



Test Report: HVGC-480-H

480W Constant Power Mode 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

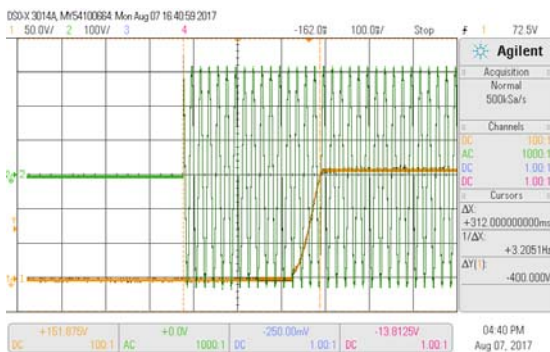


DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	CURRENT TOLERANCE	±5%	I/P: 347VAC I/P: 480VAC O/P: FULL LOAD Io: 2.8A & 3.5A Ta: 25°C	Io: 2.8A: 2.8349A/347VAC@LED MAX-2V 2.8315A/347VAC@LED MIN 2.8363 A/480VAC@LED MAX-2V 2.8315A/480VAC@LED MIN 1.29% Io: 3.5A 3.5265A/347VAC@LED MAX-2V 3.5163A/347VAC@LED MIN 3.5287 A/480VAC@LED MAX-2V 3.5163A/480VAC@LED MIN 0.82%
2	FULL POWER CURRENT RANGE	2800~3500mA	I/P: 347VAC O/P: FULL LOAD Io: 2.8A & 3.5A Ta: 25°C	2.8A / 171.5V 3.5A / 137.1V
3	OPEN CIRCUIT VOLTAGE (max)	180V	I/P: 347VAC O/P: NO LOAD Io: Io Adj = 2.8A Ta: 25°C	173.02V
4	CONSTANT CURRENT REGION	CH1: 68V~ 171.5V	I/P: 347VAC O/P: FULL LOAD Io: 2.8A & 3.5A Ta: 25°C	Io: 2.8A: 1V~171.5V/347VAC Io: 3.5A 1V~137.1V/347VAC
5	CURRENT ADJ. RANGE	CH1: 1400mA~3500mA	I/P: 180VAC I/P: 528VAC O/P: LED MIN & LED MAX-2V Ta: 25°C	3697mA~1132mA/180VAC@LED=137.1V 3693mA~1150mA /180VAC@LED=68V 3708mA~1131mA/528VAC@ LED=137.1V 3698mA~1150mA/528VAC@ LED=68V
6	CURRENT RIPPLE	5% max. @rated current	I/P: 347VAC O/P: FULL LOAD Io: 2.8A & 3.5A Ta: 25°C	Io: 2.8A: 3.96% Io: 3.5A: 2.92%
7	SET UP TIME	230VAC/ 500 ms (Max) 347VAC/ 500 ms (Max) 480VAC/ 500 ms (Max)	I/P: 230VAC I/P: 347VAC I/P: 480VAC O/P: FULL LOAD Ta: 25°C	230VAC/ 312 ms 347VAC/ 256ms 480VAC/ 240 ms

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



INPUT=347VAC/60HZ @ FULL LOAD
CH1 : Output Voltage CH2 : AC Input Voltage

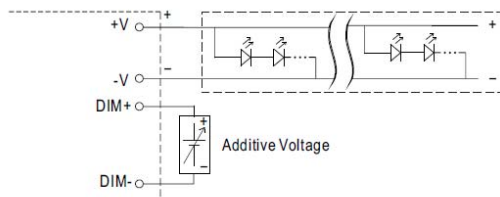


8 DIMMING OPERATION (for B-Type)

※3 in 1 dimming function

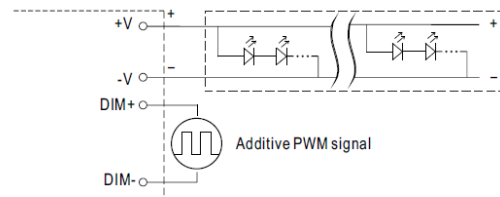
- ※Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- ※Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- ※Dimming source current from power supply: 100 μ A (typ.)

◎ Applying additive 0 ~ 10VDC



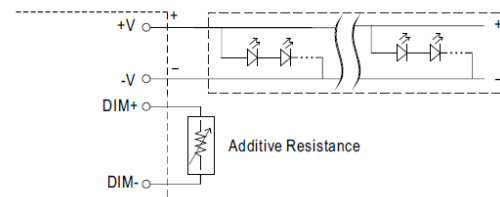
"DO NOT connect "DIM- to -V"

◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):

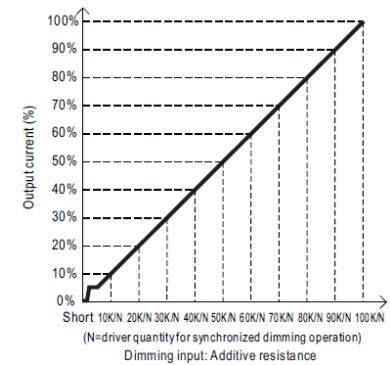
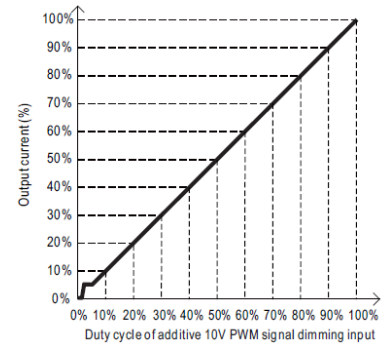
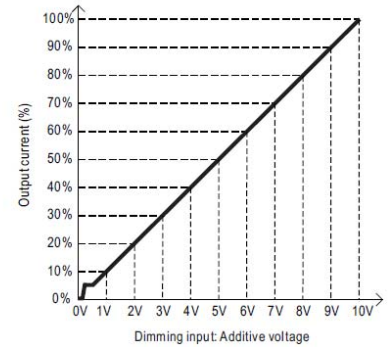


"DO NOT connect "DIM- to -V"

◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"



- Note : 1. Min. dimming level is about 5% 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 0k Ω or 0Vdc, or 10V PWM signal with 0% duty cycle.

I/P : 347VAC
 O/P : DIMMING TEST
 TA : 25 $^{\circ}$ C

R	SHORT	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
O/P CURRENT	0.0000A	0.301A	0.567A	0.860A	1.127A	1.408A	1.692A	1.976A	2.234A	2.533A	2.808A	2.813A
%	0.00%	10.75%	20.25%	30.71%	40.25%	50.29%	60.43%	70.57%	79.79%	90.46%	100.29%	100.46%
V	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
O/P CURRENT	0.0000A	0.300A	0.592A	0.858A	1.138A	1.420A	1.688A	1.986A	2.270A	2.556A	2.811A	2.813A
%	0.00%	10.71%	21.14%	30.64%	40.64%	50.71%	60.29%	70.93%	81.07%	91.29%	100.39%	100.46%

PWM (100HZ)	SHORT	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
O/P CURRENT	0.0000A	0.301A	0.567A	0.860A	1.127A	1.408A	1.692A	1.976A	2.234A	2.533A	2.808A	2.813A
%	0.00%	10.75%	20.25%	30.71%	40.25%	50.29%	60.43%	70.57%	79.79%	90.46%	100.29%	100.46%

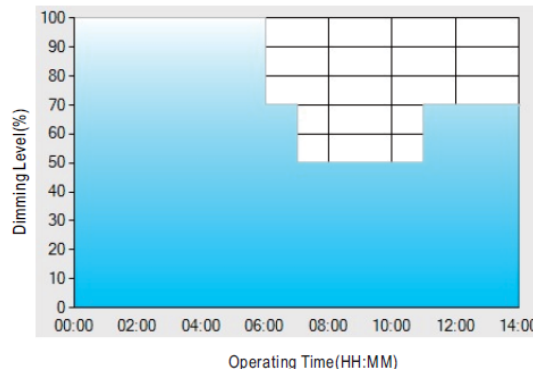
TEST RESULT : OK

9 DIMMING OPERATION (for Dxx-Type by User definition)

※**Smart timer dimming function (for Dxx-Type by User definition)**

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

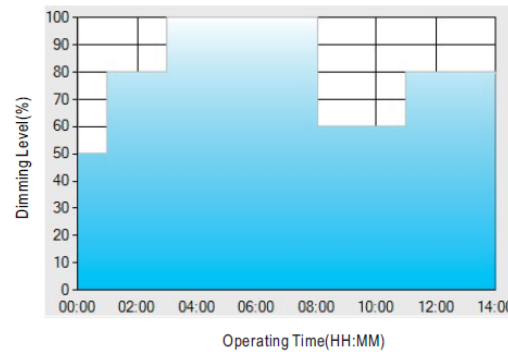
Ex : ☉ D01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	--
LEVEL**	100%	70%	50%	70%

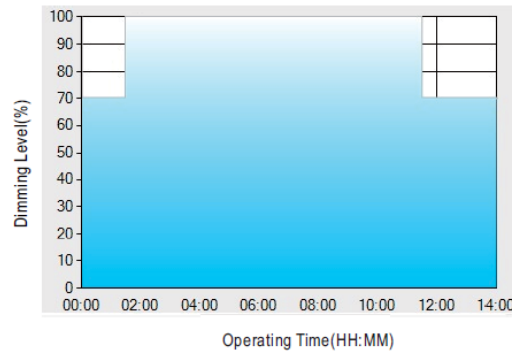
Ex : ☉ D02-Type: the profile recommended for street lighting



Set up for D02-Type in Smart timer dimming software program:

	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	--
LEVEL**	50%	80%	100%	60%	80%

Ex : ☉ D03-Type: the profile recommended for tunnel lighting



Set up for D03-Type in Smart timer dimming software program:

	T1	T2	T3
TIME**	01:30	11:00	--
LEVEL**	70%	100%	70%

I/P : 347VAC
 O/P : DIMMING TEST
 TA : 25°C
 TEST RESULT : OK

10 DALI interface(primary side)

DALI protocol including 16 groups and 64 addresses.

First step is fixed at 6% of output.

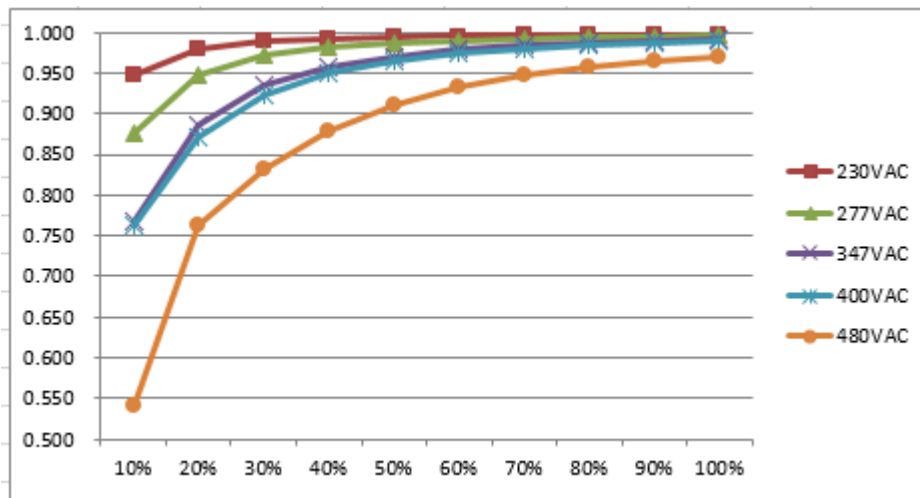
I/P : 347VAC
 O/P : DALI TEST
 TA : 25°C

TEST RESULT : OK

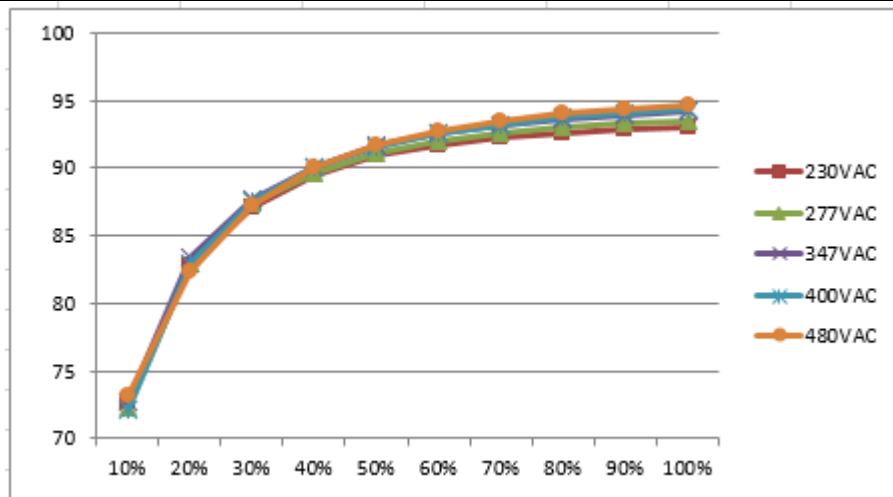
INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC~528 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	157V~528 V
			I/P: LOW-LINE-3V=177 V HIGH-LINE+10V=538 V O/P:FULL/MIN LOAD (PLEASE CHECK DERATING CURVE) ON: 30 Sec OFF: 30 Sec 10MIN (POWER ON/OFF NO DAMAGE)	(1).TEST:OK (2).TEST :OK
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE	I/P: 180 VAC ~528VAC O/P:FULL~MIN LOAD Ta:25°C	TEST:OK
3	INPUT CURRENT (TYP)	347VAC/ 1.52 A 480VAC/ 1.11A	I/P: 347VAC/480VAC O/P:FULL LOAD Ta:25°C	I =1.487A/ 347VAC I =1.087A/480VAC
4	POWER FACTOR(TYP)	0.98/230 VAC FULL LOAD 0.98/277 VAC FULL LOAD 0.97/347VAC FULL LOAD 0.95/480VAC FULL LOAD	I/P: 347VAC/480VAC/277VAC/230VAC O/P:FULL LOAD Ta:25°C	PF= 0.9985/230V/100%LOAD PF=0.9964/277V/100%LOAD PF=0.9941 /347V/100%LOAD PF=0.9799 /480V/100%LOAD

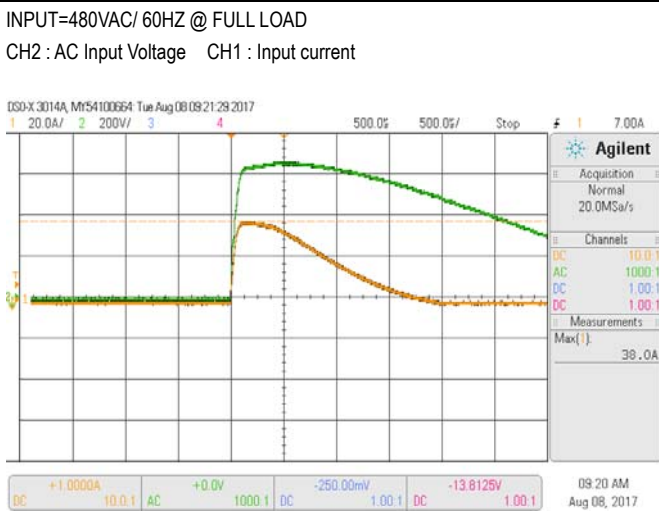
P.F vs LOAD



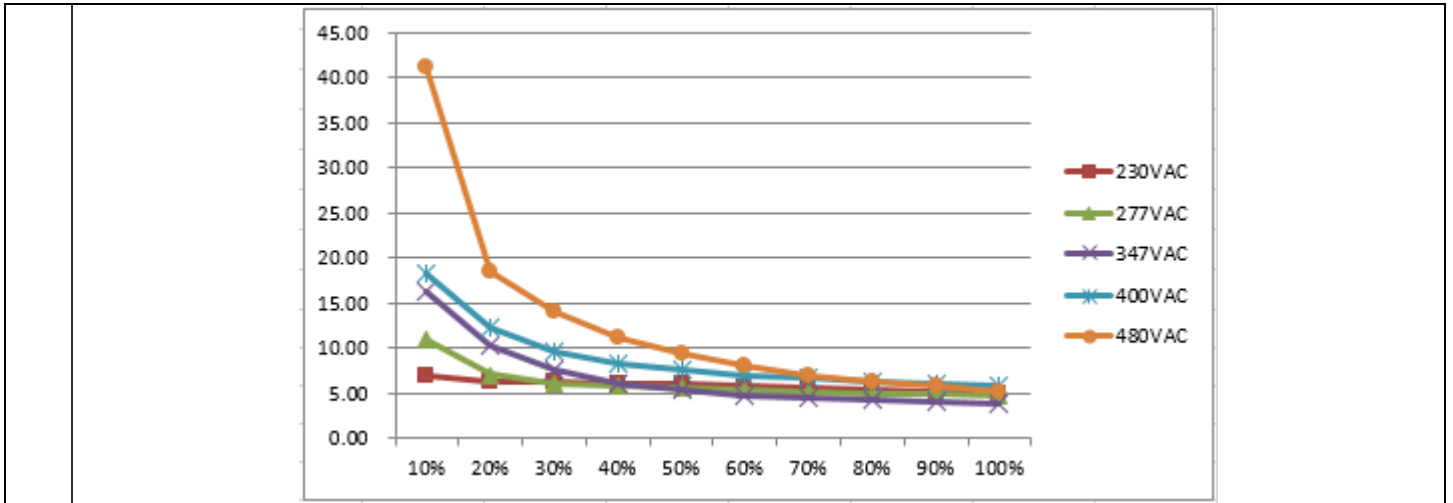
5	EFFICIENCY (TYP)	94.5%	I/P: 347VAC O/P:FULL LOAD. Ta:25°C	94.5%
	EFFICIENCY vs LOAD			



6	INRUSH CURRENT (TYP)	480V/ 40A COLD START (twidth=1100 us measured at 50% Ipeak) COLD START	I/P: 480VAC O/P: FULL LOAD Ta: 25°C	I = 38A/480VAC T50= 920 μ S
	INPUT=480VAC/ 60HZ @ FULL LOAD CH2 : AC Input Voltage CH1 : Input current			



7	TOTAL HARMONIC DISTORTION	THD < 20% output load \geq 50% at 230VAC/277VAC/347VAC /480VAC input	I/P : 230V/277V/347V/480V O/P : 100% LOAD 50% LOAD Ta : 25°C	THD : 2.9 %/230V 50% THD : 2.49 %/230V 100% THD : 3.11 %/277V 50% THD : 2.37 %/277V 100% THD : 3.85 %/347V 50% THD : 2.93 %/347V 100% THD : 8.47 %/480V 50% THD : 5.45 %/480V 100%
	THD vs LOAD			



ROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER VOLTAGE PROTECTION	V1: 177V~ 196 V PROTECTION TYPE : Shut down output voltage, re-power on to recovery	I/P: 528VAC I/P: 347VAC I/P: 180VAC O/P:MIN LOAD Ta:25°C	186.02V/ 528VAC 185.79V/ 347VAC 185.6V/ 180VAC PROTECTION TYPE : Shut down output voltage, re-power on to recovery
2	OVER TEMPERATURE PROTECTION	PROTECTION TYPE : Shut down output voltage, re-power on to recovery	I/P: 528 VAC I/P: 180 VAC O/P:FULL LOAD	O.T.P. PROTECTION TYPE : Shut down output voltage, re-power on to recovery
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE PROTECTION TYPE : Constant current, recovers automatically after fault condition is removed	I/P: 528VAC I/P: 180 VAC O/P: FULL LOAD Io: 2.8A &3.5A Ta:25°C	Io: 2.8A NO DAMAGE PROTECTION TYPE : Constant current, recovers automatically after fault condition is removed Io: 3.5A NO DAMAGE PROTECTION TYPE : Constant current, recovers automatically after fault condition is removed

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	PWM Transistor (D to S) or (C to E) Peak Voltage	Q11 Rated 9A/ 950V Q13 Rated 9A/ 950V	Io:2.8A / 3.5A I/P:High-Line +3V =531v AC ON/OFF VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue I/P:Low-Line -3V = 177V O/P: (1)Full Load (2)Output Short (3) Full Load continue	Io:2.8A Io: 3.5A Q11 Q11 VDS: VDS: (1)856V (1) 848V (2) 775V (2) 783V (3)783 V (3) 791V VDS: VDS: (1)832V (1)840V (2) 775V (2)783 V (3) 807V (3) 807V

			Ta:25°C	Q13 VDS: (1)824V (2)832 V (3) 856V VDS: (1)832V (2) 775V (3)799 V	Q13 VDS: (1)832V (2) 815V (3)783 V VDS: (1)807V (2) 775V (3) 815V
2	P.F.C Transistor (D to S) or (C to E) Peak Voltage	Q4 Rated 9A/ 950V	I/P:High-Line +3V =531V AC ON/OFF VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue I/P:Low-Line -3V = 177V O/P: (1)Full Load (2)Output Short (3) Full Load continue Ta:25°C	Io: 2.8A Q4 VDS: (1)815V (2)759V (3)807V VDS: (1)856V (2)775V (3)783V	
3	P.F.C DIODE	D8 Rated 8 A/ 1200 V	I/P:High-Line +3V =531 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue I/P:Low-Line -3V = 177V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue Ta:25°C	(1)840V (2)791V (3)783V (1)815V (2)783V (3)824V	
4	Diode Peak Voltage	D100 Rated 10 A/ 400V D110 Rated 10A/ 400V	Io: 2.8A /3.5A I/P:High-Line +3V =531 V D100 : AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue D110 AC ON/OFF O/P: (1) Full Load (2)Output Short (3) Full Load continue Ta:25°C	Io: 2.8A D100 VDS: (1)356V (2)26V (3)352V D110 VDS: (1)356V (2)18V (3)356V	Io:3.5A D100 VDS: (1)283.V (2)26V (3)291V D110 VDS: (1)287V (2)22V (3)287V
5	Input Capacitor Voltage	C5 Rated: 150μ/ 450V 105°C	I/P:High-Line +3V =531V 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)403V (2)399V (3)411V (4)386V	

6	Control IC Voltage Test	PFC IC U1 Rated 20V~10.5V(MIN.)	I/P:High-Line +3V =531 V AC ON/OFF O/P(1)FULL LOAD	Io :2.8A U1: (1) 13.3V (2) 13.5V (3) 13.5V (4) 13.5V (5) 13.5 V	Io :2.8A U2: (1) 13.3V (2) 13.3V (3) 13.3V (4) 13.3V (5) 13.3V
		PWM IC U2 Rated 16V~ 8.85V(MIN.)	(2) Output Short (3)O.L.P (4)O.V.P. (5)NO LOAD VR _{min} .(LOW LINE) Ta:25°C		

SAFETY & EMC TEST

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	IEC60950-1 I/P-O/P: 3.75KVAC/min I/P-FG: 2 KVAC/min<4.5 mA O/P-FG:1.5KVAC/min	I/P-O/P: 4.125 KVAC/min I/P-FG: 2.4KVAC/min O/P-FG: 1.8 KVAC/min Ta:25°C	I/P-O/P: 2.56mA I/P-FG:1.696 mA O/P-FG: 5.92 mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P:30GΩ I/P-FG:30G Ω O/P-FG:30G Ω NO DAMAGE
3	GROUNDING CONTINUITY	IEC60950-1 FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40A / 2min Ta:25°C	28 mΩ
4	LEAKAGE CURRENT	IEC60950-1 < 0.75 mA / 480VAC	I/P: 480 VAC O/P:Min LOAD Ta:25°C	L-FG:0.22mA N-FG: 0.22mA

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS A	I/P:230VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS
2	CONDUCTION	FCC Part 15 Subpart B	I/P:230/400/480VAC (50HZ/60HZ) O/P:FULL/80% LOAD Ta:25°C	PASS Test by certified Lab
3	RADIATION	FCC Part 15 Subpart B	I/P:230/400/480VAC (50HZ/60HZ) O/P:FULL/80% LOAD Ta:25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230/400VAC (50HZ) O/P:FULL LOAD Ta:25°C	CRITERIA A
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230/400VAC (50HZ) O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230/400VAC (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 : HVGC-480-H 1. ROOM AMBIENT BURN-IN : 1.5 HRS I/P : 347VAC O/P : FULL LOAD 2. HIGH AMBIENT BURN-IN : 1.5 HRS I/P : 347VAC O/P : FULL LOAD																																																																																										
				<table border="1"> <thead> <tr> <th>CH.</th> <th>Position</th> <th>ROOM AMBIENT Ta= 25 °C</th> <th>HIGH AMBIENT Ta= 60 °C</th> </tr> </thead> <tbody> <tr><td>1</td><td>BD1</td><td>59.5°C</td><td>95.4°C</td></tr> <tr><td>2</td><td>C11</td><td>58.8°C</td><td>94.6°C</td></tr> <tr><td>3</td><td>Q1</td><td>59.4°C</td><td>95.5°C</td></tr> <tr><td>4</td><td>D8</td><td>64.4°C</td><td>102.8°C</td></tr> <tr><td>5</td><td>L3</td><td>63.4°C</td><td>100.3°C</td></tr> <tr><td>6</td><td>LF3</td><td>60.2°C</td><td>96.4°C</td></tr> <tr><td>7</td><td>LF2</td><td>57.2°C</td><td>93.0°C</td></tr> <tr><td>8</td><td>C1</td><td>54.5°C</td><td>90.2°C</td></tr> <tr><td>9</td><td>Q10</td><td>63.1°C</td><td>100.3°C</td></tr> <tr><td>10</td><td>Q12</td><td>65.0°C</td><td>101.7°C</td></tr> <tr><td>11</td><td>C5</td><td>56.9°C</td><td>92.9°C</td></tr> <tr><td>12</td><td>RY1</td><td>60.6°C</td><td>97.1°C</td></tr> <tr><td>13</td><td>T1-1</td><td>64.6°C</td><td>99.2°C</td></tr> <tr><td>14</td><td>T1-2</td><td>64.1°C</td><td>102.1°C</td></tr> <tr><td>15</td><td>D103</td><td>58.5°C</td><td>94.4°C</td></tr> <tr><td>16</td><td>D114</td><td>57.9°C</td><td>94.5°C</td></tr> <tr><td>17</td><td>C105</td><td>55.2°C</td><td>90.8°C</td></tr> <tr><td>18</td><td>C120</td><td>51.3°C</td><td>87.2°C</td></tr> <tr><td>19</td><td>U501</td><td>70.4°C</td><td>107.8°C</td></tr> <tr><td>20</td><td>C93</td><td>64.4°C</td><td>100.1°C</td></tr> <tr><td>21</td><td>RTH2</td><td>60.0°C</td><td>95.1°C</td></tr> </tbody> </table>	CH.	Position	ROOM AMBIENT Ta= 25 °C	HIGH AMBIENT Ta= 60 °C	1	BD1	59.5°C	95.4°C	2	C11	58.8°C	94.6°C	3	Q1	59.4°C	95.5°C	4	D8	64.4°C	102.8°C	5	L3	63.4°C	100.3°C	6	LF3	60.2°C	96.4°C	7	LF2	57.2°C	93.0°C	8	C1	54.5°C	90.2°C	9	Q10	63.1°C	100.3°C	10	Q12	65.0°C	101.7°C	11	C5	56.9°C	92.9°C	12	RY1	60.6°C	97.1°C	13	T1-1	64.6°C	99.2°C	14	T1-2	64.1°C	102.1°C	15	D103	58.5°C	94.4°C	16	D114	57.9°C	94.5°C	17	C105	55.2°C	90.8°C	18	C120	51.3°C	87.2°C	19	U501	70.4°C	107.8°C	20	C93	64.4°C	100.1°C	21	RTH2	60.0°C	95.1°C
CH.	Position	ROOM AMBIENT Ta= 25 °C	HIGH AMBIENT Ta= 60 °C																																																																																									
1	BD1	59.5°C	95.4°C																																																																																									
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6	LF3	60.2°C	96.4°C																																																																																									
7	LF2	57.2°C	93.0°C																																																																																									
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9	Q10	63.1°C	100.3°C																																																																																									
10	Q12	65.0°C	101.7°C																																																																																									
11	C5	56.9°C	92.9°C																																																																																									
12	RY1	60.6°C	97.1°C																																																																																									
13	T1-1	64.6°C	99.2°C																																																																																									
14	T1-2	64.1°C	102.1°C																																																																																									
15	D103	58.5°C	94.4°C																																																																																									
16	D114	57.9°C	94.5°C																																																																																									
17	C105	55.2°C	90.8°C																																																																																									
18	C120	51.3°C	87.2°C																																																																																									
19	U501	70.4°C	107.8°C																																																																																									
20	C93	64.4°C	100.1°C																																																																																									
21	RTH2	60.0°C	95.1°C																																																																																									
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 528VAC/180VAC O/P : 100 % LOAD Ta= -45°C	TEST : OK																																																																																								
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60 °C NO DAMAGE	I/P : 538VAC O/P : FULL LOAD Ta= 60 °C HUMIDITY= 95 %R.H	TEST : OK																																																																																								
4	TEMPERATURE COEFFICIENT	± 0.03%/°C (0~60°C)	I/P : 347 VAC O/P : FULL LOAD	± 0.013 %/°C (0~60°C)																																																																																								
5	STORAGE TEMPERATURE TEST	1. Thermal shock Temperature : -50°C~ +125°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 100 CYCLE 5. Input/Output condition : STATIC		OK																																																																																								
6	THERMAL SHOCK TEST	1. Thermal shock Temperature : -45°C~ +65°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:347V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST 1cycle:347V/ FULL LOAD Burn In Test		OK																																																																																								



480W Single Output LED Power Supply **HVGC-480** series

7	VIBRATION TEST	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 5G (5) Test Time : 72min in each axis (X.Y.Z) (6) Ta : 25°C	TEST : OK
8	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT (1) I/P : 347VAC O/P : FULL LOAD Tc= 80 °C LIFE TIME (2) I/P : 347VAC O/P : 75% LOAD Tc= 80 °C LIFE TIME (3) I/P : 347VAC O/P : 50% LOAD Tc= 80 °C LIFE TIME	(1) 64302HRS (2) 68299HRS (3) 70785HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction 286.1K hrs min. Telcordia SR-332(Bellcore) ; 72.9K hrs min. MIL-HDBK-217F (25°C)	
10	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	DANIEL GAO	SANFORD SU	VINCENT ZENG

12.10.30 A50-F031