

|            |             |             |              |            |
|------------|-------------|-------------|--------------|------------|
| <b>adt</b> | MODEL NO.   | ADT9024     | SHEET NO     | QB20130457 |
|            | DESCRIPTION | Car Charger | ISSUED DATE: | 2013/06/17 |

## APPROVAL SHEET

|  |
|--|
| APPROVAL SIGNATURE                       |
| <br><br><br><br><br><br><br><br><br><br> |
| DATE:                                    |

Customer : XXXX

Model No : ADT9024

Type : Car Charger Adapter



|               |  |                |                   |
|---------------|--|----------------|-------------------|
| Input Voltage | 11V---16VDC or 22V---24VDC                     | Output Voltage | 24V DC 3.75 A 90W |
| Output Cable  | UL1185 16AWG L=1200mm Plug:5.5X2.5X9.5mm 180 度 |                |                   |
| DC IN NET     |  | Packaging      |                   |

### ADT TECHNOLOGY CO., LTD

2F.-5, No.315, Sec. 3, Minsheng Rd., Banqiao Dist., New Taipei City 220,Taiwan

TEL:+886-2-22587990 FAX:+886-2-22586990

<http://www.adtweb.com.tw>

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3. ENVIRONMENTAL
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## 1. INTRODUCTION

This document defines the specifications for the 90 watts DC to DC adapter named ADT9024  
The device shall accept DC input from either an Car mobile/RV Cigarette or Air Plug.

A working indicator LED will display green when the output voltage is ON. The input plug shall mate with all common vehicle lighter sockets.

## 2. ELECTRONICS SPECIFICATION

| Parameter                             | Specification  |
|---------------------------------------|--|
| Input Operation voltage               | 11V---16VDC or 22V---32VDC for operation voltage(After turn on )<br>Turn on voltage must be over 11.5VDC.      |
| Maximum input current                 | 10A  |
| Inrush current                        | No damage to the relative components   |
| Output voltage                        | 24VDC+/-5%   |
| Output current (Max.)                 | 3.75A  |
| Maximum rated output power            | 90W continuous   |
| Maximum output voltage ripple & noise | 300mVpk  |
| Input under-voltage protection        | Shutdown if input voltage is below 10.5VDC with auto recovery mode   |
| Over current protection               | Shutdown if output load exceed 110%~150% of Max. load, with latch mode   |
| Output over voltage protection        | 30V maximum, shut down with latch mode if output OVP is triggered.   |
| Over temperature protection           | Shutdown with auto recovery mode if internal temperature is higher than 120°C when abnormal condition occurred |
| Efficiency                            | 85% minimum.   |

## 3.0 ENVIRONMENTAL

### 3-1. Operating Temperature

0°C to +40°C

### 3-2. Storage Temperature

-20°C to 85°C

### **3-3. Shock**

Operational: 10G, 1/2 sine pulse, 11-millisecond duration, 3 drops each direction and axis

Non-operational: 60G, 1/2 sine pulse, 11-millisecond duration, 3 drops each direction and axis

The adapter shall survive a drop onto a hardwood surface from a height of 36" with no damage to the circuit board assembly and no cracking of the plastic case. The unit shall be dropped in a voluntary axis at least three times for this test. No components shall become loose from the PCB.

### **3-4. Vibration**

Operational: 5 to 500Hz @ 0.5G acceleration for 30 minutes in each axis

Non-operational: 5 to 500Hz @ 1G acceleration for 1 hour in each axis

### **3-5. Electrostatic Discharge Sensitivity**

No hardware failure up to  $\pm 8\text{KV}$ . The test procedure should be according to IEC801-2(1991).

### **3-6. Burn In**

4 hours at  $40^{\circ}\text{C}$  ( $\pm 5^{\circ}\text{C}$ ), nominal input voltage(24V), and 80% load condition.

### **3-7. MTBF**

50,000 hours minimum.

## **4.0 INTERNATIONAL STANDARD**

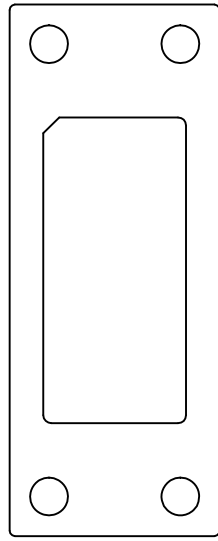
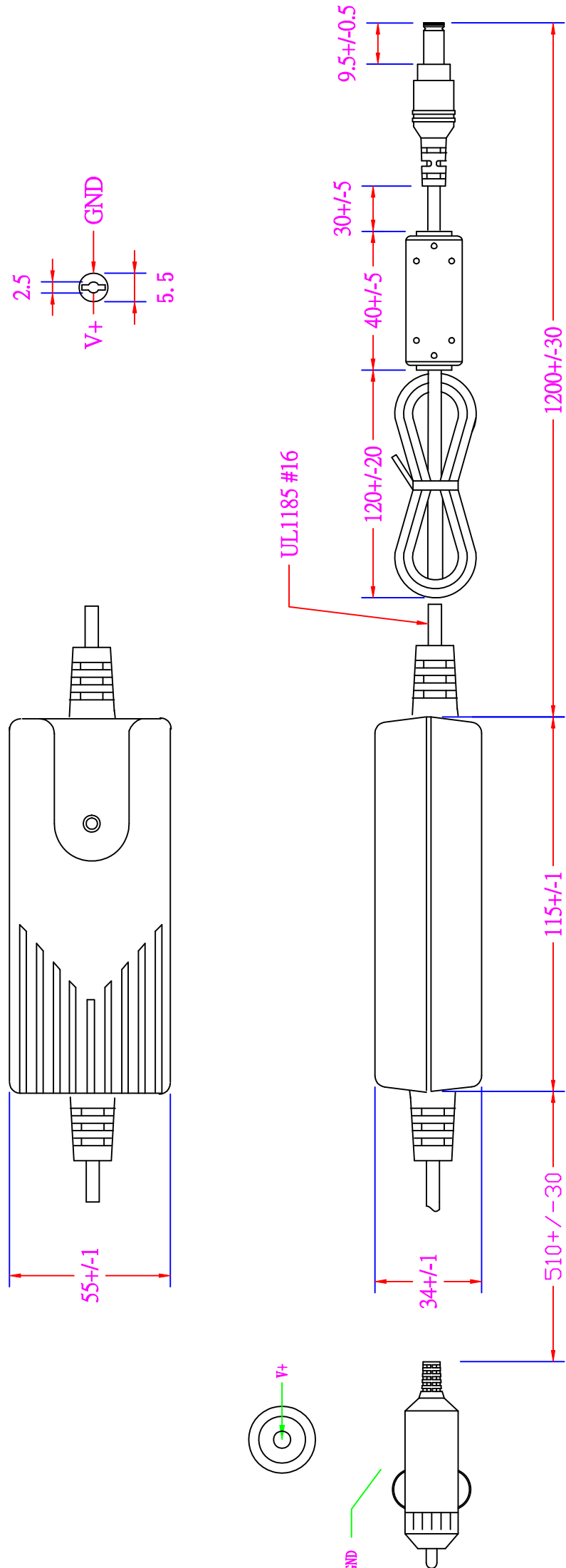
### **4.1 Safety Standard**

TBD

## **5.0 MECHANICAL**

### **5-1. Case Dimensions**

L115 x W55 x H34 mm



|          |             |            |          |
|----------|-------------|------------|----------|
| MODEL    | ED1082(10)  | UNIT       | APPROVED |
| DESCRIP  | OUTLINE     | SCALE      | DESIGNED |
| NAME     | CAR ADAPTER | DATE       | CHECK    |
| CUSTOMER |             | 2019-05-16 |          |
|          | CUS. P/N    | DRAWING    |          |
|          |             | L. J. YU   |          |

**adt**

ADT TECHNOLOGY CO.,LTD

CAR CHARGER

MODEL : ADT9024

DC INPUT: 11-16V & 22-24V dc

DC OUTPUT: 24V  $\Rightarrow$  3.75A

DATE CODE:

|    |    |    |   |   |   |   |   |   |   |
|----|----|----|---|---|---|---|---|---|---|
| 13 | 14 | 15 |   |   | 1 | 2 | 3 | 4 | 5 |
| 1  | 2  | 3  | 4 | 5 | 6 | 7 | 8 | 9 | 0 |



RoHS

CE FCC



E9-10R-04. 1083

MADE IN CHINA 23121062002

<http://www.adtweb.com.tw> /

EDAC P/N.: 312

Background: Black color

Character: Silver color

Unit: mm