channel	± 5%,2W max
Maxium input power	<70W
Effiency typical value（230V,50Hz,full loaded①）	88 - 90 %
Power factor（230V,50Hz,full loaded①）	>0.95
Stand-by power consumption②	<0.3W
THD(230V,50Hz,full loaded①）	<10%
Start-up time（230V,50Hz,full loaded）	<0.5S
Start-up time（120V,50Hz,full loaded）	<1S
The maximum setup current precision	± 5%
Input inrush current	<15A
Dimming range	0.1 -100%
Withstand Voltage I/P-O/P	3750 V
Withstand Voltage I/P-FG	1875 V
Withstand Voltage O/P-FG	500V
Surge L/N-earth，L-N	2KV,1KV
Operating Temp., Humidity	-25℃~+49℃,20%~95%RH
Storage Temp.,Humidity	-40℃~+85℃,10%~95%RH
Lifetime	≥50000hours@Tc=72℃ at 120VAC input,100% load
Weight	360g
Reference dimension	130 × 76 × 30 mm

Model Specifications

Type	Output Current	Output Voltage	Output Power	Input Power (230V,50Hz)	Efficiency	Case Temperature	Ambient Temperature
MU050I180AQI4	1000 mA	50 V	50.00 W	56.20 W	89.0%	84℃	-25 - 49℃
	1050 mA	48 V	50.40 W	56.80 W	88.7%	84℃	-25 - 49℃
	1100 mA	45 V	49.50 W	56.30 W	87.9%	84℃	-25 - 49℃
	1150 mA	43 V	49.45 W	56.30 W	87.8%	84℃	-25 - 49℃
	1200 mA	42 V	50.40 W	57.20 W	88.1%	84℃	-25 - 49℃
	1250 mA	40 V	50.00 W	57.00 W	87.7%	84℃	-25 - 49℃
	1300 mA	38 V	49.40 W	56.40 W	87.6%	84℃	-25 - 49℃
	1350 mA	37 V	50.00 W	57.00 W	87.7%	84℃	-25 - 49℃
	1400 mA	36 V	50.40 W	57.50 W	87.7%	84℃	-25 - 49℃
	1450 mA	34 V	49.30 W	56.50 W	87.3%	84℃	-25 - 49℃
	1500 mA	33 V	49.50 W	56.80 W	87.1%	84℃	-25 - 49℃
	1550 mA	32 V	49.60 W	57.00 W	87.0%	84℃	-25 - 49℃
	1600 mA	31 V	49.60 W	57.00 W	87.0%	84℃	-25 - 49℃
	1650 mA	30 V	49.50 W	57.00 W	86.8%	84℃	-25 - 49℃
	1700 mA	29 V	49.30 W	56.90 W	86.6%	84℃	-25 - 49℃
	1750 mA	29 V	50.75 W	58.40 W	86.9%	84℃	-25 - 49℃
	1800 mA	28 V	50.40 W	57.90 W	87.0%	84℃	-25 - 49℃

*1： Load:50V*1A
*2： Stand-by power consumption 110V<50mW, 230V<200mW

Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 Class B / EN55015
Radiated Emissions	FCC Part15 Class B / EN55015
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Function Description

- MCS technology

Connect Smartkey to the driver through MCS(Multifunctional Configuration Settings) ports. With MOONS' Configuarator software, you can set the MAX current of the driver(each step is 1 mA),dimming curve type, etc.
Please refer to specification of Smartkey to get specific information.

- Temperature Detection

In order to protect the LED, the temperature of LED is detected by a NTC. When the temperature exceeds the point which can be set by Smartkey, the output current can be decreased automatically, but not less than 25%.

- Constant Output Power

The driver can satisfy the curve of constant output power within a large range of output current and voltage.

- Protection

Thermal Protection
When the temperature of the inside PCB exceeds 110℃ , output current will be decreased to 50%. And it can not recover until the temperture drops to 70℃ .
Short-circuit Protection
Once the output short-circuits, the output will be cut off automatically. Then the driver will try to restart every 4s.
No-load Protection
The driver operating with no load will not be damaged, and it will try to restart every 4s. So the driver supports hot plug in.
Over-Power Protection
IIf the total power exceeds 60W, the output current of each channel will decrease to 50%, and then the maximum output power is increased to 50W gradually.

- Online Update

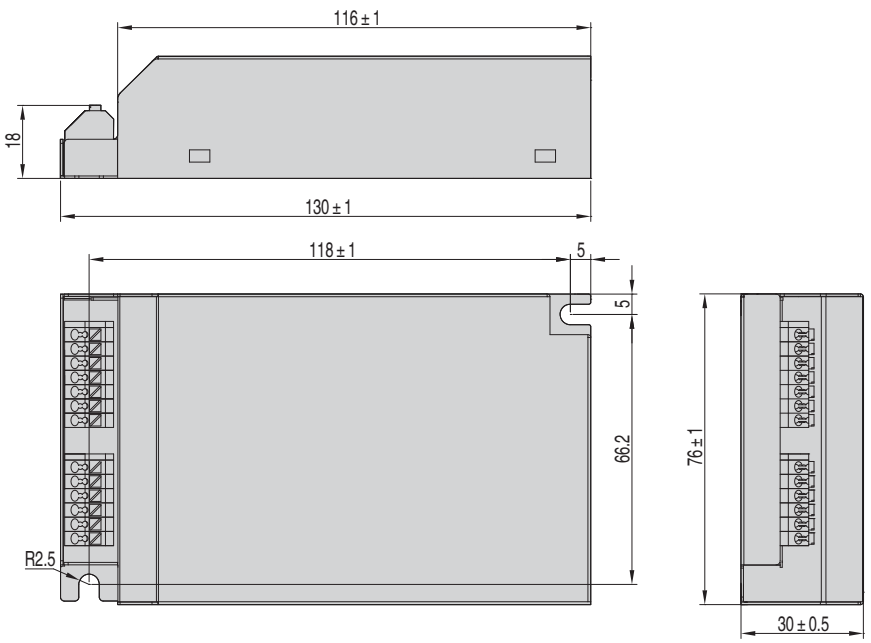
Use smart key to connect PC and the driver to update the firmware.
Please refer to the specification of Smart key.

- Daisy-Chain

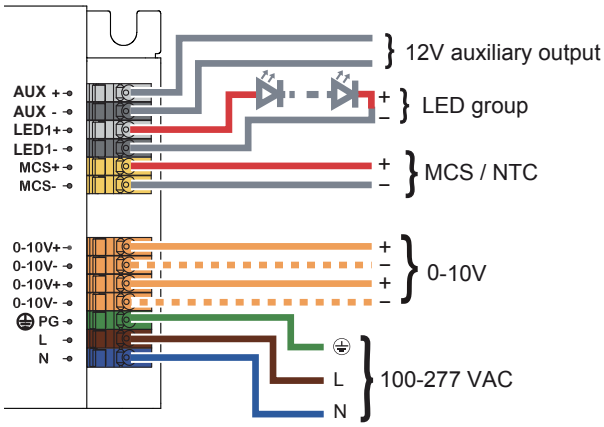
0-10V dimming ports has 2 groups of 0-10V+ and 0-10V-, which support daisy-chain.

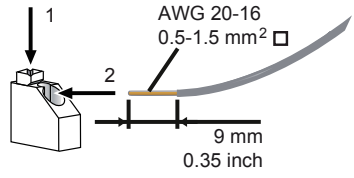
*1: Recommended manufacture and type of the NTC
Manufacture: Thinking TSM2A473J409ARZA(SMD) \ VISHAY NTCS0805e4473JXT \ MURATA NCP21WB473J03RA

Mechanical Outline (unit: mm)



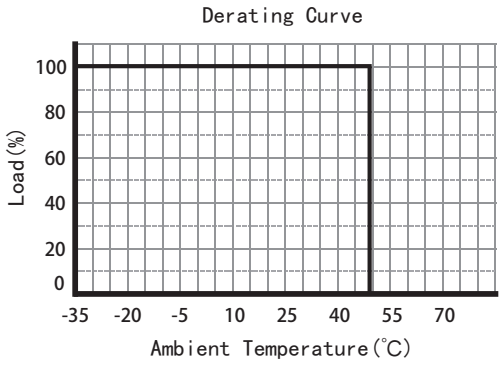
Ports

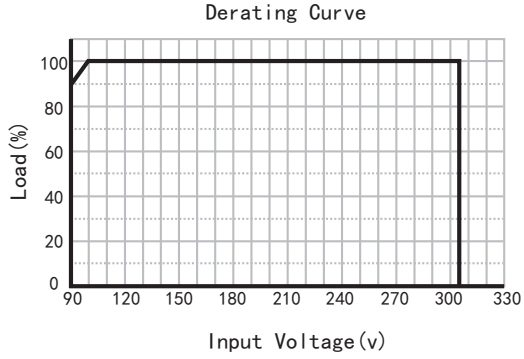




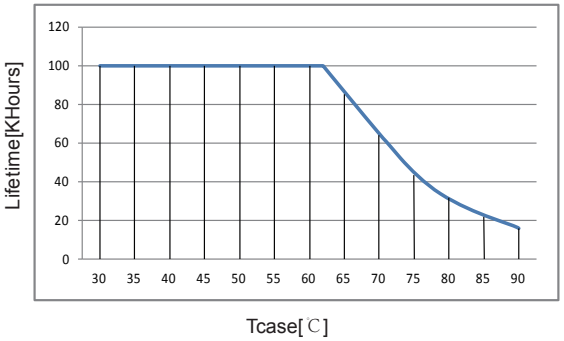
Solid or stranded copper wires only.

Test curve

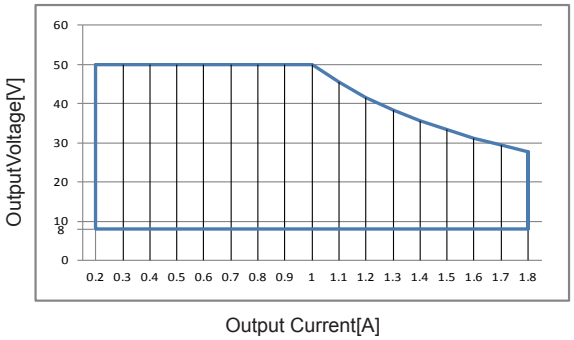




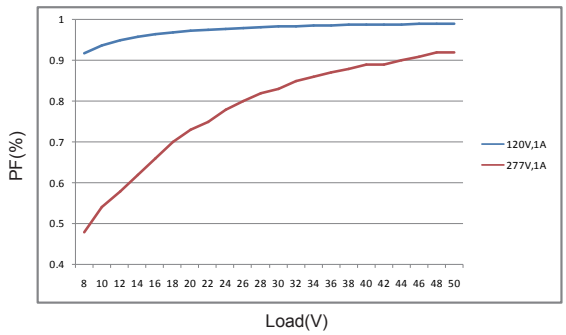
Lifetime VS.Tcase



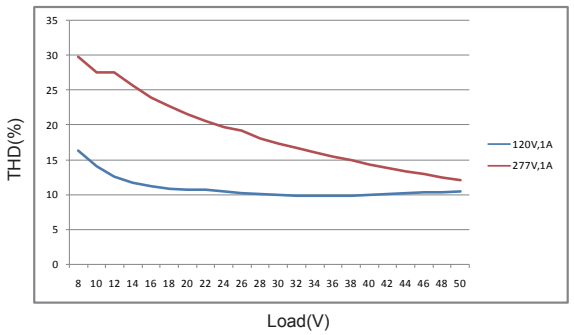
V/I OPERATING RANGE



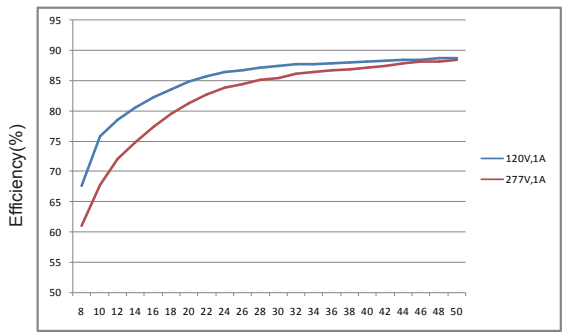
Power Factor Curve



Current Total Harmonic Curve



Efficiency Curve



0-10V Curve