



Test Report: SPWM-150-12

150W Constant Voltage PWM Output LED Driver

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

■ RELIABILITY TEST

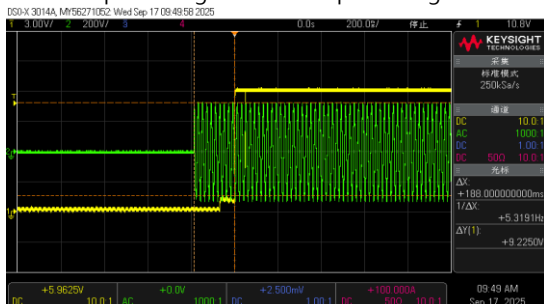
ENVIRONMENT TEST

DESIGN VERIFY TEST

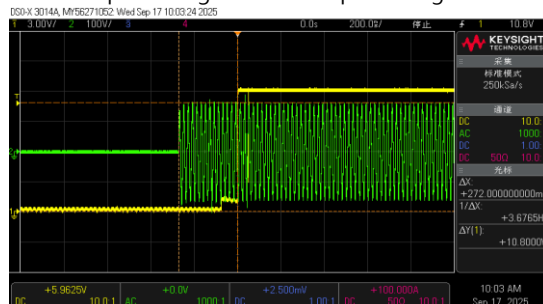
OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	DIMMING RANGE	0~100%	I/P: 230 VAC I/P:115VAC O/P:FULL LOAD Ta:25°C	0.16%~ 100% / 3.2KHz
2	VOLTAGE ADJ. RANGE	11 V ~ 14 V	I/P: 230 VAC I/P:115VAC O/P:NO LOAD Ta:25°C	Test : 10.6 V~ 14.8V/ 230V 10.6V~ 14.8 V/115V
3	OVER/UNDERSHOOT TEST	< $\pm 5\%$	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: 3.75 %
4	SET UP TIME (Max)	230VAC/ 500ms 115VAC/ 1200ms	I/P: 230 VAC I/P: 115VAC O/P:FULL LOAD Ta:25°C	230VAC/188 ms 115VAC/272 ms

INPUT=230VAC/50HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

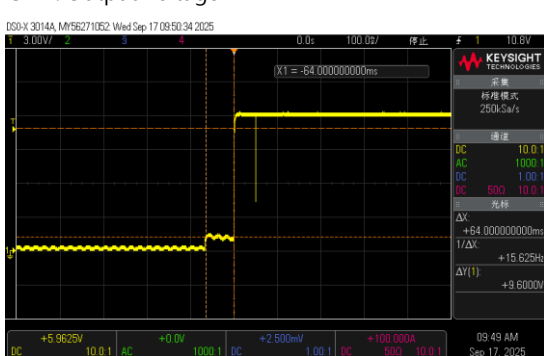


INPUT=115VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

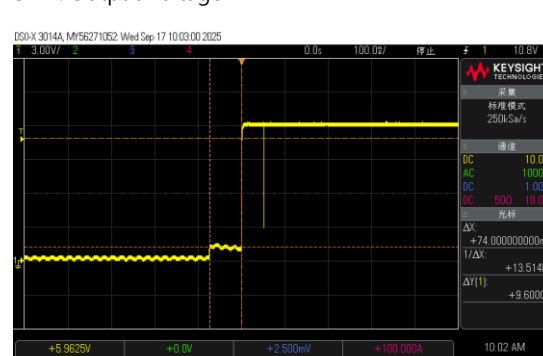


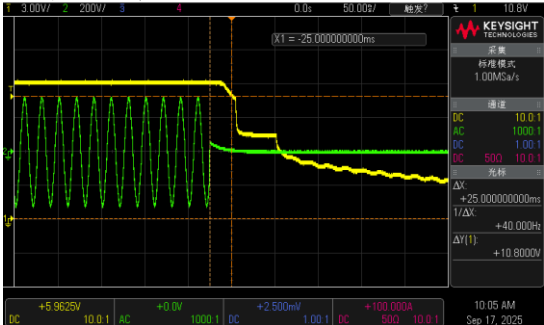
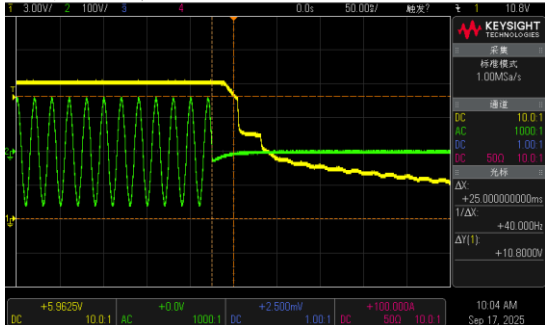
5	RISE TIME (Max)	230VAC/ 80ms 115VAC/ 80ms	I/P: 230 VAC I/P: 11VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 64ms 115 VAC/ 74ms
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INPUT=230VAC/50HZ @ FULL LOAD
CH1 : Output Voltage



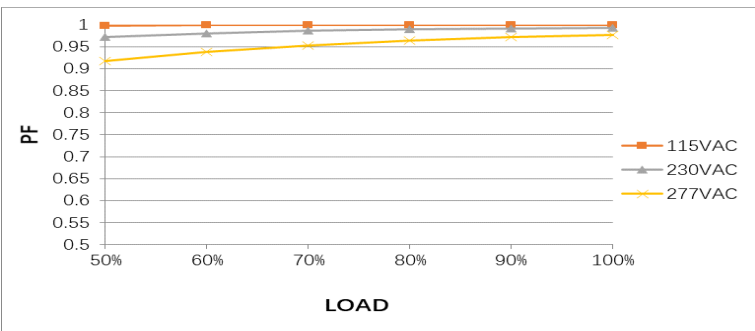
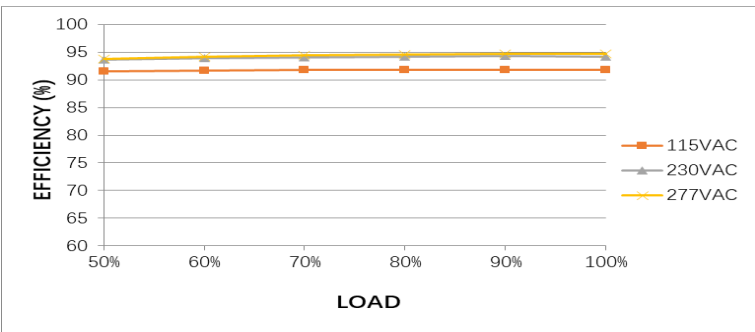
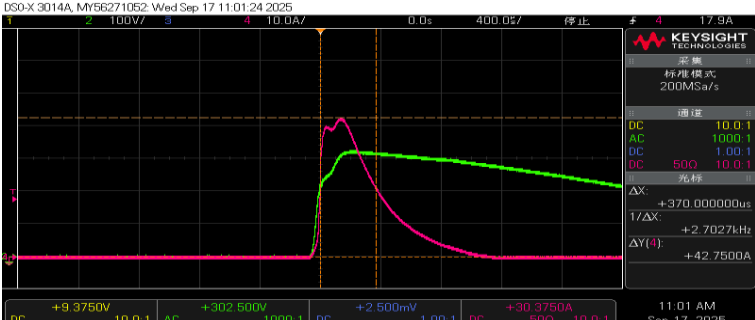
INPUT=115VAC/60HZ @ FULL LOAD
CH1 : Output Voltage

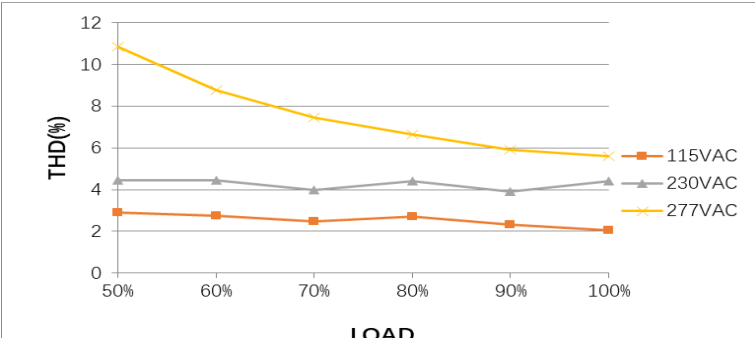


6	HOLD UP TIME (Typ.)	230VAC/ 10 ms 115VAC/ 10 ms	I/P: 230 VAC I/P: 11VAC O/P:FULL LOAD Ta:25°C	230VAC/ 25 ms 115 VAC/ 25ms
INPUT=230VAC/50HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage DSO-X 3014A, MY56271052, Wed Sep 17 10:05:56 2025  INPUT=115VAC/60HZ @ FULL LOAD CH1 : Output Voltage CH2 : AC Input Voltage DSO-X 3014A, MY56271052, Wed Sep 17 10:04:22 2025 				

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	100VAC~305 VAC 156VDC~410VDC	(1) I/P:TESTING O/P:FULL LOAD (2) I/P:DC TESTING(L:- N:-) O/P: FULL / 50% LOAD (3) I/P:DC TESTING(L:- N:+) O/P: FULL / 50% LOAD (4) I/P: LOW-LINE=156VDC HIGH-LINE=410VDC O/P: Dimming on/off Ta:25°C	(1)100 V~305 V (2)156Vdc ~ 410Vdc/FULL LOAD 156Vdc~410Vdc/50% LOAD (3)156 Vdc~410Vdc/FULL LOAD 156Vdc~410Vdc/50% LOAD (4) OK
			I/P: LOW-LINE-3V=97V HIGH-LINE+10V=315V O/P:FULL/MIN LOAD (PLEASE CHECK DERATING CURVE) ON: 30 Sec OFF: 30 Sec 10MIN (POWER ON/OFF NO DAMAGE)	TEST: OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 100 VAC ~305VAC O/P:FULL~MIN LOAD Ta:25°C	OK
3	INPUT CURRENT (TYP)	277 VAC/ 0.8 A 230 VAC/ 1.0 A 115VAC/ 1.5 A	I/P: 277VAC I/P: 230VAC I/P: 115VAC O/P:FULL LOAD Ta:25°C	I = 0.59 A/ 277VAC I = 0.70 A/ 230VAC I = 1.43 A/115VAC

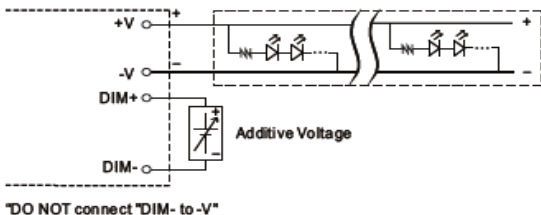
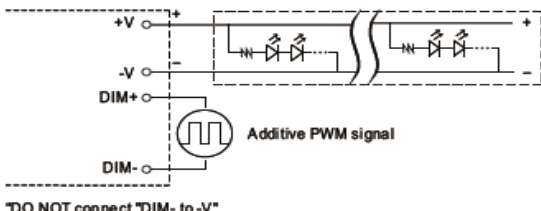
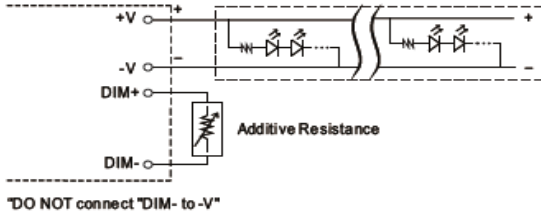
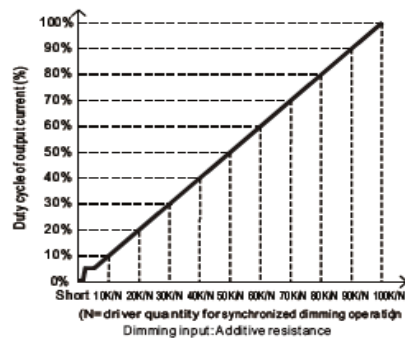
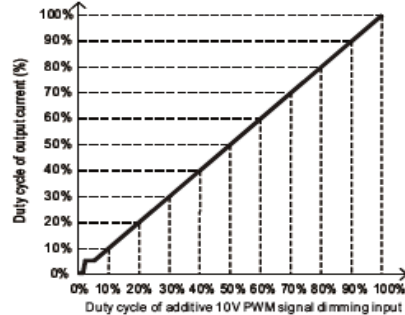
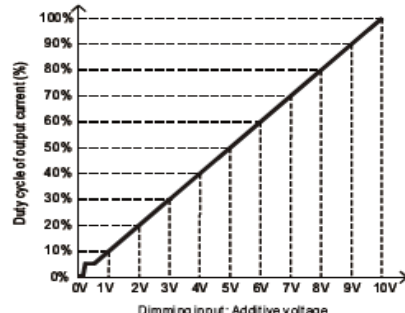
4	LEAKAGE CURRENT	< 0.25mA / 277 VAC	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG: 0.0114 mA N-FG: 0.0120mA																												
5	STANDBY POWER CONSUMPTION	<0.5W (Dimming off)	I/P: 230VAC O/P : DIM OFF Ta : 25°C	0.364W/230VAC																												
6	POWER FACTOR(TYP)	0.92 /277 VAC 0.95 /230 VAC 0.97 /115 VAC	I/P: 277VAC I/P: 230VAC I/P: 115VAC O/P: FULL LOAD Ta:25°C	PF= 0.977/277VAC PF= 0.993 /230VAC PF= 0.999 /115VAC																												
P.F vs LOAD  <table><caption>P.F vs LOAD Data</caption><thead><tr><th>LOAD</th><th>115VAC</th><th>230VAC</th><th>277VAC</th></tr></thead><tbody><tr><td>50%</td><td>0.92</td><td>0.95</td><td>0.97</td></tr><tr><td>60%</td><td>0.93</td><td>0.96</td><td>0.98</td></tr><tr><td>70%</td><td>0.94</td><td>0.97</td><td>0.99</td></tr><tr><td>80%</td><td>0.95</td><td>0.98</td><td>0.99</td></tr><tr><td>90%</td><td>0.96</td><td>0.99</td><td>0.99</td></tr><tr><td>100%</td><td>0.97</td><td>0.99</td><td>0.99</td></tr></tbody></table>					LOAD	115VAC	230VAC	277VAC	50%	0.92	0.95	0.97	60%	0.93	0.96	0.98	70%	0.94	0.97	0.99	80%	0.95	0.98	0.99	90%	0.96	0.99	0.99	100%	0.97	0.99	0.99
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7	EFFICIENCY (TYP)	92 %	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	92.9%																												
EFFICIENCY vs LOAD  <table><caption>EFFICIENCY vs LOAD Data</caption><thead><tr><th>LOAD</th><th>115VAC</th><th>230VAC</th><th>277VAC</th></tr></thead><tbody><tr><td>50%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr><tr><td>60%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr><tr><td>70%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr><tr><td>80%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr><tr><td>90%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr><tr><td>100%</td><td>92.9</td><td>92.9</td><td>92.9</td></tr></tbody></table>					LOAD	115VAC	230VAC	277VAC	50%	92.9	92.9	92.9	60%	92.9	92.9	92.9	70%	92.9	92.9	92.9	80%	92.9	92.9	92.9	90%	92.9	92.9	92.9	100%	92.9	92.9	92.9
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100%	92.9	92.9	92.9																													
8	INRUSH CURRENT (TYP)	230 V/ 55 A COLD START (twidth=500us measured at 50% Ipeak) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I = 42.75A/ 230VAC T50= 370 us																												
INPUT=230VAC/50HZ @ FULL LOAD CH4 : Input current CH2: AC Input Voltage  DSO-X 3014A, MY56271052, Wed Sep 17 11:01:24 2025 KEYSIGHT TECHNOLOGIES 标准模式 200MSa/s 通道 1 10.0 V 通道 2 1000.0 V 通道 3 1.00 V 通道 4 500.0 V 光标 ΔX: +370.000000us 1/ΔX: +2.7027kHz ΔY(1): +42.7500A 11:01 AM Sep 17, 2025																																

9	TOTAL HARMONIC DISTORTION	THD<10% @load ≥ 50%/115VAC, 230VAC; @load ≥ 75%/277VAC	I/P : 115VAC /230VAC/277VAC O/P : 75% LOAD 50% LOAD Ta : 25°C	THD : 4.44 %/230VAC*50%load THD : 2.89 %/115VAC*50%load THD : 7.47 %/277VAC*75%load																												
THD&LOAD																																
 <table><caption>THD (%) vs LOAD (%) Data</caption><thead><tr><th>LOAD (%)</th><th>115VAC THD (%)</th><th>230VAC THD (%)</th><th>277VAC THD (%)</th></tr></thead><tbody><tr><td>50%</td><td>3.0</td><td>4.5</td><td>11.0</td></tr><tr><td>60%</td><td>2.8</td><td>4.5</td><td>9.0</td></tr><tr><td>70%</td><td>2.5</td><td>4.0</td><td>7.5</td></tr><tr><td>80%</td><td>2.8</td><td>4.5</td><td>6.5</td></tr><tr><td>90%</td><td>2.5</td><td>4.0</td><td>6.0</td></tr><tr><td>100%</td><td>2.2</td><td>4.5</td><td>5.5</td></tr></tbody></table>					LOAD (%)	115VAC THD (%)	230VAC THD (%)	277VAC THD (%)	50%	3.0	4.5	11.0	60%	2.8	4.5	9.0	70%	2.5	4.0	7.5	80%	2.8	4.5	6.5	90%	2.5	4.0	6.0	100%	2.2	4.5	5.5
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100%	2.2	4.5	5.5																													

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	105 % ~ 150 %	I/P: 305VAC I/P: 230VAC I/P: 100VAC O/P: TESTING Ta: 25°C	126.4 %/ 305VAC 124.8 %/ 230VAC 126.4%/ 100VAC Protection type : Hiccup mode, recovers automatically after fault condition is removed.
2	OVER VOLTAGE PROTECTION	V1: 15 V ~ 20 V	I/P: 305VAC I/P: 230VAC I/P: 100VAC O/P: MIN LOAD Ta: 25°C	17.6V/ 305VAC 17.5V/ 230VAC 17.6V/ 100VAC Protection type : Shut down O/P voltage, re-power on to recover after fault condition is removed
3	OVER TEMPERATURE PROTECTION	NO DAMAGE	I/P: 305 VAC I/P: 100 VAC O/P: FULL LOAD	O.T.P Active Protection type : Shut down O/P voltage, re-power on to recover after fault condition is removed
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 305VAC I/P: 100 VAC O/P: FULL LOAD Ta: 25°C	NO DAMAGE Protection type : 【For Blank type】 : Shut down O/P voltage, re-power on to recover after fault condition is removed. 【For DA2/DA2Q type】 : Hiccup mode, recovers automatically after fault condition is removed.

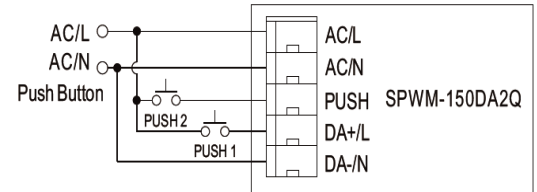
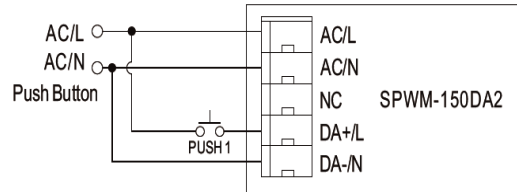
CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT									
1	DIMMING OPERATION (Blank Type)	※ 3 in 1 dimming function - Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance. - Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers. - Dimming source current from power supply: 100 μ A (typ.) ◎ Applying additive 0 ~ 10VDC  ◎ Applying additive 10V PWM signal (frequency range 300Hz~3KHz):  ◎ Applying additive resistance: 0~100k Ω   Note : 1. Min. dimming level is about 6% and the output current is not defined when 0% < I_{out} < 6%. 2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle. I/P : 230 VAC ; O/P : DIMMING TEST ;Ta : 25°C											
1	Resistance value	Short	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
	Output Current	0	1.210 A	2.410 A	3.600 A	4.790 A	6.020 A	7.280 A	8.590 A	9.960 A	11.30 A	12.500 A	12.500 A
	Output Current duty	0%	9.68 %	19.28 %	28.80 %	38.32 %	48.16 %	58.24 %	68.72 %	79.68 %	90.40 %	100.00 %	100.00 %
	Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
	Output Current	0	1.270 A	2.450 A	3.620 A	4.800 A	5.990 A	7.240 A	8.510 A	9.800 A	11.10 A	12.500 A	12.500 A
	Output Current duty	0%	10.16 %	19.60 %	28.96 %	38.40 %	47.92 %	57.92 %	68.08 %	78.40 %	88.80 %	100.00 %	100.00 %
	Duty value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
	Output Current	0	1.310 A	2.490 A	3.660 A	4.840 A	6.030 A	7.260 A	8.510 A	9.780 A	11.00 A	12.500 A	12.500 A
	Output Current duty	0%	10.48 %	19.92 %	29.28 %	38.72 %	48.24 %	58.08 %	68.08 %	78.24 %	88.00 %	100.00 %	100.00 %
	Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
	Output Current	0	1.270 A	2.450 A	3.620 A	4.800 A	5.990 A	7.240 A	8.510 A	9.800 A	11.10 A	12.500 A	12.500 A
	Output Current duty	0%	10.16 %	19.60 %	28.96 %	38.40 %	47.92 %	57.92 %	68.08 %	78.40 %	88.80 %	100.00 %	100.00 %

2 PUSH DIMMING OPERATION (DA2/DA2Q Type)

※PUSH dimming (primary side), for DA2/DA2Q Model

- Input wiring diagram



- The factory default dimming level is at 100%.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the push button to the last driver is 20 meters.

Action	Action duration
Short Push	0.1~1s
Long Push	>1s

Push Button functionally

Model	Application	Dip Switch			Push 1 for brightness	Push 2 for colour
		1	2	3		
DA2 Type	1 logic unit of LED (DT6, Brightness Dimming)				Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	This model does not feature this button.
DA2Q Type	1 logic unit of LED (DT6, Brightness Dimming)	ON	ON	ON	Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : no response Long Push : no response
	4 logic unit of LED (DT6, Brightness Dimming)	ON	ON	OFF	4 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : no response Long Push : no response
	1 logic unit of colourtype RGBW (DT8, RGBW colour control) (factory default)	OFF	OFF	OFF	Short Push : ON/OFF Long Push : Dim up/down. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : Switch to "W channel control" or "RGB color control". Long Push : Dimming "W channel control" or "RGB color control". -W channel control: Long press to dim up stop at maximum. Long press to dim down stop at minimum(0). -RGB color control: Long press to change RGB color.
	1 logic unit of colourtype Tc (DT8, Tunable white control)	ON	OFF	OFF	Short Push : ON/OFF Long Push : Dim up/down - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up, cooler/down, warmer) - dim up possible even if when unit is OFF

Model		Dip Switch			PUSH 1 for brightness	PUSH 2 for colour
		1	2	3		
DA2Q Type	2 logic units of colour type Tc (DT8. Tunable white control)	OFF	ON	OFF	2 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim up/down - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	2 control gears are synchronously controlled Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up,cooler/down,warmer) - dim up possible even if when unit is OFF
	2 logic units (1 logic unit of DT6) (1 logic unit of colour type Tc)	OFF	OFF	ON	Only the DT6 device responds Short Push : ON/OFF Long Push : Dim up/down - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change(up/down) - dim up possible even if when unit is OFF	Only the DT8 device responds Short Push : ON/OFF Long Push : Dim2Warm - The color temperature warms up while the brightness dims, and the color temperature cools down while the brightness brightens. - dim up stop at maximum; dim down stop at minimum dim (not dim off) - with next push, direction change (up,cooler/down,warmer) - dim up possible even if when unit is OFF
I/P : 230 VAC O/P : FULL LOAD Ta : 25°C TEST RESULT : OK						

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q3 Rated 650V/11 A	AC ON/OFF I/P:High-Line +3V =308V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load I/P:Low-Line -3V = 97V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	VDS: (1) 488V (2) 480V (3) 476V (4) 484V (5) 488V VDS: (1) 496V (2) 496V (3) 492V (4) 496V (5) 496V

2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated 650V/25 A	AC ON/OFF I/P:High-Line +3V =308 V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load I/P:Low-Line -3V = 97V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	VDS: (1) 548V (2) 512V (3) 508V (4) 480V (5) 496V VDS: (1) 540V (2) 540V (3) 540V (4) 540V (5) 540V
3	P.F.C DIODE	D5 Rated 8A/ 600V	AC ON/OFF I/P:High-Line +3V =308 V O/P: (1)Full Load input (2)Output Short (3)Dimming off (4)OLP (5) No Load I/P: Low-Line -3V = 97V O/P: (1)Full Load (2)Output Short (3)Dimming off (4)OLP (5) No Load Ta:25°C	(1) 468V (2) 468V (3) 468V (4) 468V (5) 464V (1) 464V (2) 464V (3) 468V (4) 464V (5) 468V
4	Diode Peak Voltage	Q100 Rated 179A/45V	AC ON/OFF I/P: High-Line +3V =308 V O/P: (1)Full Load (2)Output Short (3) Dimming off (4) OLP (5).NO LOAD Ta:25°C	VDS: (1) 36.3V (2) 35.5V (3) 35.9V (4) 36.7V (5) 35.5V
5	Input Capacitor Voltage	C5 Rated: 68μ / 450V Surge voltage: 580V	I/P:High-Line +3V =308V O/P: (1)Full Load input on/off (2) Min load input on /Off (3)Full Load /Min load Change (4)Full load continue Ta:25°C	(1) 464V (2) 460V (3) 460V (4) 448V

6	Control IC Voltage Test	PWM IC U2Rated 10V~27V PFC IC U1 Rated -0.3 V~ 27V MCU IC U602 Rated 1.7 V~ 3.6 V	AC ON/OFF I/P:High-Line +3V =308 V O/P:(1) Full Load (2) Output Short (3) O.L.P (4) O.V.P. (5) No Load VR min (Low Line) (6) DIM OFF Ta:25°C	U2 (1) 15.9V (2) 15.9V (3) 15.9V (4) 15.9V (5) 11.7V (6) 12.9 V U1 (1) 15.9V (2) 15.9V (3) 15.9V (4) 15.9V (5) 11.7V (6) 12.9V U602 (1)3.307V (2)3.305V (3)3.307V (4)3.306V (5)3.306V (6)3.307V
7	DIMMING MOS (DA2Q type)	Q110/ Q113 Rated : 160A/40V	AC ON/OFF I/P : High-Line +3V = 308 V O/P : (1) Full Load (2) Output Short (3) Dim on/off Ta : 25°C	Q110 (1) 12.73V (2) 12.49V (3) 7.66 V Q113 (1) 11.1V (2) 12.57V (3) 7.50V

SAFETY & EMC TEST REPORT

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	I/P-O/P: 3.75 K VAC/min	I/P-O/P: 4.125 KVAC/min Ta:25°C	I/P - O/P: 0.978 mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P: 500 VDC>100MΩ	I/P-O/P: 500 VDC Ta:25°C	I/P - O/P: >9999 MΩ NO DAMAGE

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS C	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS
2	CONDUCTION	EN55015 CLASS B	I/P: 230 VAC /50HZ O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab
3	RADIATION	EN55015 CLASS B	I/P: 230 VAC /50HZ O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 AIR :8KV / Contact :4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A/ Blank type CRITERIA B/ DA2&DA2Q type
5	E.F.T	EN61000-4-4 INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 L-N :2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
7	Test by certified Lab & Test Report Prepare Any contradictions of the test results, please refer to the latest EMC test report			

■ RELIABILITY TEST

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT																																																																																				
1	TEMPERATURE RISE TEST	MODEL : SPWM-150-12 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=24.3 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=46.2 °C <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta=24.3°C</th><th>HIGH AMBIENT Ta=46.2 °C</th></tr><tr><td>1</td><td>RTH1</td><td>73.8°C</td><td>85.6°C</td></tr><tr><td>2</td><td>BD1</td><td>67.6°C</td><td>87.0°C</td></tr><tr><td>3</td><td>C10</td><td>68.8°C</td><td>88.3°C</td></tr><tr><td>4</td><td>L2</td><td>73.9°C</td><td>93.8°C</td></tr><tr><td>5</td><td>Q1</td><td>72.2°C</td><td>91.4°C</td></tr><tr><td>6</td><td>D5</td><td>74.3°C</td><td>94.1°C</td></tr><tr><td>7</td><td>R7</td><td>71.6°C</td><td>91.1°C</td></tr><tr><td>8</td><td>C5</td><td>64.0°C</td><td>85.1°C</td></tr><tr><td>9</td><td>U2</td><td>73.6°C</td><td>93.9°C</td></tr><tr><td>10</td><td>C60</td><td>69.0°C</td><td>90.0°C</td></tr><tr><td>11</td><td>U1</td><td>71.6°C</td><td>91.0°C</td></tr><tr><td>12</td><td>Q2</td><td>76.2°C</td><td>97.1°C</td></tr><tr><td>13</td><td>T1</td><td>74.3°C</td><td>96.7°C</td></tr><tr><td>14</td><td>U100</td><td>69.7°C</td><td>91.8°C</td></tr><tr><td>15</td><td>Q100</td><td>75.7°C</td><td>98.7°C</td></tr><tr><td>16</td><td>C130</td><td>73.2°C</td><td>95.9°C</td></tr><tr><td>17</td><td>C105</td><td>80.2°C</td><td>103.0°C</td></tr><tr><td>18</td><td>Q110</td><td>71.6°C</td><td>95.4°C</td></tr><tr><td>19</td><td>RTH2</td><td>66.9°C</td><td>87.2°C</td></tr><tr><td>20</td><td>TC</td><td>54.7°C</td><td>79.0°C</td></tr></table>			NO	Position	ROOM AMBIENT Ta=24.3°C	HIGH AMBIENT Ta=46.2 °C	1	RTH1	73.8°C	85.6°C	2	BD1	67.6°C	87.0°C	3	C10	68.8°C	88.3°C	4	L2	73.9°C	93.8°C	5	Q1	72.2°C	91.4°C	6	D5	74.3°C	94.1°C	7	R7	71.6°C	91.1°C	8	C5	64.0°C	85.1°C	9	U2	73.6°C	93.9°C	10	C60	69.0°C	90.0°C	11	U1	71.6°C	91.0°C	12	Q2	76.2°C	97.1°C	13	T1	74.3°C	96.7°C	14	U100	69.7°C	91.8°C	15	Q100	75.7°C	98.7°C	16	C130	73.2°C	95.9°C	17	C105	80.2°C	103.0°C	18	Q110	71.6°C	95.4°C	19	RTH2	66.9°C	87.2°C	20	TC	54.7°C	79.0°C
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P : 230 VAC O/P : 124 * LOAD Ta : 25°C	TEST : OK																																																																																				
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 305VAC/100VAC O/P : 100/80 * LOAD Ta=-25°C	TEST : OK																																																																																				
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 45 °C NO DAMAGE	I/P : 315 VAC O/P : FULL LOAD Ta=45 °C HUMIDITY= 95 %R.H	TEST : OK																																																																																				
5	TEMPERATURE COEFFICIENT	± 0.03 %(0~50°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.008 %(0~50°C)																																																																																				

6	STORAGE TEMPERATURE TEST	-40~+80°C	1. Thermal shock Temperature : -45°C~ +90°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10CYCLE 5. Input/output condition : STATIC TEST : OK
7	THERMAL SHOCK TEST	-20~+45°C	1. Thermal shock Temperature : -25°C~ +50°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 16 CYCLE 5. Input/output condition : 15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST 1cycle:230V/ FULL LOAD Burn In Test
8	VIBRATION TEST	5 ~ 100Hz, 2G 12min./1cycle, 72min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 5~100Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 3G (5) Test Time : 180min in each axis (X.Y.Z) (6) Ta : 25°C
9	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Ta=25 °C LIFE TIME (2) I/P : 230VAC O/P : FULL LOAD Ta=45 °C LIFE TIME (3) I/P : 230VAC O/P : 75% LOAD Ta =45 °C LIFE TIME (4) I/P : 230VAC O/P : 50% LOAD Ta =45 °C LIFE TIME	(1) 320649HRS (2) 28909HRS (3) 162566HRS (4) 597077HRS
10	MTBF	Conducted by Parts Stress Analysis Prediction 1926.4K hrs min. Telcordia SR-332 (Bellcore) ; 158.1K hrs min. MIL-HDBK-217F (25°C)	
11	Ongoing Reliability Test	I/P : 230VAC O/P : FULL LOAD TA=50°C Demonstration Mean Time Between Failure : 50,000 hours	

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	WUWQIN/ZHOUBIAO	WENF	WUWQ

2020.10.1 TAG-QA-009