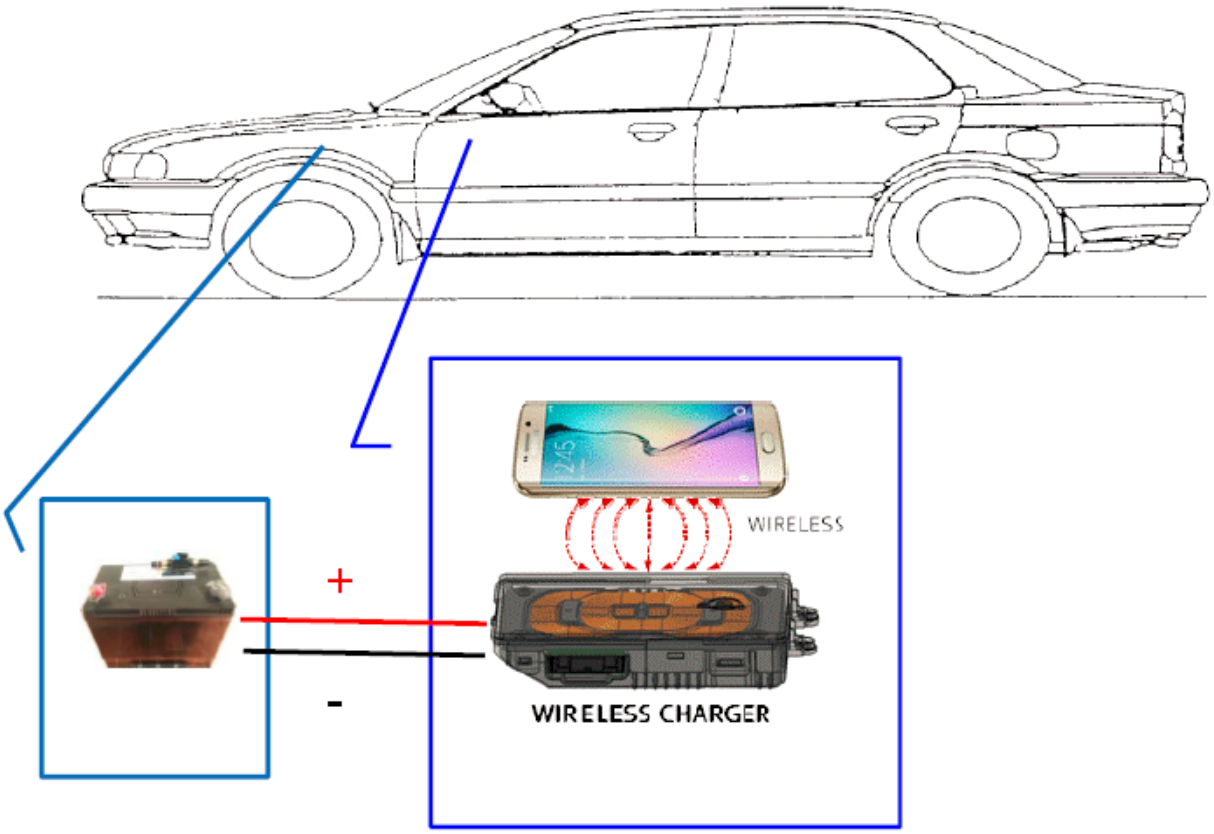
1. Constitution of the Unit Assy-Wireless Charging (WPC) for vehicle

Wireless Charger Unit, it's possible to charge the receiver based upon WPC(Wireless Power Consortium) Standard.
WPC detects the receiver based upon the WPC standard being put on the surface of charge, and begins to charge it.
WPC detects conditions of the receiver and controls the transmission electric power by the state of the battery of it.
When the receiver is removed,WPC will suspend the transmission electric power.
When the receiver is full charge, WPC will suspend the transmission electric power.
WPC can recognize a foreign object and suspend the transmission electric power.



Wireless Charger External Ports

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
B_CAN_H	B_CAN_L	P_LED BLUE SKY	P_LED AMBER	P_LED GREEN	GND_ECU	LFSearching	NC	GND_POWER	NC	ACC	B+

Vehicle communication port

Vehicle communication port

Use of vehicle battery power

2. User's manual (provisionally)

◎ Unit Assy - Wireless Charging (OMRON KOREA : OKA-200W)

You can charger a mobile phone or the battery pack and the like to Qi-compliant Wireless Charger Unit.
※ Wireless Charger Unit is abbreviated as WPC.

Frequency: 111kHz
Voltage: 12V DC
Power: 5W

1. Once a receiver is placed on the product, it transmits the power wirelessly.
2. The LED connected to the product, signals the status as below.

Charging:	Amber
Discharging:	Green
Error:	Amber Blink

Power state of vehicle is ACC or IGN, the product will be stand-by status. If a receiver such as smart phone is not placed properly, it emits Amber LED and receiver must be relocated.

4. Specification

4.1 CONTROL PART

4.1.1 CPU

Type	uPD78F0567-xxx(8bit)
	Manufacturer : RENESAS Corporation
ROM	256 Kbytes
RAM	16 bytes
EEPROM	32 bytes
Clock frequency	4 MHz
Package	80pin SSOP

4.1.2 Others

Dimension	39.1mm×70.9mm×17.0mm
Weigh	about 290 g
Battery	Car Battery (DC 12 V)
Operating Voltage, Current	DC 12V, 2.0A
Transmission Frequency	111 KHz
Operation Temperature	-30 ℃ ~ 75℃
Support Standard	WPC Ver 1.2

4. Specification

4.2 Wireless Charging PART

4.2.1 CPU

Type	WCT1001A
	Manufacturer : Freescale
ROM	64 Kbytes
RAM	8 bytes
Clock frequency	8 MHz
Package	64pin LQFP

4.1.2 Antenna (Coil)

Type	3 Coil Assembly
Dimension	116.1 mm * 64.01 mm * 5.0 mm

5.Features

5.1 Charging Function

WPC possesses the charge function of 3 coils type based upon WPC Ver 1.2.
It controls the resonance voltage according to the request from the receiver.
It doesn't change the frequency of the resonance voltage.
It judges whether there is a thing on the charge surface by the different amount of the resonance voltage and the receiver.

5.2 Foreign Objection Detection

WPC monitors the power loss from the resonance voltage and current inside it.
WPC judges that there is a foreign object when power loss is beyond the constant value.

FCC Part 15.19
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Part 15.21
Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement
This equipment complies with FCC RF Radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
The equipment is installed in a vehicle with a minimum distance of 20 cm to any direction between the radiator and users. During normal usage, it should be at least 20 cm away from the users.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC RF Radiation Exposure Statement
This equipment complies with IC RF Radiation exposure limits set forth for an uncontrolled environment.
This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

Déclaration d'Industrie Canada sur l'exposition aux radiofréquences
Cet équipement est conforme aux limites établies par Industrie Canada en matière d'exposition aux radiofréquences dans un environnement non contrôlé. Cet appareil et son antenne ne doivent pas être colocalisés ou fonctionner en conjonction avec tout autre antenne ou émetteur.
Cet équipement doit être installé et utilisé avec une distance minimale de 20cm entre le radiateur et votre corps.