

# 納入仕様書 SPECIFICATION

**Customer :** A096  
**Part No. :** \_\_\_\_\_  
**Design No.:** GQ302011030804  
**Model . :** GQ30-120200-BU  
**Safety . :** UL/FCC  
**Rev :** A0  
**Date :** 2011-3-8

客戶承認合格章 APPROVED BY CUSTOMER

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	Drawn	Executed	Checked	Approved
	黄少荣			

# Specification

AC INPUT : 100~240V

Model:GQ30-120200-BU

DC OUTPUT: 12V/2.0A

## 1.0 SCOPE

This document describes the electrical, mechanical, environmental and RoHS correspondence level free-ization specification of 24W (Wall mount)UL type single output 12VDC / 2.0A switching adapter. The elimination (containment regulation value within) of the containment regulation substance.

## 2.0 INPUT SPECIFICATION

### 2.1 Input Voltage and Frequency

The power supply shall meet all specification below when powered from following sources.

Voltage Range	Line Frequency	Min. Voltage	Max. Voltage
100~240VAC	47Hz-63Hz	90VAC	264VAC

Table 2.1.1

### 2.2 Current

The maximum input current is 1.0A at 100Vac.

### 2.3 AC Inrush Current

The peak inrush current shall be limited to 50A at 240Vac input for a cold start at 25°C.

### 2.4 Stand By Power

The maximum input power is 0.3W MAX. at inupt 100/240VAC and no load

## 3.0 OUTPUT SPECIFICATION

### 3.1 Output Voltage (Load regulation)

The power supply shall be statically regulated for load.

Load	Min.Load	Full.Load
Current	0A	2.0A
Voltage	12VDC±5%	12VDC±5%

Table 3.1.1

### 3.2 Line regulation

The line regulation is less than 5%.

### 3.3 Ripple and Noise

Output	Voltage	Max.peak to peak ripple&noise
Vo	12VDC	120mV

Table 3.1.3

Measuring is done by 20MHz bandwidth oscilloscope and terminated each output with a 10uF capacitor and a 0.1uF capacitor.

### 3.4 Efficiency

3.4.1 The average efficiency shall be 78.60% Min,at 115VAC and 4conditions load. (25%.50%.75%.100%).Meet CEC level IV.

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### 3.5 Hold up time

The hold up time shall be longer than 10ms at 100Vac input and rated load.

### 3.6 Temperature coefficient

±0.5%/°C typical on all output.

### 3.7 Turn on / off delay

During turn on and turn off, no voltage shall exceed its nominal voltage by more than 10% and no output will change its polarity with respect to its return line. All output shall reach their steady state values within 3S of turn on.

### 3.8 Transient Response and Deviation

The power supply will meet output voltage deviation will be within 5% when the current change (transient response). For example the transient response of current change from 0 to 50%, the output voltage deviation will be within 5%.

### 3.9 Indicator

The power supply is designed NO LED indicator to indicate the power output in its normal condition.

## 4.0 PROTECTION REQUIREMENT

### 4.1 Over – voltage protection

The power supply shall shutdown all output when output voltage reaches to its over – voltage protection trigger point of 15 V min

### 4.2 Short circuit protection

No damage to the power supply shall be sustained when operating any output under any line condition, into a short circuit condition for an indefinite period of time. The power supply shall be self – recovering when fault condition remove.

### 4.3 Overshoot

At turn on, the output voltage shall not exceed steady stage by more than 10%.

### 4.4 Over current Protection

The maximum output current shall be limited to 130~300%.

## 5.0 RELIABILITY

Calculated MTBF shall exceed 20,000 hours at maximum load and 25°C ambient in accordance with MIL-STD-HDBK-217.

## 6.0 ENVIRONMENTAL CONDITIONS

### 6.1 Operating

The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions.

**6.1.1 Ambient Temperature: 0°C ~ 35°C**

**6.1.2 Relative Humidity: 10% ~ 90%**

**6.1.3 Altitude : Sea level to -100 ~ 10,000 feet.**

**6.1.4 Vibration: 1.0mm, 10 – 25Hz, 15 minutes per cycle for each axis (X, Y, Z)**

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## 6.2 Storage

The power supply shall be capable of with standing the following environmental conditions extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies:

**6.2.1 Ambient Temperature: -10°C ~ 70°C**

**6.2.2 Relative Humidity: 10% ~ 90%**

**6.2.3 Sea level to-100 ~ 10,000 feet**

**6.2.4 Vibration and Shock:**

The power supply shall be designed to with stand normal transportation vibration per MIL-STD-883C method 514 and procedures X, as it is mounted in the chassis assembly and packed for shipping.

## 7.0 DIELECTRIC WITHSTAND SPECIFICATION

### 7.1 Hi-pot test

Shall withstand without breakdown 3600VAC 10mA 2Sec between AC plug to DC plug and case. Under leakage current 10mA max.(The voltage applied to the insulation under test is gradually raised from zero to the prescribed voltage and held at that value for 2Sec.)

### 7.2 Insulation Resistance

500 VDC 30 Mega Ohms min. Between AC plug and DC plug and case.

## 8.0 INTERNATIONAL STANDARTS

The power supply has been designed to meet following safety standard

### 8.1 EMI standards

The power supply meets the radiated and conducted emission requirements for FCC part 15

### 8.2 EMS standards

The power supply meet below standard

ESD:Contact > 4KV,Air>8KV meet EN 61000-4-2

RS:Frequency 80MHZ~1.0GHz,Field Strenght 3V/M,meet EN61000-4-3

EFT:1.0KV on input ac power ports.meet EN61000-4-4

SURGE: Line to line:+/-1KV(peek),meet EN61000-4-5

Line to earth(ground):+/-2KV(peek),meet EN61000-4-5

### 8.3 Safety

The power supply has been designed to meet or certified under following standard

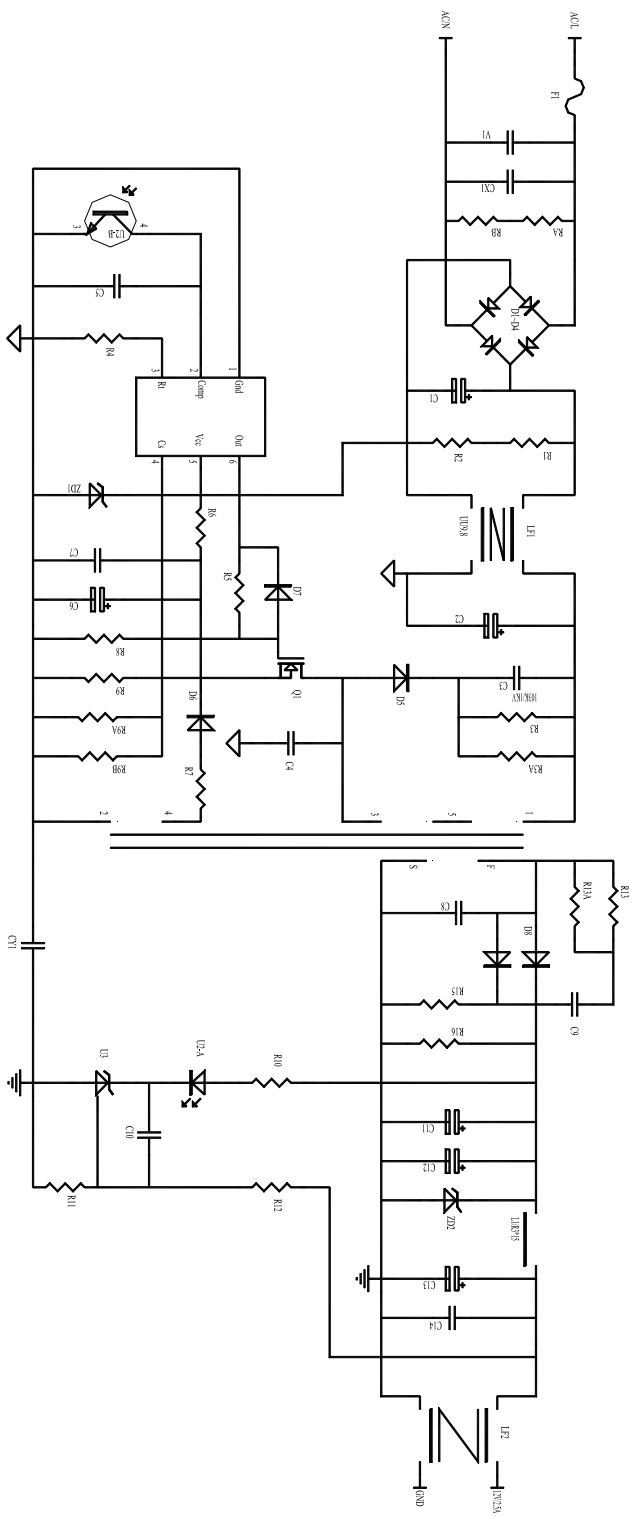
Certified	Standard
UL/CUL	UL60065
FCC	Part15 Subpart B

## 9.0 Product life Warranty

Gang Qi warrants this product against defects in materials and workmanship under normal use for a period of EIGHTEEN (18) MONTH, which accordance to date code of the product ("Warranty Period") If a hardware defect arises and a valid claim is received within the Warranty Period, at its option, Gang Qi will either (1) repair the defect at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product.

## 10.0 WEIGHT

The unit weight is about XXg. exclude packing.



NAME: CIRCUIT  
DESCRIPTION

单位 (mm)

料号  
规格  
30W  
A0

黄少荣

审核  
日期

日期

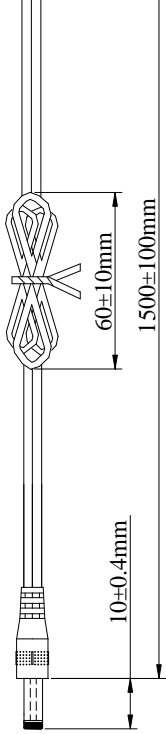
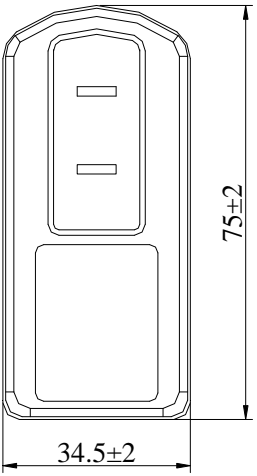
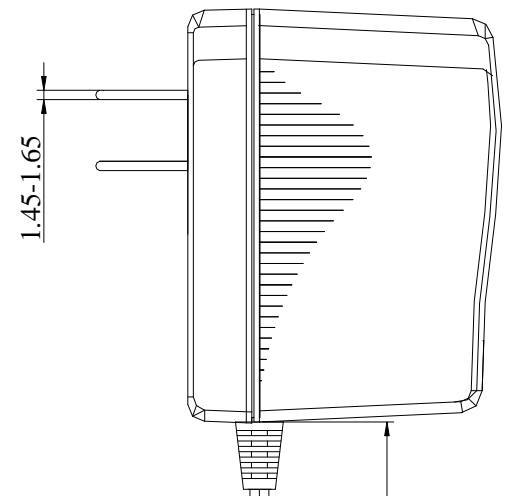
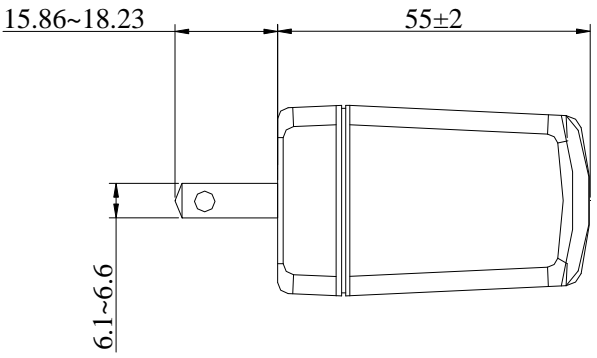
12

01

02

03

CASE Size: 75mm(L)\*34.5mm(w)\*55mm(H)



UL2468#22AWG1.5米/黑色, DC PLUG:  $\phi 5.5*2.1*10$ /直头  
内正外负



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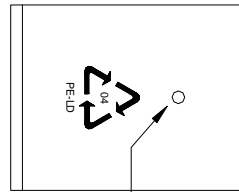
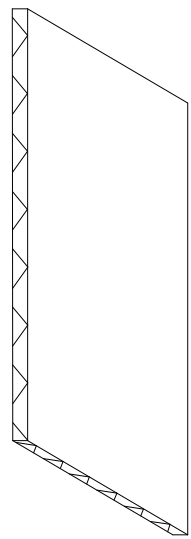
		单位	(mm)	1. 名称: 外壳 2. 材质: PC+ABS 3. 颜色: 黑色 4. 符合ROHS标准
		料号		
规格	GQ30-120200-BU			
版本	A0			
审核		日期	2011-01-05	
核准				

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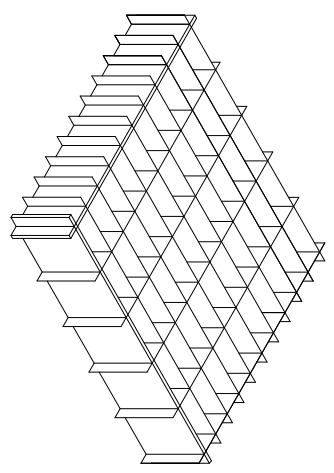
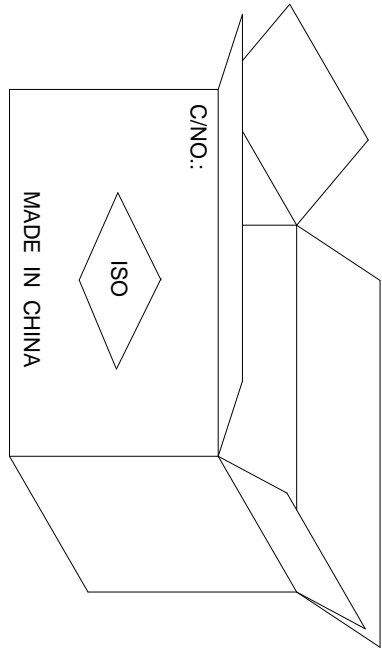


仓隙孔  
φ5mm

PE袋

侧唛内容为：  
P/O: Design NO: PCS  
QTY: N.W: KGS  
G.W: KGS  
SIZE: KGS

正唛内容如图！



				1. 外箱材质: B=B 隔板, 隔井材质: B=C 2. 外箱需印字 3. PE袋厚度: 0.03mm 4. 符合ROHS标准	
单位	(mm)	料号		规格	GQ30-120200-BU
审核		审核		版本	A0
日期	2011-01-05	日期		日期	

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