



# Test Report: LCM-40TW

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40W Constant Power Mode With Tunable White 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

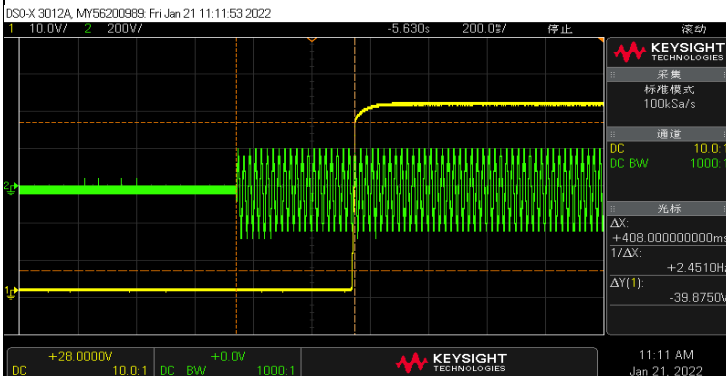
ENVIRONMENT TEST

DESIGN VERIFY TEST

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	RATED POWER	40W Max. total	I/P:230VAC O/P:LEDmax CP: 0.8A & 1.05A Ta:25°C	CP: 0.8A 50V*0.8A=40W CP: 1.05A 38V*1.05A=39.9W
2	NO LOAD VOLTAGE VOLTAGE (max)	53V	I/P: 230VAC O/P:NO LOAD CP: OPEN Ta:25°C	52.99V
3	CONSTANT CURRENT REGION	CP 0.8A: CH1:20V~ 50V  CP 1.05A: CH1:20V~ 38V	I/P: 230VAC O/P:LEDmax CP: 0.8A & 1.05A Ta:25°C	CP 0.8A: 10.6V~ 52.1V/230VAC CP 1.05A: 11.3V~ 42.3V/230VAC
4	CURRENT ADJ. RANGE (BY DIP SWITCH)	CH1/CH2: 500~1050mA	I/P: 230VAC O/P:CVmin& CVmax-1V CP: 0.5A ~1.05A Ta:25°C	CH1: 508mA/606mA/701mA/782mA/898mA/1043mA CH2: 506mA/607mA/708mA/787mA/904mA/1049mA
5	CURRENT RIPPLE	2.0% max.	I/P: 230VAC O/P:LEDmax CP: 0.8A & 1.05A Ta:25°C	CP 0.8A: 1.02%  CP 1.05A: 0.89%
6	SET UP TIME	230VAC/ 500 ms (Max)	I/P: 230VAC O/P:LEDmax CP 0.8A Ta:25°C	230VAC/ 408ms

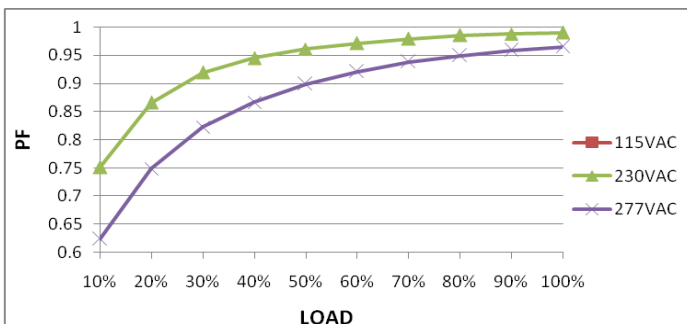
INPUT=230VAC/50HZ @ LEDMAX@ CP 0.8A  
CH1 : Output Voltage CH2 : AC Input Voltage



### INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	INPUT VOLTAGE RANGE	180VAC~277VAC 260VDC ~ 390VDC	(1) I/P:TESTING O/P:LEDmax (2) I/P:DC TESTING(L:+ N:-) O/P:LEDmax (3) I/P:DC TESTING(L:- N:+) O/P:LEDmax (4) I/P: LOW-LINE=260VDC HIGH-LINE=390VDC O/P: Dimming on/off Ta:25°C	(1) 177VAC~298VAC (2) 260VDC~390VDC (3) 260VDC~390VDC (4) 260VDC~390VDC
			I/P: LOW-LINE-3V=177 V HIGH-LINE+10V=287V O/P: LEDmax / LEDmin CP 0.8A (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 ~295VAC O/P: LEDmax ~ LEDmin CP 0.8A Ta:25°C	TEST:OK
3	INPUT CURRENT (TYP)	230VAC/ 0.23 A	I/P: 230VAC O/P:LEDmax CP 0.8A Ta:25°C	I =0.193A/ 230VAC
4	POWER FACTOR(TYP)	0.98/230VAC LEDMAX 0.95/277VAC LEDMAX	I/P: 230VAC/277VAC O/P:LEDmax CP 0.8A Ta:25°C	PF=0.990/230V/100%LOAD PF=0.965/277V/100%LOAD

P.F vs LOAD



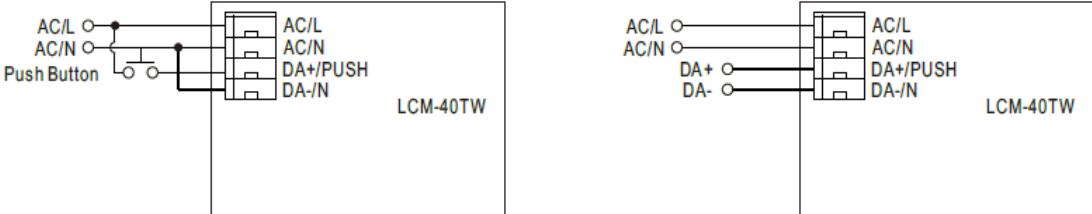
5	EFFICIENCY (TYP)	87%	I/P: 230VAC O/P:LEDmax CP 0.8A Ta:25°C	87.99%
<p>EFFICIENCY vs LOAD</p>				
6	INRUSH CURRENT (TYP)	230V/ 20A COLD START  (twidth=310 usmeasured at 50% Ipeak) COLD START	I/P: 230VAC O/P:LEDmax CP 0.8A Ta:25°C	I =13.7A /230VAC  T50= 272 μ S
<p>INPUT=230VAC/ 60HZ @ LEDMAX CH2 : AC Input Voltage CH4 : Input current</p>				
7	TOTAL HARMONIC DISTORTION	THD < 10% @ 230VAC/50% loading THD < 10% @ 277VAC/75% loading	I/P : 230/277VAC O/P : 50%/75% LOAD CP 0.8A Ta : 25°C	THD : 5.82 %230V 50% THD : 8.41 %277V 75%
<p>THD vs LOAD</p>				

8	STANDBY POWER CONSUMPTION	Standby power consumption < 0.5W (Dimming off)	I/P: 230VAC O/P: MIN LOAD Ta: 25°C	0.4182W
9	LEAKAGE CURRENT	EN61347-1 < 0.75mA / 277VAC	I/P: 277 VAC O/P: Min LOAD Ta: 25°C	L-FG: 0.014mA N-FG: 0.013mA

### ROTECTION FUNCTION TEST

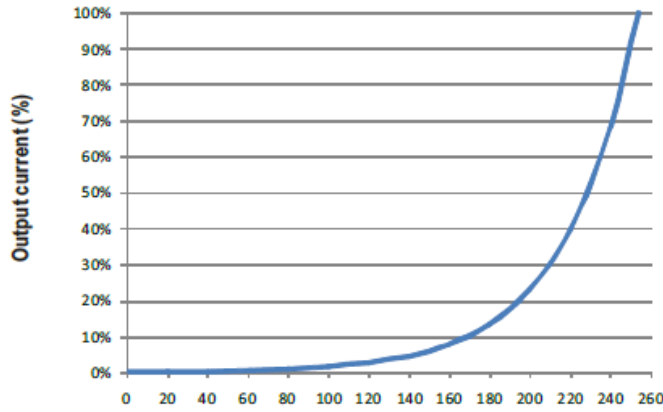
NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	OVER LOAD PROTECTION	V1: 105%~135%	I/P: 295VAC I/P: 230VAC I/P: 180VAC CP 0.8A  O/P: TESTING Ta: 25°C	112.6%/ 295VAC 112.0%/ 230VAC 112.2%/ 180VAC PROTECTION TYPE : Hiccup mode, recovers automatically after fault condition is removed.
2	OVER TEMPERATURE PROTECTION	NO DAMAGE	I/P: 295 VAC I/P: 180 VAC O/P: LEDmax CP 0.8A Ta: 25°C	O.T.P. Active PROTECTION TYPE : Stage 1: Derating to 70% loading; Stage 2: Shut down. recovers automatically after fault condition is removed
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 295VAC I/P: 180 VAC O/P: LEDMAX CP: 0.8A & 1.05A Ta: 25°C	CP: 0.8A NO DAMAGE PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed  CP: 1.05A NO DAMAGE PROTECTION TYPE : Constant current limiting, recovers automatically after fault condition is removed

CONTROL FUNCTION TEST

1	DIP SWITCH TABLE	<p>LCM-40TW is a multiple-stage constant power driver, selection of output current through DIP switch is exhibited below.</p> <table border="1" data-bbox="427 398 810 689"> <tr> <th>Io \ DIP S.W</th> <th>1</th> <th>2</th> <th>3</th> </tr> <tr> <td>500mA</td> <td>----</td> <td>ON</td> <td>ON</td> </tr> <tr> <td></td> <td>ON</td> <td>ON</td> <td>ON</td> </tr> <tr> <td>600mA</td> <td>----</td> <td>----</td> <td>ON</td> </tr> <tr> <td></td> <td>ON</td> <td>----</td> <td>ON</td> </tr> <tr> <td>700mA(factory default)</td> <td>ON</td> <td>ON</td> <td>----</td> </tr> <tr> <td>800mA</td> <td>----</td> <td>ON</td> <td>----</td> </tr> <tr> <td>900mA</td> <td>ON</td> <td>----</td> <td>----</td> </tr> <tr> <td>1050mA</td> <td>----</td> <td>----</td> <td>----</td> </tr> </table> <table border="1" data-bbox="1058 416 1441 607"> <tr> <th>Status \ DIP S.W</th> <th>4</th> <th>5</th> <th>Activated Channel</th> </tr> <tr> <td>Single-address DT6</td> <td>----</td> <td>ON</td> <td>CH1</td> </tr> <tr> <td>Dual-address DT6</td> <td>ON</td> <td>ON</td> <td>CH1,CH2</td> </tr> <tr> <td>Single-address DT8 (factory default)</td> <td>----</td> <td>----</td> <td>CH1,CH2</td> </tr> <tr> <td></td> <td>ON</td> <td>----</td> <td>CH1,CH2</td> </tr> </table> <p>Note: For more current setting, please contact MW's sales.</p> <p>TEST RESULT : OK</p>	Io \ DIP S.W	1	2	3	500mA	----	ON	ON		ON	ON	ON	600mA	----	----	ON		ON	----	ON	700mA(factory default)	ON	ON	----	800mA	----	ON	----	900mA	ON	----	----	1050mA	----	----	----	Status \ DIP S.W	4	5	Activated Channel	Single-address DT6	----	ON	CH1	Dual-address DT6	ON	ON	CH1,CH2	Single-address DT8 (factory default)	----	----	CH1,CH2		ON	----	CH1,CH2
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2	DIMMING OPERATION	<p>※ Output wiring diagram</p>  <p>※ PUSH dimming (primary side)</p> <ul style="list-style-type: none"> <li>• The factory default dimming level is at 100%.</li> <li>• If the push action lasts less than 0.05 sec., it will not lead to a change for the status of the driver.</li> <li>• Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.</li> <li>• The maximum length of the cable from the push button to the last driver is 20 meters.</li> <li>• The additive push button can be connected only between the PUSH terminal, as displayed in the diagram, and AC/L (in brown or black); it will lead to short circuit if it is connected to AC/N.</li> </ul> <table border="1" data-bbox="323 1261 702 1406"> <thead> <tr> <th>Action</th> <th>Action duration</th> </tr> </thead> <tbody> <tr> <td>Short Push</td> <td>0.1~1s</td> </tr> <tr> <td>Double Click</td> <td>Click twice in 1.5s</td> </tr> <tr> <td>Long Push</td> <td>1.5~10s</td> </tr> </tbody> </table> <p>Function</p> <table border="1" data-bbox="323 1451 1082 2056"> <thead> <tr> <th>Status</th> <th>Output</th> <th>Push button function</th> </tr> </thead> <tbody> <tr> <td>DT6 Single Address</td> <td>CH1</td> <td>Short Push : ON/OFF Double Click : go to maximum. Long Push: Dim up/down. - stop at max./min. level - with next push, direction change (up/down) - dim up possible even if when unit is in standby mode (dim off mode)</td> </tr> <tr> <td>DT6 Dual Address</td> <td>CH1,CH2</td> <td>Short Push: ON/OFF Double Click : go to maximum. Long Push : Dim up+CCT cooler/Dim down+CCT warmer - dim up stop at maximum; dim down stop at min dim (not dim off) - with next push, up or down direction will change - dim up possible even if when unit is in standby mode (dim off mode)</td> </tr> <tr> <td>DT8</td> <td>CH1(C) , CH2(W)</td> <td>Short Push : ON/OFF Double Click : Switch between Dim control or CCT control mode Long Push : Dim up/down or CCT control - stop at max./min. level - with next push, direction change (up/down, warm/cold) - dim up possible even if when unit is in standby mode (dim off mode)</td> </tr> </tbody> </table> <p>TEST RESULT : OK</p>	Action	Action duration	Short Push	0.1~1s	Double Click	Click twice in 1.5s	Long Push	1.5~10s	Status	Output	Push button function	DT6 Single Address	CH1	Short Push : ON/OFF Double Click : go to maximum. Long Push: Dim up/down. - stop at max./min. level - with next push, direction change (up/down) - dim up possible even if when unit is in standby mode (dim off mode)	DT6 Dual Address	CH1,CH2	Short Push: ON/OFF Double Click : go to maximum. Long Push : Dim up+CCT cooler/Dim down+CCT warmer - dim up stop at maximum; dim down stop at min dim (not dim off) - with next push, up or down direction will change - dim up possible even if when unit is in standby mode (dim off mode)	DT8	CH1(C) , CH2(W)	Short Push : ON/OFF Double Click : Switch between Dim control or CCT control mode Long Push : Dim up/down or CCT control - stop at max./min. level - with next push, direction change (up/down, warm/cold) - dim up possible even if when unit is in standby mode (dim off mode)																																				
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※DALI interface(primary side; for DA2-Type)

- Apply DALI signal between DA+ and DA-
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 0.2%.



DALI Dimming curve

Application	Output channels	Output connections schematic diagram
Two independent output control(DT6)	Single or dual address (CH1 only in single address mode)	
Tunable white control(DT8)	Single address	

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	Q2 Rated: 6A /800V	<p>AC ON/OFF I/P:High-Line +3V =280V CP: 0.8A/1.05A VDS: O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) Output Short</p> <p>I/P:Low-Line -3V = 177V CP: 0.8A/1.05A VDS: O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) Output Short</p> <p>Ta:25°C</p>	<p>280V: CP: 0.8A Q2 VDS: (1) 597V (2) 584V (3) 584V (4) 568V (5) 580 V</p> <p>177V: CP: 0.8A Q2 VDS: (1) 584V (2) 584V (3) 592V (4) 564V (5) 576V</p> <p>280V: CP: 1.05A VDS: (1) 592V (2) 584V (3) 608V (4) 568V (5) 576V</p> <p>177V: CP: 1.05A VDS: (1) 582V (2) 582V (3) 582V (4) 570V (5) 574V</p>
2	P.F.C Transistor ( D to S) or (C to E) Peak Voltage	Q1 Rated: 10.6A/650V	<p>AC ON/OFF I/P:High-Line +3V =280V CP:0.8A VDS: O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) Output Short</p> <p>I/P:Low-Line -3V = 177V VDS: O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) Output Short</p> <p>Ta:25°C</p>	<p>280V: VDS: (1) 458V (2) 434V (3) 454V (4) 426V (5) 442V</p> <p>177V: VDS: (1) 450V (2) 438V (3) 446V (4) 426V (5) 434V</p>
3	P.F.C DIODE	D5 Rated: 3A/600V	<p>I/P:High-Line +3V =280V AC ON/OFF CP: 1.05A O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) Output Short</p>	<p>280V: (1) 446V (2) 438V (3) 446V (4)434V (5)422V</p>



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4	Diode Peak Voltage	<p>D100 Rated  3A/300V</p>	<p>AC ON/OFF  I/P:High-Line +3V =280 V  CP: 0.8A/1.05A  O/P: (1)LEDmax  (2) LEDmax continue  (3) Output Short</p> <p>Ta:25°C</p>	<p>CP: 0.8A      CP: 1.05A  (1) 253V      (1) 255V  (2) 251V      (1) 251V  (3) 251V      (2) 251V</p>
5	Control IC Voltage Test	<p>PFC IC U1 Rated  9.3V~27V</p> <p>PWM IC U2 Rated  9.5V~30V</p> <p>D to D IC U120 Rated  6~60 ( VIN )</p> <p>MCU U404 Rated:  1.7V~3.6V</p>	<p>AC ON/OFF  I/P:High-Line +3V =280 V  CP: 0.8A  O/P: (1)LEDmax  (2) LEDmax continue  (3) LEDmin  (4) LEDmin continue  (5) NO LOAD  (6)dim off</p> <p>Ta:25°C</p>	<p><b>U1/U2</b>  (1) 19.1V  (2) 18.9V  (3) 17.7V  (4) 17.7V  (5) 17.3V  (6) 18.9V</p> <p><b>U120</b>  (1) 6.19V  (2) 6.27 V  (3) 6.19V  (4) 6.19V  (5) 6.19V  (6) 6.27V</p> <p><b>U404:</b>  (1) 3.38V  (2) 3.38V  (3) 3.38V  (4) 3.38V  (5) 3.38V  (6) 3.38V</p>
6	Clamp Diode Peak Voltage	<p>D53 Rated :  1A/200V</p> <p>D112 Rated :  1A/200V</p>	<p>AC ON/OFF  I/P : High-Line +3V = 280 V  CP: 0.8A  O/P: (1)LEDmax  (2) LEDmax continue  (3) LEDmin  (4) LEDmin continue  (5) NO LOAD</p> <p>Ta : 25°C</p>	<p><b>D53</b>                      <b>D112</b>  (1)79.6 V                      (1) 79.6V  (2) 78.0V                      (2) 77.7V  (3) 78.0V                      (3) 78.8V  (4)75.6V                      (4) 75.6V  (5)74.8V                      (5) 74.8V</p>

7	LED DIMMING MOS	<p>Q100 Rated : 3.3A/100V</p> <p>Q101 Rated:18A/100V</p>	<p>AC ON/OFF I/P:High-Line +10V =280 V</p> <p>O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) NO LOAD (6)dim off</p> <p>Ta : 25°C</p>	<p>CP: 0.8A ( DT8 )</p> <table border="0"> <tr> <td>Q100</td> <td>Q101</td> </tr> <tr> <td>VDS:</td> <td>VDS:</td> </tr> <tr> <td>(1) 60.6V</td> <td>(1) 60.2V</td> </tr> <tr> <td>(2) 59.3V</td> <td>(2) 0.7V</td> </tr> <tr> <td>(3) 61.7V</td> <td>(3) 60.2V</td> </tr> <tr> <td>(4) 59.3V</td> <td>(4) 0.7V</td> </tr> <tr> <td>(5) 58.5V</td> <td>(5) 60.2V</td> </tr> <tr> <td>(6) 59.3V</td> <td>(6) 60.2V</td> </tr> </table> <p>CP: 1.05A ( DT8 )</p> <table border="0"> <tr> <td>VDS:</td> <td>VDS:</td> </tr> <tr> <td>(1) 62.5V</td> <td>(1) 60.2V</td> </tr> <tr> <td>(2) 59.3V</td> <td>(2) 0.7V</td> </tr> <tr> <td>(3) 68.1V</td> <td>(3) 60.2V</td> </tr> <tr> <td>(4) 59.3V</td> <td>(4) 0.7V</td> </tr> <tr> <td>(5) 59.3V</td> <td>(5) 60.2V</td> </tr> <tr> <td>(6) 59.3V</td> <td>(6) 60.2V</td> </tr> </table> <p>CP: 0.8A ( DT6 )</p> <table border="0"> <tr> <td>VDS:</td> <td>VDS:</td> </tr> <tr> <td>(1) 63.3V</td> <td>(1) 60.2V</td> </tr> <tr> <td>(2) 59.3V</td> <td>(2) 0.7V</td> </tr> <tr> <td>(3) 64.1V</td> <td>(3) 60.2V</td> </tr> <tr> <td>(4) 59.3V</td> <td>(4) 0.7V</td> </tr> <tr> <td>(5) 59.3V</td> <td>(5) 60.2V</td> </tr> <tr> <td>(6) 59.3V</td> <td>(6) 60.2V</td> </tr> </table> <p>CP: 1.05A ( DT6 )</p> <table border="0"> <tr> <td>VDS:</td> <td>VDS:</td> </tr> <tr> <td>(1) 59.3V</td> <td>(1) 60.2V</td> </tr> <tr> <td>(2) 59.3V</td> <td>(2) 0.7V</td> </tr> <tr> <td>(3) 68.9V</td> <td>(3) 60.2V</td> </tr> <tr> <td>(4) 59.3V</td> <td>(4) 0.7V</td> </tr> <tr> <td>(5) 59.3V</td> <td>(5) 60.2V</td> </tr> <tr> <td>(6) 59.3V</td> <td>(6) 60.2V</td> </tr> </table>	Q100	Q101	VDS:	VDS:	(1) 60.6V	(1) 60.2V	(2) 59.3V	(2) 0.7V	(3) 61.7V	(3) 60.2V	(4) 59.3V	(4) 0.7V	(5) 58.5V	(5) 60.2V	(6) 59.3V	(6) 60.2V	VDS:	VDS:	(1) 62.5V	(1) 60.2V	(2) 59.3V	(2) 0.7V	(3) 68.1V	(3) 60.2V	(4) 59.3V	(4) 0.7V	(5) 59.3V	(5) 60.2V	(6) 59.3V	(6) 60.2V	VDS:	VDS:	(1) 63.3V	(1) 60.2V	(2) 59.3V	(2) 0.7V	(3) 64.1V	(3) 60.2V	(4) 59.3V	(4) 0.7V	(5) 59.3V	(5) 60.2V	(6) 59.3V	(6) 60.2V	VDS:	VDS:	(1) 59.3V	(1) 60.2V	(2) 59.3V	(2) 0.7V	(3) 68.9V	(3) 60.2V	(4) 59.3V	(4) 0.7V	(5) 59.3V	(5) 60.2V	(6) 59.3V	(6) 60.2V
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8	Buck Diode Peak Voltage	<p>D120 Rated : 10A/100V</p>	<p>AC ON/OFF I/P : High-Line +3V = 280 V</p> <p>O/P: (1)LEDmax (2) LEDmax continue (3) LEDmin (4) LEDmin continue (5) NO LOAD</p> <p>Ta : 25°C</p>	<p>CP: 0.8A D120</p> <table border="0"> <tr> <td>(1) 62.7V</td> </tr> <tr> <td>(2) 61.9V</td> </tr> <tr> <td>(3) 64.3V</td> </tr> <tr> <td>(4) 61.9V</td> </tr> <tr> <td>(5) 61.9V</td> </tr> </table> <p>CP: 0.8A D140</p> <table border="0"> <tr> <td>(1)65.9 V</td> </tr> <tr> <td>(2)61.1 V</td> </tr> <tr> <td>(3)68.3V</td> </tr> <tr> <td>(4)61.9V</td> </tr> <tr> <td>(5)62.7V</td> </tr> </table>	(1) 62.7V	(2) 61.9V	(3) 64.3V	(4) 61.9V	(5) 61.9V	(1)65.9 V	(2)61.1 V	(3)68.3V	(4)61.9V	(5)62.7V																																																
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## SAFETY & EMC TEST

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	WITHSTAND VOLTAGE	EN61347-1 I/P-O/P: 3.75KVAC/min	I/P-O/P: 4.125 KVAC/min Ta:25°C	I/P-O/P::2.728mA NO DAMAGE
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P: 500 VDC Ta:25°C	I/P-O/P: >9999MΩ NO DAMAGE

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT
1	HARMONIC	EN61000-3-2 CLASS C	I/P: 230VAC/50HZ O/P: LEDmax Ta:25°C	PASS
2	CONDUCTION	EN55015	I/P:230VAC (50HZ) O/P: LEDmax /50% LOAD Ta:25°C	PASS Test by certified Lab
3	RADIATION	EN55015	I/P: 230VAC (50HZ) O/P:LEDmax Ta:25°C	PASS Test by certified Lab
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR : 8KV / Contact : 4KV	I/P: 230VAC (50HZ) O/P:LEDmax Ta:25°C	CRITERIA A
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230VAC (50HZ) O/P:LEDmax Ta:25°C	CRITERIA A
6	SURGE	IEC61000-4-5 light industry L-N :2KV	I/P: 230VAC (50HZ) O/P:LEDmax 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 : LCM-40TW 1. ROOM AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=23.2 °C 2. HIGH AMBIENT BURN-IN : 2 HRS I/P : 230VAC O/P : FULL LOAD Ta=46.9 °C																																																																																																																																						
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2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P : 277VAC/180VAC O/P : 100%LOAD Ta= -35 °C	TEST : OK
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 45 °C NO DAMAGE	I/P : 285 VAC O/P : FULL LOAD Ta=45 °C HUMIDITY= 95 %R.H	TEST : OK
4	TEMPERATURE COEFFICIENT	+ 0.03 %/(0°C~50°C)	I/P : 230 VAC O/P : FULL LOAD	+ 0.007 %/°C(0~50°C)
5	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	
6	THERMAL SHOCK TEST	-30~45°C	1. Thermal shock Temperature : -35°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 TEST : OK	
7	VIBRATION TEST	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	1 Carton & 1 Set (1) Waveform : Sine Wave (2) Frequency : 10~500Hz (3) Sweep Time : 12min/sweep cycle (4) Acceleration : 3G (5) Test Time : 180min in each axis (X.Y.Z) (6) Ta : 25°C	
8	CAPACITOR LIFE CYCLE	SUPPOSE C101 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) 36286HRS (2) 50149HRS (3) 61482HRS
9	MTBF	Conducted by Parts Stress Analysis Prediction 2111.7K hrs min. Telcordia SR-332 (Bellcore); 177.4K 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/HUANGMK	WENF	LINKX