



# Test Report: HLG-480H-C3500

---

480W Single Output LED Power Supply

## ■ 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

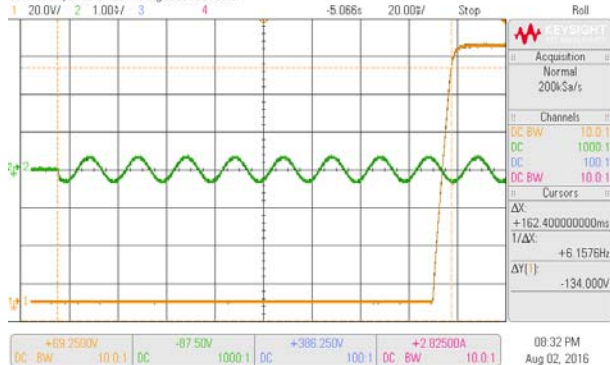
### OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	CURRENT TOLERANCE	±5%	I/P: 230 VAC I/P:115VAC O/P:FULL LOAD Ta:25°C	3.511A /230VAC@CV MAX-1V 3.512A /230VAC@CV MIN 3.512A/115VAC@CV MAX-1V 3.513A/115VAC@CV MIN 0.374%
2	CONSTANT CURRENT REGION	CH1:68 V- 137V	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	0.32V~137V /230VAC
3	OPEN CIRCUIT VOLTAGE (max.)	170V	I/P: 230 VAC O/P:NO LOAD Ta:25°C	139.17V/230VAC
4	CURRENT ADJ. RANGE	CH1:1750mA~ 3500mA	I/P: 230 VAC I/P:115VAC O/P:CV MIN & CV MAX-1V Ta:25°C	1.456A~ 3.753A /230VAC@CV MAX-1V 1.457A~ 3.754A /230VAC@CV MIN 1.456A~3.754A/115VAC@CV MAX-1V 1.457A~3.755A/115VAC@CV MIN
5	CURRENT RIPPLE	5% max. @rated current	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	2.83%
6	SET UP TIME (Max)	230VAC/ 500 ms (Max) 115VAC/ 500ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 162.4ms 115 VAC/187ms

INPUT=230VAC/50HZ @ FULL LOAD

CH1 : Output Voltage CH2 : AC Input Voltage

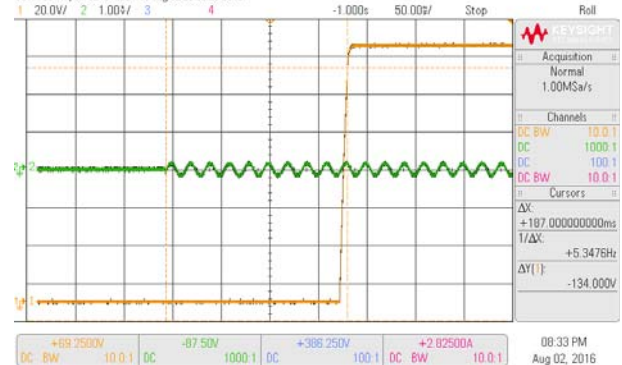
050-X:3014A, M/52161480 Tue Aug 02 20:32:34 2016



INPUT=115VAC/60HZ @ FULL LOAD

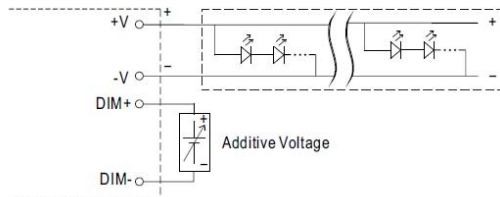
CH1 : Output Voltage CH2 : AC Input Voltage

050-X:3014A, M/52161480 Tue Aug 02 20:33:23 2016

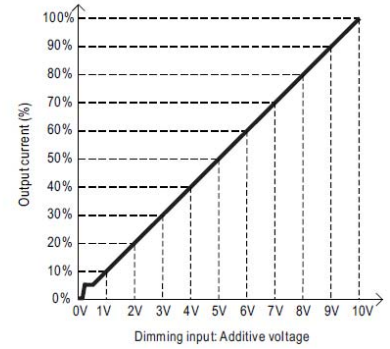


7	DIMMING OPERATION (for B-Type)	<p>※3 in 1 dimming function</p> <p>※Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.</p> <p>※Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.</p> <p>※Dimming source current from power supply: 100μ. A (typ.)</p>
---	--------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

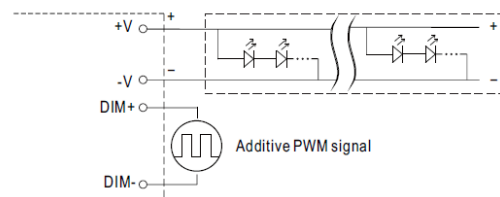
◎ Applying additive 0 ~ 10VDC



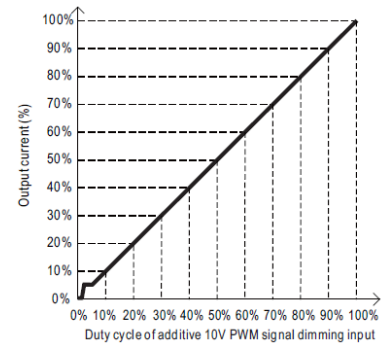
"DO NOT connect "DIM- to -V"



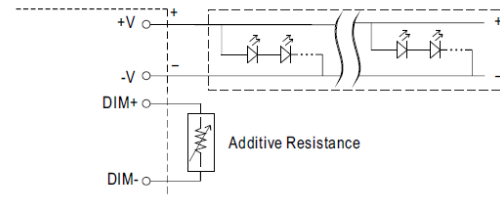
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



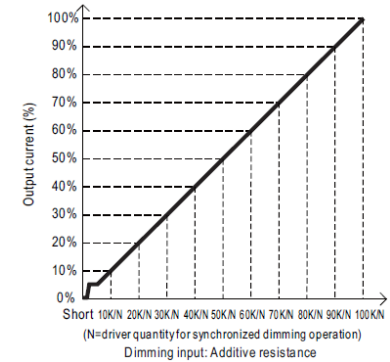
"DO NOT connect "DIM- to -V"



◎ Applying additive resistance:



"DO NOT connect "DIM- to -V"



Note : 1. Min. dimming level is about 6% and the output current is not defined when 0% < I<sub>out</sub> < 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.

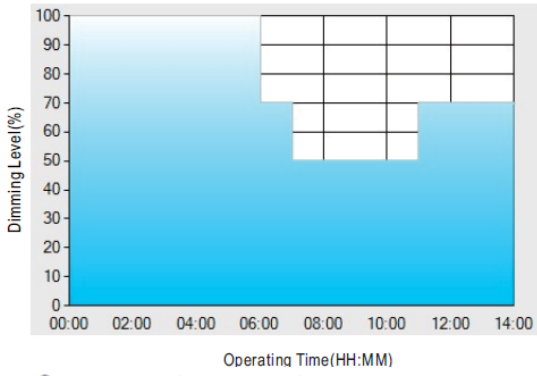
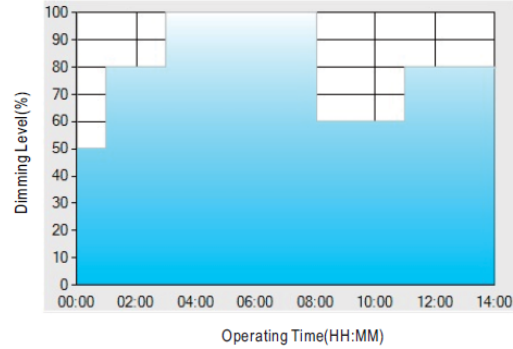
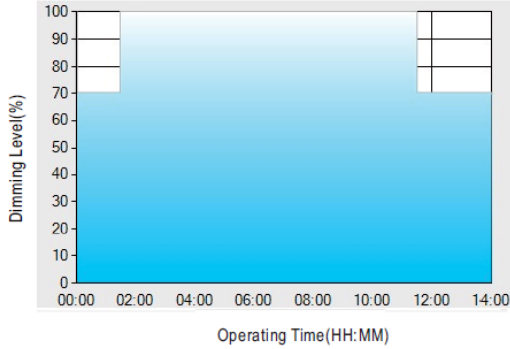
I/P : 230VAC

O/P : DIMMING TEST

TA : 25°C

R	SHORT	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
O/P CURRENT	0A	0.310A	0.667A	1.063A	1.440A	1.830A	2.200A	2.570A	2.940A	3.350A	3.580A	3.590A
%	0%	8.86%	19.06%	30.37%	41.14%	52.29%	62.86%	73.43%	84.00%	95.71%	102.29%	102.57%
V	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
O/P CURRENT	0A	0.349A	0.730A	1.088A	1.460A	1.800A	2.210A	2.530A	2.910A	3.240A	3.580A	3.590A
%	0%	9.97%	20.86%	31.09%	41.71%	51.43%	63.14%	72.29%	83.14%	92.57%	102.29%	102.57%
PWM (100HZ)	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
O/P CURRENT	0A	0.275A	0.665A	1.045A	1.430A	1.810A	2.180A	2.550A	2.910A	3.280A	3.590A	3.590A
%	0%	7.86%	19.00%	29.86%	40.86%	51.71%	62.29%	72.86%	83.14%	93.71%	102.57%	102.57%

TEST RESULT : OK

<p>8</p>	<p><b>DIMMING OPERATION (for Dxx-Type by User definition)</b></p>	<p>※<b>Smart timer dimming function (for Dxx-Type by User definition)</b>            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: ① D01-Type: the profile recommended for residential lighting</p>  <p>Set up for D01-Type in Smart timer dimming software program:</p> <table border="1" data-bbox="1050 593 1484 721"> <thead> <tr> <th></th> <th>T1</th> <th>T2</th> <th>T3</th> <th>T4</th> </tr> </thead> <tbody> <tr> <td>TIME**</td> <td>06:00</td> <td>07:00</td> <td>11:00</td> <td>--</td> </tr> <tr> <td>LEVEL**</td> <td>100%</td> <td>70%</td> <td>50%</td> <td>70%</td> </tr> </tbody> </table> <p>Ex: ② D02-Type: the profile recommended for street lighting</p>  <p>Set up for D02-Type in Smart timer dimming software program:</p> <table border="1" data-bbox="997 990 1497 1117"> <thead> <tr> <th></th> <th>T1</th> <th>T2</th> <th>T3</th> <th>T4</th> <th>T5</th> </tr> </thead> <tbody> <tr> <td>TIME**</td> <td>01:00</td> <td>03:00</td> <td>8:00</td> <td>11:00</td> <td>--</td> </tr> <tr> <td>LEVEL**</td> <td>50%</td> <td>80%</td> <td>100%</td> <td>60%</td> <td>80%</td> </tr> </tbody> </table> <p>Ex: ③ D03-Type: the profile recommended for tunnel lighting</p>  <p>Set up for D03-Type in Smart timer dimming software program:</p> <table border="1" data-bbox="1066 1384 1417 1518"> <thead> <tr> <th></th> <th>T1</th> <th>T2</th> <th>T3</th> </tr> </thead> <tbody> <tr> <td>TIME**</td> <td>01:30</td> <td>11:00</td> <td>---</td> </tr> <tr> <td>LEVEL**</td> <td>70%</td> <td>100%</td> <td>70%</td> </tr> </tbody> </table> <p>I/P : 230VAC            O/P : DIMMING TEST            TA : 25°C            TEST RESULT : OK</p>		T1	T2	T3	T4	TIME**	06:00	07:00	11:00	--	LEVEL**	100%	70%	50%	70%		T1	T2	T3	T4	T5	TIME**	01:00	03:00	8:00	11:00	--	LEVEL**	50%	80%	100%	60%	80%		T1	T2	T3	TIME**	01:30	11:00	---	LEVEL**	70%	100%	70%
	T1	T2	T3	T4																																											
TIME**	06:00	07:00	11:00	--																																											
LEVEL**	100%	70%	50%	70%																																											
	T1	T2	T3	T4	T5																																										
TIME**	01:00	03:00	8:00	11:00	--																																										
LEVEL**	50%	80%	100%	60%	80%																																										
	T1	T2	T3																																												
TIME**	01:30	11:00	---																																												
LEVEL**	70%	100%	70%																																												

## INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	90VAC~305 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	74.6V~305 V



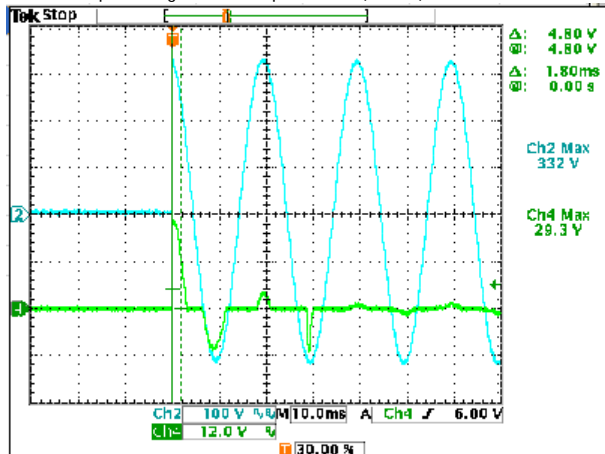
# 480W Single Output LED Power Supply

# HLG-480H-C series

			I/P: LOW-LINE-3V=87 V HIGH-LINE+10V=315 V 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)	277VAC/ 2A 230 VAC/ 2.45 A 115 VAC/ 5 A	I/P: 277VAC/230 VAC/115 VAC O/P:FULL LOAD Ta:25°C	I = 1.879A/277VAC I = 2.24A/ 230VAC I = 4.6A/ 115VAC
4	LEAKAGE CURRENT	< 0.75 mA/ 277 VAC	I/P : 277 VAC O/P : Min LOAD Ta : 25°C	L-FG: 0.215 mA N-FG: 0.21mA
5	INRUSH CURRENT (TYP)	230 V/ 35A COLD START  (twidth=1800us measured at 50% Ipeak) COLD START	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	I = 29.3A/ 230VAC  T50= 1320 us

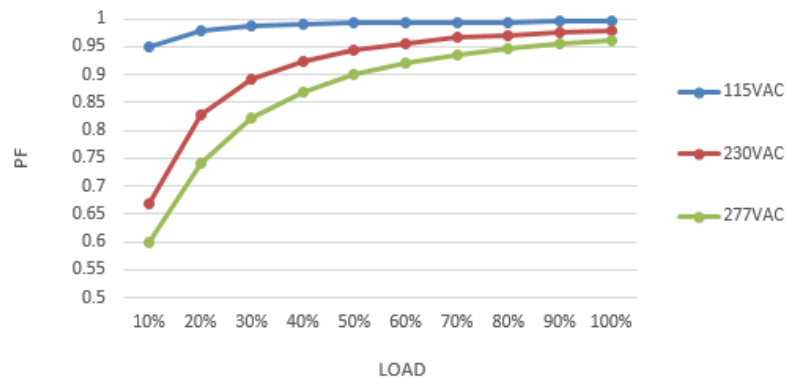
INPUT=230VAC/50HZ @ FULL LOAD

CH2 : AC Input Voltage CH4 : Input current (1V=1A)



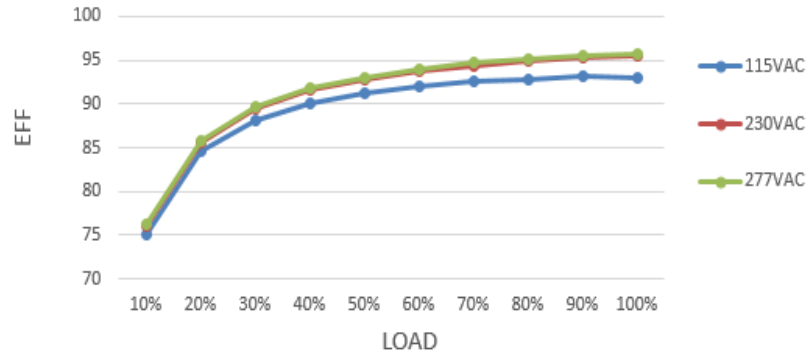
6	POWER FACTOR(TYP)	0.95/230 VAC FULL LOAD 0.98/115 VAC FULL LOAD 0.94/277 VAC FULL LOAD	I/P: 230 VAC/115VAC/277VAC O/P:FULL LOAD Ta:25°C	PF= 0.986/230V/100%LOAD PF= 0.999/115V/100%LOAD PF= 0.971/277V/100%LOAD
---	-------------------	----------------------------------------------------------------------------	--------------------------------------------------------	-------------------------------------------------------------------------------

P.F vs LOAD



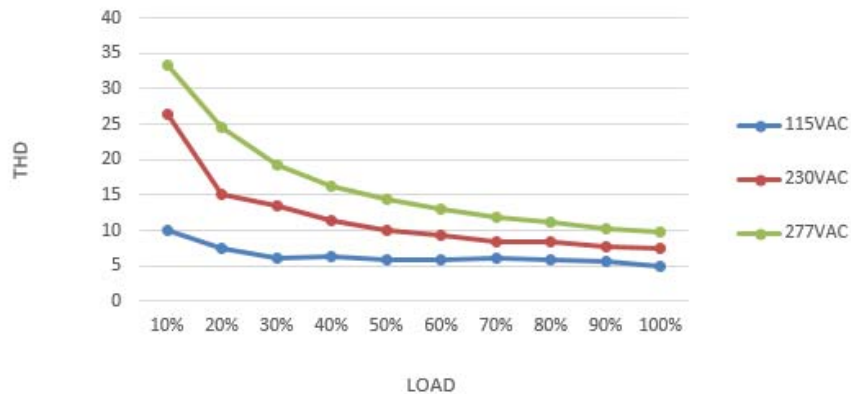
7	EFFICIENCY (TYP)	95 %	I/P: 230 VAC O/P: FULL LOAD Ta: 25°C	95.26%
---	------------------	------	--------------------------------------------	--------

EFFICIENCY vs LOAD



8	TOTAL HARMONIC DISTORTION	THD < 20% @ output load ≥ 40% at 115VAC/230VAC/277VAC input	I/P : 230VAC O/P : 100% LOAD 40% LOAD Ta : 25°C	THD : 6.6 % THD : 7.5 %
			I/P : 230VAC O/P : 100% LOAD 40% LOAD Ta : 25°C	THD : 8 % THD : 14 %
			I/P : 277VAC O/P : 100% LOAD 40% LOAD Ta : 25°C	THD : 9.96 % THD : 15.81 %

THD&LOAD



## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER VOLTAGE PROTECTION	V1: 173 V~ 197 V  PROTECTION TYPE : Shut down output voltage, re-power on to recovery	I/P: 305VAC I/P: 230VAC I/P: 90VAC O/P: MIN LOAD Ta: 25°C	180.6V/ 305VAC 180.6V/ 230VAC 180.6V/ 90VAC 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: 305 VAC I/P: 90 VAC O/P: FULL LOAD	O.T.P Active 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: 305VAC I/P: 90 VAC O/P: FULL LOAD Ta:25°C	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) <b>Peak Voltage</b>	Q 10 Rated 13 A/600 V  Q 12 Rated 13 A/ 600V	I/P:High-Line +3V =308V AC ON/OFF VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD  I/P:Low-Line -3V = 97V VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD Ta:25°C	Q10 Q12 VDS: VDS: (1) 475V (1) 507V (2) 495V (2) 539V (3) 447V (3) 451V (4) 443V (4) 479V  VDS: VDS: (1) 475V (1) 495V (2) 491V (2) 535V (3) 463V (3) 471V (4) 447V (4) 483V
2	P.F.C Transistor ( D to S) or (C to E) <b>Peak Voltage</b>	Q1 Rated 13 A/ 600V	I/P:High-Line +3V =308V AC ON/OFF VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD  I/P:Low-Line -3V = 97V VDS: O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD Ta:25°C	Q1 308V VDS: (1)583 V (2)471V (3)579 V (4) 439V  97V VDS: (1) 583V (2) 523V (3) 575V (4) 463V
3	P.F.C DIODE	D8 Rated 10A/600V	I/P:High-Line +3V =308 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD  I/P:Low-Line -3V = 97V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD Ta:25°C	308V (1) 499V (2) 467V (3) 515V (4) 431V  97V (1) 539V (2) 455V (3) 531V (4) 475V

4	Diode Peak Voltage	D100 Rated 10A/400 V  D101 Rated 20A/600 V	I/P:High-Line +3V =308 V AC ON/OFF O/P: (1)Full Load (2)Output Short (3) Full Load continue (4)NO LOAD (5) burst mode Ta:25°C	D100: VDS: (1) 308V (2) 30V (3) 302V (4) 296V (5)310V  D101: VDS: (1) 300V (2) 30V (3) 300V (4) 304V (5)308V
5	Input Capacitor Voltage	C5 Rated: 150μ/ 450V	I/P:High-Line +3V =308V O/P: (1)Full Load input on/off (2) Min load input on /Off (3)Full load continue Ta:25°C	(1)448 V (2) 435V (3) 443V
6	Control IC Voltage Test	PWM IC U2 Rated 16V- 8.85V(MIN.)  PFC IC U1 Rated 20V-10.5V(MIN.)	I/P:High-Line +3V =308 V AC ON/OFF O/P:(1)FULL LOAD (2) Output Short (3)O.V.P. Ta:25°C	U2 (1) 14.32V (2) 13.52V (3) 13.4V  U1 (1) 14.32V (2)14.32V (3) 13.92V

## SAFETY & EMC TEST REPORT

### 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<4.5mA 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: 4.61mA I/P-FG: 3.8mA O/P-FG: 5.79mA 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: 19.2G 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	29mΩ

### 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 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 LIGHT INDUSTRY L-N :2KV L,N-PE:4KV	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 : HLG-480H-C3500 1. ROOM AMBIENT BURN-IN : 3 HRS I/P : 230VAC O/P : FULL LOAD Ta= 31.2°C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta= 60°C																																																																																																														
				<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta= 31.2 °C</th> <th>HIGH AMBIENT Ta= 60°C</th> </tr> </thead> <tbody> <tr><td>1</td><td>BD2</td><td>66.4°C</td><td>97.1°C</td></tr> <tr><td>2</td><td>C10</td><td>62.0°C</td><td>93.3°C</td></tr> <tr><td>3</td><td>Q1</td><td>62.4°C</td><td>92.7°C</td></tr> <tr><td>4</td><td>D8</td><td>65.5°C</td><td>96.7°C</td></tr> <tr><td>5</td><td>Q10</td><td>64.8°C</td><td>95.0°C</td></tr> <tr><td>6</td><td>Q12</td><td>66.5°C</td><td>95.3°C</td></tr> <tr><td>7</td><td>RY1</td><td>64.0°C</td><td>95.5°C</td></tr> <tr><td>8</td><td>LF2</td><td>58.3°C</td><td>89.6°C</td></tr> <tr><td>9</td><td>ZNR2</td><td>58.2°C</td><td>88.8°C</td></tr> <tr><td>10</td><td>C1</td><td>57.3°C</td><td>87.8°C</td></tr> <tr><td>11</td><td>C5</td><td>58.4°C</td><td>89.5°C</td></tr> <tr><td>12</td><td>L3</td><td>66.0°C</td><td>95.6°C</td></tr> <tr><td>13</td><td>U1</td><td>58.7°C</td><td>88.8°C</td></tr> <tr><td>14</td><td>U2</td><td>59.2°C</td><td>89.8°C</td></tr> <tr><td>15</td><td>T1</td><td>69.0°C</td><td>96.7°C</td></tr> <tr><td>16</td><td>T2</td><td>71.2°C</td><td>101.2°C</td></tr> <tr><td>17</td><td>D101</td><td>63.9°C</td><td>93.1°C</td></tr> <tr><td>18</td><td>D113</td><td>65.8°C</td><td>94.2°C</td></tr> <tr><td>19</td><td>C105</td><td>60.4°C</td><td>92.6°C</td></tr> <tr><td>20</td><td>LF100</td><td>59.9°C</td><td>88.8°C</td></tr> <tr><td>21</td><td>T500</td><td>61.7°C</td><td>90.0°C</td></tr> <tr><td>22</td><td>C511</td><td>60.3°C</td><td>91.0°C</td></tr> <tr><td>23</td><td>U501</td><td>58.5°C</td><td>89.4°C</td></tr> <tr><td>24</td><td>J101</td><td>60.1°C</td><td>90.2°C</td></tr> <tr><td>25</td><td>C93</td><td>62.2°C</td><td>92.9°C</td></tr> <tr><td>26</td><td>RTH2</td><td>60.8°C</td><td>90.2°C</td></tr> </tbody> </table>	NO	Position	ROOM AMBIENT Ta= 31.2 °C	HIGH AMBIENT Ta= 60°C	1	BD2	66.4°C	97.1°C	2	C10	62.0°C	93.3°C	3	Q1	62.4°C	92.7°C	4	D8	65.5°C	96.7°C	5	Q10	64.8°C	95.0°C	6	Q12	66.5°C	95.3°C	7	RY1	64.0°C	95.5°C	8	LF2	58.3°C	89.6°C	9	ZNR2	58.2°C	88.8°C	10	C1	57.3°C	87.8°C	11	C5	58.4°C	89.5°C	12	L3	66.0°C	95.6°C	13	U1	58.7°C	88.8°C	14	U2	59.2°C	89.8°C	15	T1	69.0°C	96.7°C	16	T2	71.2°C	101.2°C	17	D101	63.9°C	93.1°C	18	D113	65.8°C	94.2°C	19	C105	60.4°C	92.6°C	20	LF100	59.9°C	88.8°C	21	T500	61.7°C	90.0°C	22	C511	60.3°C	91.0°C	23	U501	58.5°C	89.4°C	24	J101	60.1°C	90.2°C	25	C93	62.2°C	92.9°C	26	RTH2	60.8°C	90.2°C
NO	Position	ROOM AMBIENT Ta= 31.2 °C	HIGH AMBIENT Ta= 60°C																																																																																																													
1	BD2	66.4°C	97.1°C																																																																																																													
2	C10	62.0°C	93.3°C																																																																																																													
3	Q1	62.4°C	92.7°C																																																																																																													
4	D8	65.5°C	96.7°C																																																																																																													
5	Q10	64.8°C	95.0°C																																																																																																													
6	Q12	66.5°C	95.3°C																																																																																																													
7	RY1	64.0°C	95.5°C																																																																																																													
8	LF2	58.3°C	89.6°C																																																																																																													
9	ZNR2	58.2°C	88.8°C																																																																																																													
10	C1	57.3°C	87.8°C																																																																																																													
11	C5	58.4°C	89.5°C																																																																																																													
12	L3	66.0°C	95.6°C																																																																																																													
13	U1	58.7°C	88.8°C																																																																																																													
14	U2	59.2°C	89.8°C																																																																																																													
15	T1	69.0°C	96.7°C																																																																																																													
16	T2	71.2°C	101.2°C																																																																																																													
17	D101	63.9°C	93.1°C																																																																																																													
18	D113	65.8°C	94.2°C																																																																																																													
19	C105	60.4°C	92.6°C																																																																																																													
20	LF100	59.9°C	88.8°C																																																																																																													
21	T500	61.7°C	90.0°C																																																																																																													
22	C511	60.3°C	91.0°C																																																																																																													
23	U501	58.5°C	89.4°C																																																																																																													
24	J101	60.1°C	90.2°C																																																																																																													
25	C93	62.2°C	92.9°C																																																																																																													
26	RTH2	60.8°C	90.2°C																																																																																																													



# 480W Single Output LED Power Supply

# HLG-480H-C series

2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 305VAC/100VAC 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 : 315 VAC O/P : FULL LOAD Ta= 60 °C HUMIDITY= 95 %R.H	TEST : OK
4	TEMPERATURE COEFFICIENT	± 0.03%/°C (0-60°C)	I/P : 230 VAC O/P : FULL LOAD	± 0.007 %/°C (0-60°C)
5	STORAGE TEMPERATURE TEST	<ol style="list-style-type: none"> <li>1. Thermal shock Temperature : -45°C ~ +90°C</li> <li>2. Temperature change rate : 25°C / MIN</li> <li>3. Dwell time low and high temperature : 30 MIN/EACH</li> <li>4. Total test cycle : 5 CYCLE</li> <li>5. Input/Output condition : STATIC</li> </ol>		OK
6	THERMAL SHOCK TEST	<ol style="list-style-type: none"> <li>1. Thermal shock Temperature : -45°C ~ +65°C</li> <li>2. Temperature change rate : 25°C / MIN</li> <li>3. Dwell time low and high temperature : 30 MIN/EACH</li> <li>4. Total test cycle : 10 CYCLE</li> <li>5. Input/Output condition : 15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST 1cycle:230V/ FULL LOAD Burn In Test</li> </ol>		OK
7	VIBRATION TEST	<ol style="list-style-type: none"> <li>1 Carton &amp; 1 Set</li> <li>(1) Waveform : Sine Wave</li> <li>(2) Frequency : 10-500Hz</li> <li>(3) Sweep Time : 12min/sweep cycle</li> <li>(4) Acceleration : 5G</li> <li>(5) Test Time : 60min in each axis (X.Y.Z)</li> <li>(6) Ta : 25°C</li> </ol>		TEST : OK
8	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Tc= 75 °C LIFE TIME (2) I/P : 230VAC O/P : 75% LOAD Tc= 75 °C LIFE TIME (3) I/P : 230VAC O/P : 50% LOAD Tc= 75 °C LIFE TIME		(1) 74988 HRS (2) 81335 HRS (3) 83566 HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction 421.1K hrs min. Telcordia SR-332 (Bellcore) ; 110.5K 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 : 62,000 hours		

TEST RESULT	TESTER	REVIEW	APPROVAL
PASS	DANIEL GAO	SANFORD SU	VINCENT TSENG

12.10.30 A50-F031