

# UMEC SMPS SPECIFICATION

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This unit is ready for “Green Product” and meet “Pb-free lead plating” & “RoHS Compliant” requirement.

## 1.0 INPUT CHARACTERISTICS :

1.1 Input Voltage Range : 90Vac to 264Vac , Single Phase.

1.2 Input Frequency Range : 47Hz to 63Hz.

1.3 Max Input AC Current : 1.2A @90VAC.

1.4 Inrush Current : Component Damage Can not Occur After Inrush Current Applies, And  
70A Max. at 230VAC @Cold Start

1.5 Efficiency : 70% Min. at 110VAC Input, Output 12Vdc Load 3.25A.

Min. Loading Power Dissipation : Input Power < 1W AT 230Vac

(Measure at Warm up Condition Amb: 25°C

1.6 Brightness Voltage (Vadj) : 0 Vdc (Max.) ~ 3.3Vdc(Min.)

1.7 On / Off Control : 3.3Vdc (On) 0Vdc (Off)

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## 2.0

### 2.1 Static Output Characteristics ( Vdc )

Output Voltage	Load Range		Regulation		Ripple & Noise Voltage	Ambient 25°C
	Min.	Max.	Min.	Max.		
12V $\pm$ 5%	10mA	1.25A	11.4V	12.6V	120 mVp-p	

NOTE : A. Ripple & Noise Test : Use 20MHz Bandwidth Frequency Oscilloscope.

B. At Output 12V Connector Terminals Add 0.1uF Ceramic And 47uF Low Impedance Aluminum Electrolytic Capacitor For Ripple Voltage And Spike Noise Voltage Test, @25°C Warm-up Test.

### 2.2 Output Characteristics (Switching Power)

2.2.1 Turn-On Delay Time : 3 Sec Max. at Output 12V Connector Terminals

2.2.2 Hold up Time : 8mS Min. @110Vac Input, Full Load at Output 12V Connector Terminals.

2.2.3 Short Circuit Protection : No Damage.

2.2.4 EN61000-4-2 Electrostatic Discharge Immunity Test (ESD) Class 4:

(1).Air Discharge Test (With System) : $\pm$ 15KV...No Damage.

(2).Contact Discharge Test (With System) : $\pm$  8KV...No Damage.

2.2.5 EN61000-4-4 Electrical Fast Transient/Burst Immunity Test (EFT)

Class 2: 1KV/5KHz On AC Power Port For 1 Minute (With System)...No Damage.

2.2.6 EN61000-4-5 Surge Immunity Test (PLD) Class 3(With System):

(1).L to N: 1KV /1.2\*50uS...No Damage.

(2).L/N to PE: 2KV/1.2\*50uS.....No Damage.

### 2.3 Output Characteristics (Inverter) :

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2.3.1 Panel Type : CHUNGHWA CLAA190EA03; CHUNGHWA CLAA170EA07;  
SHARP LQ170E1LG11; LG LM170EG01.

2.3.2 Scope : The Inverter Unit to Drive Four CCFL Backlight Lamps.

2.3.3  $V_{adj} = 3.3V$   $V_{on} = 3.3V$  @ 25°C

	Min.	Typ.	Max.	Remark
IL	2	3.5	5.0	Resistance Load: 100K Ohm

2.3.4  $V_{adj} = 0V$ ,  $V_{on} = 3.3V$ , @ 25°C

	Min.	Typ.	Max.	Remark
Freq.	40	*	70	
IL	6.5	7.0	7.5	Resistance Load: 100K Ohm

2.3.5 Kick-Off Voltage (No Load),  $V_{on} = 3.3V$ ,

	Min.	Typ.	Max.	Remark
$V_s$	1500	1800	*	Ambient= 0 degree

2.3.6 Symbol And Unit

$V_s$  : Output Open Voltage ----- ( unit : Vrms )

$V_{in}$  : Input Voltage -----( unit : Vdc )

$I_{in}$  : Input Current -----( unit : mAdc )

Freq : Frequency -----( unit : KHz )

IL : Output Current -----( unit : mArms )

2.3.7 The Inverter Should Meet The Following Conditions :

Sine, Symmetric Waveform Without Spike in Positive And Negative.

## 3.0 DIELECTRIC WITHSTAND VOLTAGE

3.1 Primary to Secondary : 4242Vdc 10mA for 1 Second.

3.2 Leakage Current : 0.25mA Max. at 254Vac / 60Hz.(Primary to Secondary )

3.5mA Max. at 254Vac / 60Hz. (L, N to PE )

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## 4.0 CONNECTOR

### 4.1 CN2 : PLASTRON GLK-06R-B-S04 or Equivalent

Pin Definition: Pin 1 & 2 ----- VDC Output (12V +/-5%)  
Pin 3 & 4 ----- GND  
Pin 5 ----- Brightness Control  
Pin 6 ----- On/Off (“High” Set Lamp On)

### 4.2 CN301 & CN302 & CN303 & CN304 :

(FULLCONN W01-02100-0228 or PONTRONICS PEC 3501-WR or Equivalent)

Pin Definition : Pin 1 --- HV ( High Voltage for CCFL )  
Pin 2 --- Return (Low Voltage for CCFL )

### 4.3 CN1 AC Socket (3 Pin) : SOLTEAM ST-01K-BCK or Equivalent

## 5.0 MEET SAFETY REQUIRMENTS

UL (UL1950 3rd)  
C+UL (CSA C22.2 NO.950)  
TUV (EN 60950 )  
CB Report (IEC 60950 )  
Meet LPS Requirement.

## 6.0 ENVIRONMENTS

6.1 Operating Temperature : 0 to 40°C

6.2 Operating Relative Humidity : 8 to 90 %.

6.3 Storage Temperature : - 30 to + 85°C

6.4 Storage Relative Humidity : 5 % to 95 % Noncondensing.

