



Test Report: HLG-150H-30

150W Constant Voltage + Constant Current LED Driver

■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Other Test

Component Stress Test

■ SAFETY & E.M.C. TEST

Safety Test

E.M.C. Test

■ RELIABILITY TEST

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|-----------------------------|--|--|---|
| 1 | RIPPLE & NOISE | V1: 200 mVp-p (Max) | I/P: 230 VAC O/P:FULL LOAD Ta:25°C | V1: 34 mVp-p (Max) |
| 2 | OUTPUT VOLTAGE ADJUST RANGE | CH1: 27V-33 V | I/P: 230 VAC I/P:115VAC O/P:MIN LOAD Ta:25°C | 26.38 V-33.76 V /230VAC 26.38 V-33.76 V/115VAC |
| 3 | CURRENT ADJ RANGE | 3A-5A | I/P: 230 VAC O/P:FULL LOAD Ta:25°C | 1.82 A-7.25 A |
| 4 | CONSTANT CURRENT REGION | 15V-29V | I/P: 230 VAC O/P:CV MODE Ta:25°C | O/P=15V: 5.1 A O/P=29V: 5.1 A |
| 5 | OUTPUT VOLTAGE TOLERANCE | V1: -1% ~ 1% (Max) | I/P: 100 VAC /305VAC O/P:FULL/ 0% LOAD Ta:25°C | V1: -0.2% ~ 0.2% |
| 6 | LINE REGULATION | V1: -0.5% ~ 0.5% (Max) | I/P:100 VAC ~305 VAC O/P:FULL LOAD Ta:25°C | V1: -0.02% ~ 0.02% |
| 7 | LOAD REGULATION | V1: -0.5% ~ 0.5% (Max) | I/P: 230 VAC O/P:FULL -MIN LOAD Ta:25°C | V1: -0.2% ~ 0.2% |
| 8 | SET UP TIME | 230VAC/500 ms (Max) 115VAC/ 1000 ms (Max) | I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C | 230VAC/ 396 ms 115 VAC/ 826 ms |
| 9 | RISE TIME | 230VAC/ 200 ms (Max) 115VAC/ 200 ms (Max) | I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C | 230VAC/ 6.8 ms 115 VAC/ 6.6 ms |
| 10 | HOLD UP TIME | 230VAC/ 16 ms (Typ) 115VAC/ 16 ms (Typ) | I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C | 230VAC/ 21 ms 115 VAC/ 22 ms |
| 11 | OVER/UNDERSHOOT TEST | < ±5% | I/P: 230 VAC O/P:FULL LOAD Ta:25°C | TEST:< 5% |
| 12 | DYNAMIC LOAD | V1: 3000 mVp-p | I/P: 230 VAC O/P:(1)FULL /Min LOAD 90%DUTY/1KHZ (2)FULL /Min LOAD 90%DUTY/120HZ Ta:25°C | 198 mVp-p 1550 mVp-p |

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|----|------------------------------|---|------------------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|
| 13 | DIMMER TEST (B Type only) | SPEC: | | | | | | | | | | | |
| | | *Reference resistance value for output current adjustment (Typical) | | | | | | | | | | | |
| | | Resistance value | 10K | 20K | 30K | 40K | 50K | 60K | 70K | 80K | 90K | 100K | |
| | | Output current | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| | | *1 ~ 10V dimming function for output current adjustment (Typical) | | | | | | | | | | | |
| | | Dimming value | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | |
| | | Output current | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| | | *10V PWM signal for output current adjustment (Typical) | | | | | | | | | | | |
| | | Duty value | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| | | Output current | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | |
| | | TEST RESULT: I/P : 230 VAC ; Ta : 25°C | | | | | | | | | | | |
| | | 1 | Resistance value | 10K | 20K | 30K | 40K | 50K | 60K | 70K | 80K | 90K | 100K |
| | | | Output current | 0.521A | 1.033A | 1.544A | 2.049A | 2.565A | 3.102A | 3.595A | 4.072A | 4.678A | 5.217A |
| % | 10.42% | | 20.66% | 30.88% | 40.98% | 51.30% | 62.04% | 71.90% | 81.44% | 93.56% | 104.34% | | |
| 2 | Dimming value | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | | |
| | Output current | 0.566A | 1.022A | 1.521A | 2.032A | 2.526A | 3.033A | 3.530A | 4.039A | 4.556A | 5.066A | | |
| | % | 11.32% | 20.44% | 30.43% | 40.64% | 50.52% | 60.66% | 70.60% | 80.78% | 91.12% | 101.32% | | |
| 3 | Duty value | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | | |
| | Output current | 0.566A | 1.065A | 1.567A | 2.067A | 2.569A | 3.073A | 3.579A | 4.090A | 4.605A | 5.109A | | |
| | % | 11.32% | 21.30% | 31.34% | 41.34% | 51.38% | 61.46% | 71.58% | 81.80% | 92.10% | 102.18% | | |

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 | 71 V~305V |
| | | | I/P: (1)LOW-LINE-3V=87 V (2)HIGH-LINE=305 V O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (AC 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 | POWER FACTOR | 0.95/ 230 VAC FULL LOAD (TYP) 0.98/ 115 VAC FULL LOAD (TYP) 0.92/ 115 VAC FULL LOAD (TYP) | I/P: 230 VAC I/P: 115 VAC I/P: 277 VAC O/P:FULL LOAD Ta:25°C | PF=0.968 /230V/100%LOAD PF= 0.997 /115V/100%LOAD PF= 0.935 /277V/100%LOAD |
| 4 | EFFICIENCY | 93.5% (TYP) | I/P: 230 VAC O/P:FULL LOAD Ta:25°C | 93.67 % |
| 5 | INPUT CURRENT | 277V/ 0.7 A 230 V/ 0.75 A 115 V/ 1.7 A | I/P: 277 VAC I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C | I = 0.63 A/ 277VAC I = 0.73 A/ 230VAC I = 1.52 A/ 115VAC |
| 6 | INRUSH CURRENT | 230 V/ 65A (Typ) COLD START | I/P: 230 VAC O/P:FULL LOAD Ta:25°C | I = 56 A/ 230VAC |
| 7 | TOTAL HARMONIC DISTORTION | THD< 20% when output loading \geq 60% at 115VAC/230VAC input and output loading \geq 75% at 277VAC input | I/P : 115 VAC I/P : 230 VAC O/P : 60% LOAD I/P : 277 VAC O/P : 75%LOAD Ta : 25°C | THD : 9.02 /115VAC THD : 14.95 /230VAC THD : 16.05 /277VAC |

PROTECTION FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|-------------------------|---------------|---|--|
| 1 | OVER LOAD PROTECTION | 95 %-108 % | I/P: 305VAC I/P: 230 VAC I/P: 100 VAC O/P:TESTING Ta:25°C | 105 %/305VAC 105 %/ 230VAC 105 %//100VAC Constant current limiting, recovers automatically after fault condition is removed |
| 2 | OVER VOLTAGE PROTECTION | V1: 34V~ 38V | I/P: 305VAC I/P: 230 VAC I/P: 90 VAC O/P:MIN LOAD Ta:25°C | 35.39 V/ 305VAC 35.39 V/ 230VAC 35.42 V/ 100VAC Shut down o/p voltage with auto recovery or re-power on to recovery |

| | | | | |
|---|-----------------------------|--|--|---|
| 3 | OVER TEMPERATURE PROTECTION | NO DAMAGE | I/P: 230 VAC O/P: FULL LOAD | O.T.P. Active Shut down o/p voltage, recovers automatically after temperature goes down |
| 4 | SHORT PROTECTION | SHORT EVERY OUTPUT 1 HOUR NO DAMAGE | I/P: 305VAC O/P: FULL LOAD Ta:25°C | NO DAMAGE Constant current limiting, recovers automatically after fault condition is removed |

COMPONENT STRESS TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|---|--------------------------|---|--|
| 1 | Power Transistor (D to S) or (C to E) Peak Voltage | Q5 Rated 12A/500V | I/P : High-Line +3V = 308V O/P : (1)Full Load Turn on (2) Output Short (3)Full load continue Ta : 25°C | (1) 472 V (2) 446 V (3) 450 V |
| 2 | Diode Peak Voltage | Q101 Rated 57A/100V | I/P : High-Line +3V =308V O/P : (1)Full Load Turn on (2)Output Short (3)Full load continue Ta : 25°C | (1) 85 V (2) 24.8 V (3) 73.2 V |
| | | Q102 Rated 57A/100V | I/P : High-Line +3V = 308 V O/P : (1)Full Load Turn on (2)Output Short (3)Full load continue Ta : 25°C | (1) 96.8 V (2) 23.6 V (3) 69.6 V |
| 3 | Input Capacitor Voltage | C5 Rated: 100u/450V | I/P : High-Line +3V = 308V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta : 25°C | (1) 434.7 V (2) 434.8 V (3) 434.9 V |
| 4 | Control IC Voltage Test | U 900 Rated 8.85V~16V | I/P : High-Line +3V = 308V O/P : (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta : 25°C | (1) 12.679 V (2) 12.614 V (3) 12.608 V |
| 5 | P.F.C Transistor (D to S) or (C to E) Peak Voltage | Q1 Rated 17A/600V | I/P : High-Line +3V = 308 V O/P : (1)Full Load Turn on (2)Output Short (3)Full load continue Ta : 25°C | (1) 506 V (2) 448 V (3) 456 V |

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<4.5mA O/P-FG1.5KVAC/min | I/P-O/P: 4 KVAC/min I/P-FG: 2.4KVAC/min O/P-FG: 1.8 KVAC/min Ta:25°C | I/P-O/P: 2.627 mA I/P-FG: 2.329 mA O/P-FG: 3.41 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: 30 GΩ I/P-FG: 21.2 GΩ O/P-FG:30 GΩ NO DAMAGE |
| 3 | GROUNDING CONTINUITY | IEC60950-1 FG(PE) TO CHASSIS OR TRACE < 100 mΩ | 40A / 2min Ta:25°C | 9 mΩ |
| 4 | LEAKAGE CURRENT | IEC60950-1 < 0.75 mA / 240VAC | I/P: 240 VAC O/P:Min LOAD Ta:25°C | L-FG: 0.22 mA N-FG: 0.22 mA |
| 5 | APPROVAL | TUV: Certificate NO : E334940 UL: File NO : R50185176 | | |

E.M.C TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|---|--|--|-------------------------------|
| 1 | HARMONIC | EN61000-3-2 CLASS C | I/P: 230VAC/50HZ LOAD:LED/ELECTRONIC LOAD O/P:100% LOAD Ta:25°C | PASS |
| 2 | CONDUCTION | EN55022 EN55015 CLASS B | I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C | PASS Test by certified Lab |
| 3 | RADIATION | EN55022 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 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 INDUSTRY INPUT: 2KV | I/P: 230 VAC/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 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

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----|---|---|--|-------------------|----------|-----------------------------|----------------------------|---|-----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|----|--------|--------|---|------|--------|--------|---|----|--------|--------|---|------|--------|--------|---|----|--------|--------|----|------|--------|--------|----|------|--------|--------|----|-----|--------|--------|----|------|--------|--------|----|-----|--------|--------|----|-------|--------|--------|----|------|--------|--------|----|----|--------|--------|----|----|--------|------|--|
| 1 | TEMPERATURE RISE TEST | MODEL : HLG-150H-24 1. ROOM AMBIENT BURN-IN : 15.5 HRS I/P : 230VAC O/P : FULL LOAD Ta= 27.8 °C 2. HIGH AMBIENT BURN-IN : 7 HRS I/P : 230VAC O/P : FULL LOAD Ta=57.8 °C | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta= 27.8 °C</th> <th>HIGH AMBIENT Ta=57.8 °C</th> </tr> </thead> <tbody> <tr><td>1</td><td>BD1</td><td>50.5°C</td><td>77.5°C</td></tr> <tr><td>2</td><td>Q1</td><td>54.3°C</td><td>81.3°C</td></tr> <tr><td>3</td><td>L2</td><td>56.1°C</td><td>83.1°C</td></tr> <tr><td>4</td><td>Q5</td><td>55.2°C</td><td>82.2°C</td></tr> <tr><td>5</td><td>D2</td><td>56.3°C</td><td>83.3°C</td></tr> <tr><td>6</td><td>RTH2</td><td>51.5°C</td><td>78.5°C</td></tr> <tr><td>7</td><td>T1</td><td>56.5°C</td><td>83.5°C</td></tr> <tr><td>8</td><td>Q101</td><td>52.2°C</td><td>79.2°C</td></tr> <tr><td>9</td><td>D9</td><td>53.1°C</td><td>80.1°C</td></tr> <tr><td>10</td><td>C102</td><td>49.9°C</td><td>76.9°C</td></tr> <tr><td>11</td><td>C201</td><td>50.4°C</td><td>77.4°C</td></tr> <tr><td>12</td><td>C16</td><td>52.0°C</td><td>79.0°C</td></tr> <tr><td>13</td><td>C106</td><td>47.9°C</td><td>74.9°C</td></tr> <tr><td>14</td><td>C38</td><td>55.5°C</td><td>82.5°C</td></tr> <tr><td>15</td><td>LF100</td><td>48.7°C</td><td>75.7°C</td></tr> <tr><td>16</td><td>U900</td><td>52.7°C</td><td>79.7°C</td></tr> <tr><td>17</td><td>U1</td><td>53.0°C</td><td>80.0°C</td></tr> <tr><td>18</td><td>C5</td><td>46.4°C</td><td>76°C</td></tr> </tbody> </table> | NO | Position | ROOM AMBIENT Ta= 27.8 °C | HIGH AMBIENT Ta=57.8 °C | 1 | BD1 | 50.5°C | 77.5°C | 2 | Q1 | 54.3°C | 81.3°C | 3 | L2 | 56.1°C | 83.1°C | 4 | Q5 | 55.2°C | 82.2°C | 5 | D2 | 56.3°C | 83.3°C | 6 | RTH2 | 51.5°C | 78.5°C | 7 | T1 | 56.5°C | 83.5°C | 8 | Q101 | 52.2°C | 79.2°C | 9 | D9 | 53.1°C | 80.1°C | 10 | C102 | 49.9°C | 76.9°C | 11 | C201 | 50.4°C | 77.4°C | 12 | C16 | 52.0°C | 79.0°C | 13 | C106 | 47.9°C | 74.9°C | 14 | C38 | 55.5°C | 82.5°C | 15 | LF100 | 48.7°C | 75.7°C | 16 | U900 | 52.7°C | 79.7°C | 17 | U1 | 53.0°C | 80.0°C | 18 | C5 | 46.4°C | 76°C | |
| NO | Position | ROOM AMBIENT Ta= 27.8 °C | HIGH AMBIENT Ta=57.8 °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | BD1 | 50.5°C | 77.5°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Q1 | 54.3°C | 81.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | L2 | 56.1°C | 83.1°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Q5 | 55.2°C | 82.2°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | D2 | 56.3°C | 83.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | RTH2 | 51.5°C | 78.5°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | T1 | 56.5°C | 83.5°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Q101 | 52.2°C | 79.2°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | D9 | 53.1°C | 80.1°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | C102 | 49.9°C | 76.9°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | C201 | 50.4°C | 77.4°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | C16 | 52.0°C | 79.0°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | C106 | 47.9°C | 74.9°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | C38 | 55.5°C | 82.5°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | LF100 | 48.7°C | 75.7°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | U900 | 52.7°C | 79.7°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | U1 | 53.0°C | 80.0°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | C5 | 46.4°C | 76°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | OVER LOAD BURN-IN TEST | NO DAMAGE 1 HOUR (MIN) | I/P : 305 VAC O/P : O/P SHORT TEST Ta = 25°C | TEST : OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 2 HOUR | I/P : 305 VAC/100VAC O/P : 95% LOAD Ta= -40 °C | TEST : OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST | AFTER 12 HOURS IN CHAMBER ON CONTROL 60 °C NO DAMAGE | I/P : 305 VAC O/P : 95% LOAD Ta= 60 °C HUMIDITY= 95 %R.H | TEST : OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | TEMPERATURE COEFFICIENT | ± 0.03 %(0-50°C) | I/P : 230 VAC O/P : FULL LOAD | ± 0.002 %(0-50°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | STORAGE TEMPERATURE TEST | 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 : 5 CYCLE 5. Input/Output condition : STATIC | | OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | THERMAL SHOCK TEST | 1. Thermal shock Temperature : -35°C ~ +65°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle : 10 CYCLE 5. Input/Output condition : 230VAC/Full Load AC ON/OFF TEST turn on 58sec ; turn off 2sec | | OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



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| 8 | 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 |
| 9 | CAPACITOR LIFE CYCLE | HLG-150H-24:SUPPOSE C102 IS THE MOST CRITICAL COMPONENT (1) I/P : 230VAC O/P : FULL LOAD Tc= 80 °C LIFE TIME (2) I/P : 230VAC O/P : 75% LOAD Tc= 80 °C LIFE TIME (3) I/P : 230VAC O/P : 50% LOAD Tc= 80 °C LIFE TIME | (1) 64911HRS (2) 64955HRS (3) 66379HRS |
| 10 | MTBF | Conducted by Parts Stress Analysis Prediction 192.2K hrs min. MIL-HDBK-217F (25°C) | OK |
| 11 | Ongoing reliability test | I/P : 230VAC O/P : FULL LOAD TA=50°C Demonstration Mean Time Between Failure : 62,000 hours | OK |

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

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