



Test Report: ELGC-300-M

300W 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

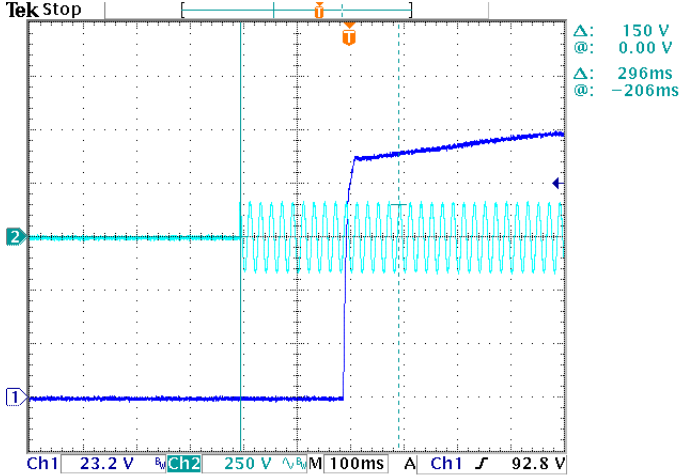
■ DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|-----------------------------|------------------------------|--|----------------------------------|
| 1 | CURRENT TOLERANCE | ±5% | I/P: 100 VAC / 305 VAC O/P: FULL/ MIN LOAD Ta: 25°C | <±5% |
| 2 | CONSTANT CURRENT REGION | 58 V~ 116 V | I/P: 230 VAC O/P: FULL LOAD Ta: 25°C | 35 V~ 116 V |
| 3 | OPEN CIRCUIT VOLTAGE (max.) | 120 V | I/P: 230 VAC O/P: NO LOAD | 115V |
| 4 | CURRENT RIPPLE | 5.0% max. @rated current | I/P: 230 VAC O/P: FULL LOAD Ta: 25°C | 3.88% |
| 5 | CURRENT ADJ. RANGE | 1.3A ~4.0 A | I/P: 230 VAC O/P: TESTING Ta: 25°C | 1.15A ~ 4.4A |
| 6 | CONSTANT POWER | O/P: 301.6W | I/P: 230 VAC O/P: Vo×Io | TEST: OK |
| 7 | SET UP TIME(Max) | 500ms/115VAC 500ms/230VAC | I/P: 115 VAC I/P: 230 VAC O/P: FULL LOAD Ta: 25°C | 296 ms/115 VAC 304 ms/230 VAC |

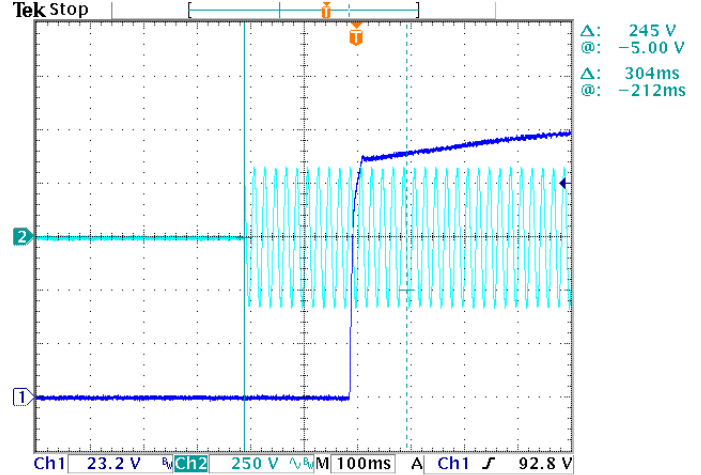
INPUT=115VAC/50HZ @ FULL LOAD

CH1: Output Voltage CH2: AC Input Voltage



INPUT=230 VAC/50HZ @ FULL LOAD

CH1: Output Voltage CH2: AC Input Voltage

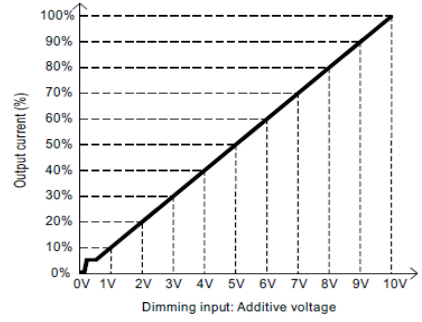
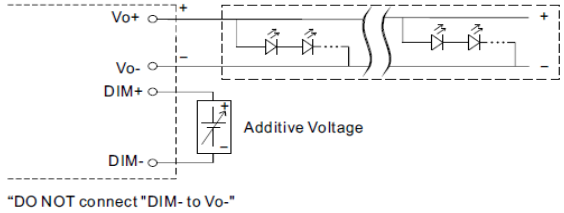


8 DIMMING OPERATION (for AB-Type)

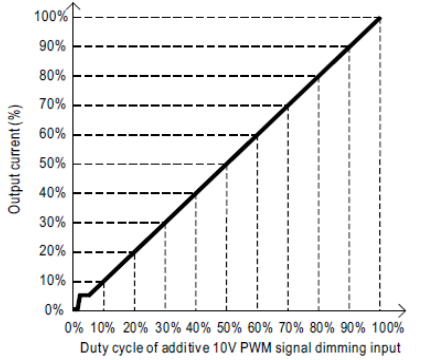
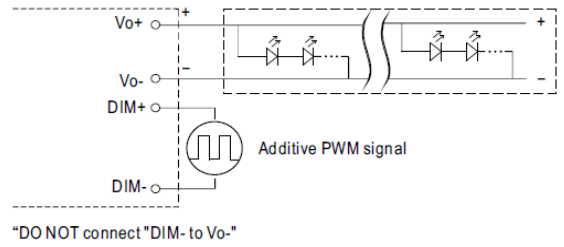
※ **3 in 1 dimming function(for B-Type)**

- 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.)

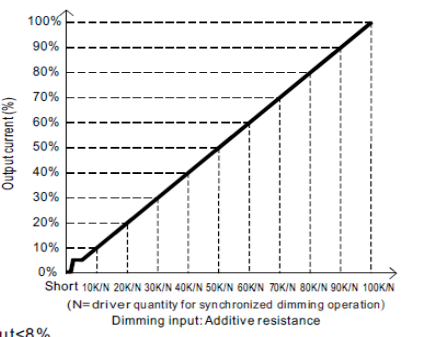
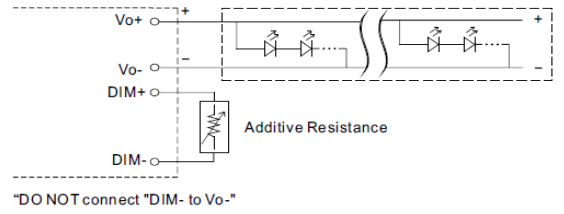
◎ Applying additive 0 ~ 10VDC



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



◎ Applying additive resistance:



Note : 1. Min. dimming level is about 8% and the output current is not defined when 0% < Iout < 8%.
 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: 230 VAC
 O/P: DIMMING TEST
 Ta: 25 $^{\circ}$ C

| 1 | DIMMING | Short | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | OPEN |
|---|----------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Output Current | 0 | 0.5000A | 0.8650A | 1.2400A | 1.6100A | 1.9800A | 2.4200A | 2.8600A | 3.2400A | 3.6500A | 4.0000A | 4.0000A |
| % | 0% | 12.50% | 21.63% | 31.00% | 40.25% | 49.50% | 60.50% | 71.50% | 81.00% | 91.25% | 100.00% | 100.00% | |
| 2 | PWM | 0V | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | OPEN |
| | Output Current | 0 | 0.4375A | 0.8000A | 1.2300A | 1.6100A | 2.0400A | 2.4400A | 2.8500A | 3.2500A | 3.6600A | 4.0100A | 4.0150A |
| % | 0% | 10.94% | 20.00% | 30.75% | 40.25% | 51.00% | 61.00% | 71.25% | 81.25% | 91.50% | 100.25% | 100.38% | |
| 3 | R | 0% | 10K | 20K | 30K | 40K | 50K | 60K | 70K | 80K | 90K | 100K | OPEN |
| | Output Current | 0 | 0.4300A | 0.8000A | 1.2400A | 1.6100A | 2.0400A | 2.4200A | 2.8000A | 3.2400A | 3.6500A | 4.0000A | 4.0000A |
| % | 0% | 10.75% | 20.00% | 31.00% | 40.25% | 51.00% | 60.50% | 70.00% | 81.00% | 91.25% | 100.00% | 100.00% | |

TEST RESULT: OK
 TEST RESULT: OK

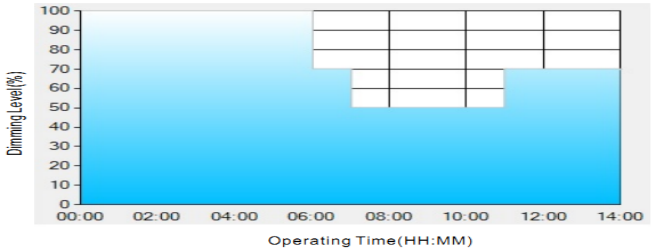
9 DIMMING OPERATION (for DX-User definition)

※ DALI Interface (primary side; for DA-Type)
 • Apply DALI signal between DA+ and DA-.
 • DALI protocol comprises 16 groups and 64 addresses.
 • First step is fixed at 8% of output.

TEST RESULT: OK

※ Smart timer dimming function
 ·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

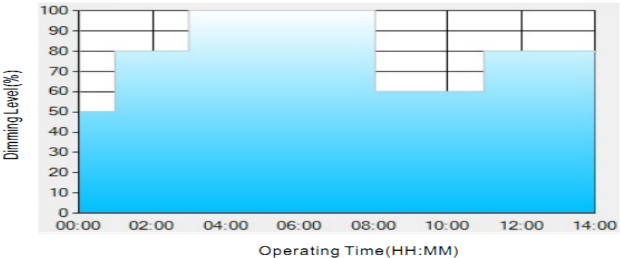


Set up for D01-Type in Smart timer dimming software program:

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

** : TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
 Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:
 [1] The power supply will switch to the constant current level at 100% starting from 6:00pm.
 [2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.
 [3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.
 [4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.
 The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

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

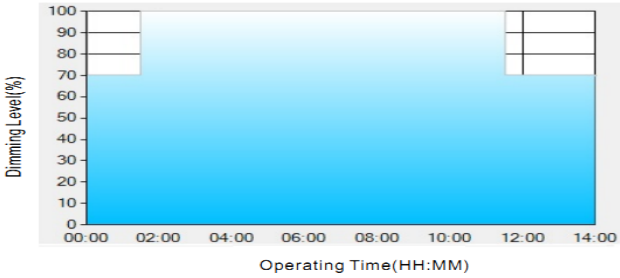


Set up for D02-Type in Smart timer dimming software program:

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

** : TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
 Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:
 [1] The power supply will switch to the constant current level at 50% starting from 5:00pm.
 [2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.
 [3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.
 [4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.
 [5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

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% |

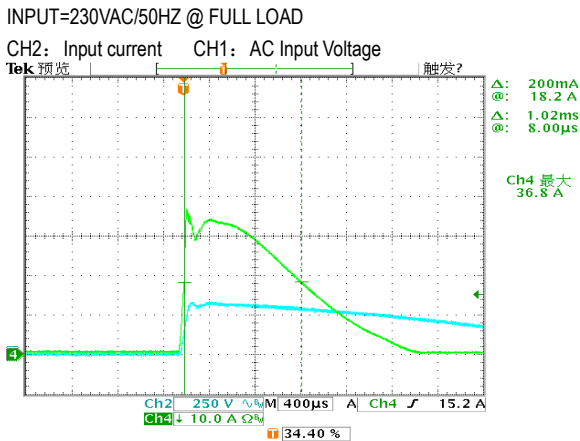
** : TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
 Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:
 [1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
 [2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
 [3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.
 The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

TEST RESULT: OK

MEAN WELL
 2018/10/2
 ISSU

INPUT FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|---------------------------|--|--|---|
| 1 | INPUT VOLTAGE RANGE | 90VAC~305 VAC | I/P: TESTING O/P: FULL LOAD (PLEASE CHECK DERATING CURVE) Ta: 25°C | 87V~305 V |
| | | | 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: 90 VAC ~305 VAC O/P: FULL~NO LOAD Ta: 25°C | TEST: OK |
| 3 | AC CURRENT | 115VAC/ 3.0 A 230 VAC/ 1.6 A 277 VAC/ 1.3 A | I/P: 115 VAC I/P: 230 VAC I/P: 277 VAC O/P: FULL LOAD Ta: 25°C | I=2.844A/ 115VAC I= 1.402A/ 230VAC I= 1.214A/277VAC |
| 4 | LEAKAGE CURRENT | < 0.75mA / 277VAC | I/P: 277 VAC O/P: NO LOAD Ta: 25°C | L-FG: 0.283mA N-FG: 0.274mA |
| 5 | STANDBY POWER CONSUMPTION | <0.5W for A/B/DA-Type | I/P: 230VAC O/P: NO LOAD/STANDBY Ta: 25°C | 0.37W |
| 6 | INRUSH CURRENT(Typ) | 230 V/ 45A COLD START (twidth=1300us measured at 50% Ipeak) COLD START at 230V | I/P: 230 VAC O/P: FULL LOAD Ta: 25°C | I=36.8A/ 230VAC Twidth = 1020us |



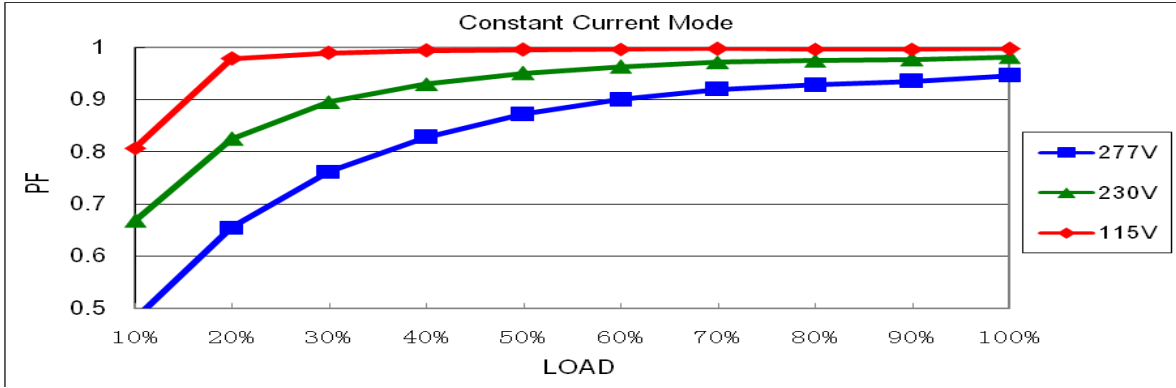


300W Constant Power Mode LED Driver

ELGC-300 series

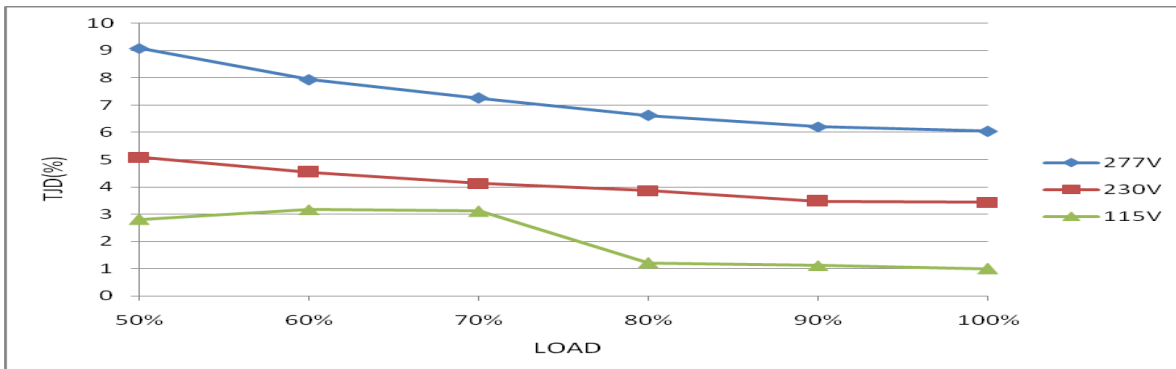
| | | | | |
|---|--------------|---|--|--|
| 7 | POWER FACTOR | 0.97/ 115VAC@ FULL LOAD 0.95/ 230VAC@ FULL LOAD 0.92/ 277VAC@ FULL LOAD | I/P: 115 VAC I/P: 230 VAC I/P: 277 VAC O/P: FULL LOAD Ta: 25°C | PF=0.998@ FULL LOAD /115VAC PF=0.982 @ FULL LOAD /230VAC PF=0.945@ FULL LOAD /277VAC |
|---|--------------|---|--|--|

PF vs LOAD



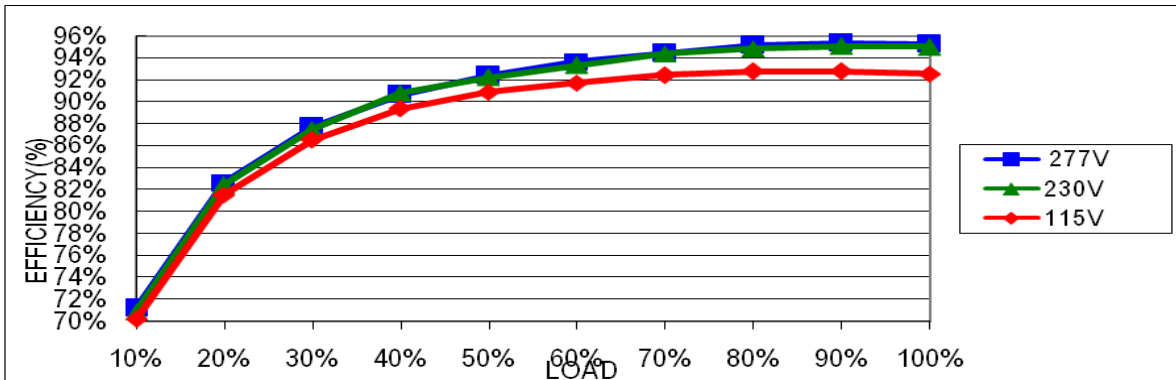
| | | | | |
|---|---------------------------|---|--|--|
| 8 | TOTAL HARMONIC DISTORTION | THD < 10% (@load ≥ 50%/115VAC; @load ≥ 50%/230VAC; @load ≥ 75%/277VAC) | I/P: 115 VAC I/P: 230 VAC I/P: 277 VAC O/P: 50% /75% LOAD Ta: 25°C | THD=2.815% @50% load /115VAC THD=5.09% @50% load /230VAC THD=6.94% @75% load /277VAC |
|---|---------------------------|---|--|--|

THD vs LOAD



| | | | | |
|---|-----------------|-------|---|--------|
| 9 | EFFICIENCY(Typ) | 93.5% | I/P: 230VAC O/P: FULL LOAD Ta: 25°C | 95.02% |
|---|-----------------|-------|---|--------|

EFFICIENCY vs LOAD



PROTECTION FUNCTION TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|-----------------------------|--|---|---|
| 1 | OVER VOLTAGE PROTECTION | 121V~145V | I/P: 100VAC I/P: 230VAC I/P: 305VAC O/P: NO LOAD | 129.62V/ 100VAC 130.22V/ 230VAC 130.26V/ 305VAC Shut down o/p voltage, re-power on to recovery |
| 2 | OVER TEMPERATURE PROTECTION | NO DAMAGE | I/P: 100VAC I/P: 230VAC I/P: 305VAC O/P: FULL LOAD | O.T.P. Active T _{case} >85°C±5°C, derate power automatically by 6%/°C max |
| 3 | SHORT PROTECTION | SHORT EVERY OUTPUT 1 HOUR NO DAMAGE | I/P: 100VAC I/P: 230VAC 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 | PWM Transistor (D to S) or (C to E) Peak Voltage | Q5 Rated 23.9A/600V | I/P: High-Line +3V =308V O/P: (1) Full Load Turn on (2) Output Short (3) Full load continue Ta: 25°C | (1) 436V (2) 436V (3) 446V |
| 2 | P.F.C Transistor (D to S) or (C to E) Peak Voltage | Q1 Rated 22A/600V | I/P: High-Line +3V =308V O/P: (1) Full Load Turn on (2) Output Short (3) Full load continue Ta: 25°C | (1) 482V (2) 458V (3) 502V |
| 3 | P.F.C DIODE | D1 Rated 10A/600V | I/P: High-Line +3V =308V O/P: (1) Full Load Turn on (2) Output Short (3) Full load continue Ta: 25°C | (1) 444V (2) 434V (3) 444V |
| 4 | Diode Peak Voltage | Q100 Rated 20A/400V | I/P: High-Line +3V =308V O/P: (1) Full Load (2) Output Short (3) Full Load continue (4) No Load Ta: 25°C | (1) 234V (2) 28.8V (3) 254V (4) 251V |
| 5 | Input Capacitor Voltage | C5 Rated: 150 μ / 450 V | I/P: High-Line +3V =308 V 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) 446V (2) 442V (3) 444V (4) 446V |

| | | | | |
|---|-------------------------|------------------|--|--|
| 6 | Control IC Voltage Test | U1 Rated 16 V | I/P: High-Line +3V =308V O/P(1)FULL LOAD (2) Output Short (3)O.V.P. (4)NO LOAD VR.LOW LINE Ta: 25°C | (1) 13.5V (2) 13.5V (3) 13.5V (4) 13.5V |
|---|-------------------------|------------------|--|--|

SAFETY TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|----------------------|--|--|---|
| 1 | WITHSTAND VOLTAGE | 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: 2.317 mA I/P-FG: 2.458mA O/P-FG: 2.528mA 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: >9999GΩ I/P-FG: >9999 G Ω O/P-FG: >9999 G Ω NO DAMAGE |
| 3 | GROUNDING CONTINUITY | FG(PE) TO CHASSIS OR TRACE < 100 mΩ | 40A / 2min Ta:25°C | 20mΩ |

E.M.C TEST

| NO | TEST ITEM | SPECIFICATION | TEST CONDITION | RESULT |
|----|---|---|--|--------|
| 1 | HARMONIC | EN61000-3-2 CLASS C | I/P: 230VAC/50HZ O/P: FULL/50% LOAD Ta: 25°C | PASS |
| 2 | CONDUCTION | EN55015 | I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C | PASS |
| 3 | RADIATION | EN55015 | I/P: 230 VAC/50HZ O/P: FULL LOAD Ta: 25°C | PASS |
| 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 | PASS |
| 5 | E.F.T | EN61000-4-4 LIGHT INDUSTRY INPUT: 2KV | I/P: 230VAC/50HZ O/P: FULL LOAD Ta: 25°C | PASS |
| 6 | SURGE | EN61000-4-5 LIGHT INDUSTRY L-N : 4KV L-PE: 6KV | I/P: 230VAC/50HZ O/P: FULL LOAD Ta: 25°C | PASS |
| 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: ELGC-300-M 1. ROOM AMBIENT BURN-IN: 2 HRS I/P: 230VAC O/P: FULL LOAD Ta= 27.8°C 2. HIGH AMBIENT BURN-IN: 2 HRS I/P: 230VAC O/P: FULL LOAD Ta=43.6°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>ROOM AMBIENT Ta= 27.8 °C</th> <th>HIGH AMBIENT Ta=43.6 °C</th> </tr> </thead> <tbody> <tr><td>1</td><td>RT1</td><td>62.7°C</td><td>77.3°C</td></tr> <tr><td>2</td><td>L1</td><td>63.7°C</td><td>78.3°C</td></tr> <tr><td>3</td><td>BD1</td><td>67.7°C</td><td>82.2°C</td></tr> <tr><td>4</td><td>C5</td><td>63.0°C</td><td>77.8°C</td></tr> <tr><td>5</td><td>Q1</td><td>64.1°C</td><td>79.1°C</td></tr> <tr><td>6</td><td>D1</td><td>66.0°C</td><td>80.8°C</td></tr> <tr><td>7</td><td>Q6</td><td>64.9°C</td><td>79.5°C</td></tr> <tr><td>8</td><td>Q5</td><td>65.7°C</td><td>80.3°C</td></tr> <tr><td>9</td><td>U2</td><td>63.1°C</td><td>77.6°C</td></tr> <tr><td>10</td><td>R8</td><td>63.3°C</td><td>77.7°C</td></tr> <tr><td>11</td><td>C41</td><td>63.4°C</td><td>78.6°C</td></tr> <tr><td>12</td><td>T1</td><td>69.6°C</td><td>85.2°C</td></tr> <tr><td>13</td><td>Q100</td><td>66.9°C</td><td>82.0°C</td></tr> <tr><td>14</td><td>Q101</td><td>66.8°C</td><td>81.3°C</td></tr> <tr><td>15</td><td>U107</td><td>65.0°C</td><td>79.7°C</td></tr> <tr><td>16</td><td>C103</td><td>63.3°C</td><td>77.4°C</td></tr> <tr><td>17</td><td>T500</td><td>65.3°C</td><td>80.4°C</td></tr> <tr><td>18</td><td>C562</td><td>64.4°C</td><td>79.2°C</td></tr> <tr><td>19</td><td>U510</td><td>71.0°C</td><td>87.9°C</td></tr> <tr><td>20</td><td>ZR1</td><td>57.1°C</td><td>71.6°C</td></tr> </tbody> </table> | NO | Position | ROOM AMBIENT Ta= 27.8 °C | HIGH AMBIENT Ta=43.6 °C | 1 | RT1 | 62.7°C | 77.3°C | 2 | L1 | 63.7°C | 78.3°C | 3 | BD1 | 67.7°C | 82.2°C | 4 | C5 | 63.0°C | 77.8°C | 5 | Q1 | 64.1°C | 79.1°C | 6 | D1 | 66.0°C | 80.8°C | 7 | Q6 | 64.9°C | 79.5°C | 8 | Q5 | 65.7°C | 80.3°C | 9 | U2 | 63.1°C | 77.6°C | 10 | R8 | 63.3°C | 77.7°C | 11 | C41 | 63.4°C | 78.6°C | 12 | T1 | 69.6°C | 85.2°C | 13 | Q100 | 66.9°C | 82.0°C | 14 | Q101 | 66.8°C | 81.3°C | 15 | U107 | 65.0°C | 79.7°C | 16 | C103 | 63.3°C | 77.4°C | 17 | T500 | 65.3°C | 80.4°C | 18 | C562 | 64.4°C | 79.2°C | 19 | U510 | 71.0°C | 87.9°C | 20 | ZR1 | 57.1°C | 71.6°C |
| NO | Position | ROOM AMBIENT Ta= 27.8 °C | HIGH AMBIENT Ta=43.6 °C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | RT1 | 62.7°C | 77.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | L1 | 63.7°C | 78.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | BD1 | 67.7°C | 82.2°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | C5 | 63.0°C | 77.8°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Q1 | 64.1°C | 79.1°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | D1 | 66.0°C | 80.8°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | Q6 | 64.9°C | 79.5°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | Q5 | 65.7°C | 80.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | U2 | 63.1°C | 77.6°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | R8 | 63.3°C | 77.7°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | C41 | 63.4°C | 78.6°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | T1 | 69.6°C | 85.2°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | Q100 | 66.9°C | 82.0°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | Q101 | 66.8°C | 81.3°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | U107 | 65.0°C | 79.7°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | C103 | 63.3°C | 77.4°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | T500 | 65.3°C | 80.4°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | C562 | 64.4°C | 79.2°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | U510 | 71.0°C | 87.9°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | ZR1 | 57.1°C | 71.6°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | LOW TEMPERATURE TURN ON TEST | TURN ON AFTER 2 HOUR | I/P: 305VAC/100VAC O/P: FULL LOAD/85% LOAD Ta= -45°C/-35°C | TEST: OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST | AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE | I/P: 305VAC O/P: FULL LOAD Ta=50 °C HUMIDITY= 95% R.H | TEST: OK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | TEMPERATURE COEFFICIENT | ±0.03%/°C (0~60°C) | I/P: 230 VAC O/P: FULL LOAD | ±0.0025%/°C (0~60°C) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | STORAGE TEMPERATURE TEST | -40~+80°C | 1. Thermal shock Temperature: -45°C~ +85°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle: 200CYCLE 5. Input/Output condition: STATIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



300W Constant Power Mode LED Driver

ELGC-300 series

| | | | |
|----|--------------------------|---|---|
| 6 | THERMAL SHOCK TEST | -40~+50°C | 1. Thermal shock Temperature: -45°C~ +55°C 2. Temperature change rate : 25°C / MIN 3. Dwell time low and high temperature : 30 MIN/EACH 4. Total test cycle: 16CYCLE 5. Input/Output condition: 15cyle:230VAC/ FULL LOAD AC on 3 sec/AC off 1 sec TEST 1cyle:230VAC/ FULL LOAD Burn In Test TEST: OK |
| 7 | VIBRATION TEST | 10~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | 1 Carton & 1 Set (1) Waveform: Sine Wave (2) Frequency: 10~500Hz (3) Sweep Time: 10min/sweep cycle (4) Acceleration: 6G (5) Test Time: 180min in each axis (X.Y.Z) (6) Ta: 25°C |
| 8 | CAPACITOR LIFE CYCLE | HBGC-300-M: SUPPOSE C105 IS THE MOST CRITICAL COMPONENT (1) I/P: 230VAC O/P: FULL LOAD Tc= 70 °C LIFE TIME (2) I/P: 230VAC O/P: 75% LOAD Tc= 70 °C LIFE TIME (3) I/P: 230VAC O/P: 50% LOAD Tc= 70 °C LIFE TIME | (1) 89817 HRS (2) 112171 HRS (3) 125820 HRS |
| 9 | MTBF | Conducted by Parts Stress Analysis Prediction 1637.5K hrs min. Telcordia SR-332 (Bellcore) ; 170.1K 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 | WUWQ/ZHOUB | WENF | LIUWY |