Powermat Charging Spot 3.1

The Powermat Charging Spot is a critical component of our wireless charging solution. Users place their phones on the spot and ‘connect’ with your venue, creating a new, highly personalized customer engagement channel.

Each Charging Spot 3.1 is a network-connected unit, enabling you to push real-time proximity offers to customers. The cloud-connected charging network also allows for remote monitoring, management and upgrades. Additionally, integrated beacons enable user activation of charging through the Powermat application. You can choose to install the Powermat Charging Spot 3.1 in one of two ways: Surface-mount or sub-surface.

Wirelessly charges all mobile phones

Powermat Charging Spot can power all Qi and AirFuel-Inductive certified devices (i.e., iPhone 8/8Plus/X, Samsung Galaxy S6/7/8/9). Phones without built-in wireless charging can be charged with the help of a Powermat Ring.

To learn more about wireless charging compatible devices go to: https://www.powermat.com/technology/compatible-phones/

Designed for public spaces

The transfer of power is based on magnetic inductance and therefore safe even when the table’s surface is wet, and spots are designed to withstand chemicals and cleaning solvents.

Durable and easy to maintain, the Charging Spot 3.1 can be installed on most surface types.

Our best in class intelligent DC Power delivery solution provides ultimate flexibility without costly electrical work. A single electrical port can support up to eight Charging Spots with one power delivery unit. Our custom designed power supply unit keeps the outlet available for other needs, and secures wiring to prevent tampering.
# Specifications

## Electrical
- Receiver output power: up to 15W
- DC voltage input 24V
- Up to 8 spots connected to power supply
- Current input 0.7A for 15W output
- Operating Frequencies: Ping 178kHz, Switch 200-300 kHz
- Built-in protections: voltage, current, thermal, FOD

## Communication
- Communicates with a ZigBee*-to-IP gateway in the venue
- IEEE 802.15.4 based RF channels
- Transmit Power +8 dBm
- Includes managed Beacon, Bluetooth 4.1
- Transmit Power 0 dBm
- Beacon (BLE) services support iBeacon and Eddystone communication protocols
- Remote firmware upgrade

## Performance with Powermat 5w ring
(transmitter coil 3mm below surface)
- X,Y on charging surface: Ø 30mm
- Z above charging surface: 10mm (14mm coil-to-coil)
- Charging efficiency: 80% (full alignment)

## Regulatory Compliance
- CE, ICES, FCC, CSA, KOMINFO – Radiated and Conducted emissions; Maximum power exposure; RF Exposure
- UL, IEC - Product safety for wireless charging
- RoHS, REACH, California OEHHA proposition 65 - Environmental restrictions

## Environmental Data
- Operating Ambient Temperature: 0 to 40 °C, recommended 25 °C
- Non-Operating Ambient Temperature: -20 to 80 °C
- Operating Humidity: 20% to 90% (non-condensing)
- Non-Operating Humidity: 5% to 95%

## Artwork
- Ring marking for alignment
- Mounted installation: printed on the inner surface and covered by a PMMA transparent layer during assembly
- Sub-surface installation: adhesive label; color can also be customized by surface fabricator (e.g. resin inlay in polymer based solid surfaces)

## Mechanical Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Surface-Mounted</th>
<th>Sub-Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hole Type</td>
<td>Pass through</td>
<td>Partial Cavity</td>
</tr>
<tr>
<td>Hole/Cave Diameter</td>
<td>Ø 2.75” (70mm)</td>
<td>Thickness above cavity 0.14” (3.5mm)</td>
</tr>
<tr>
<td>Surface type</td>
<td>Wood/MDF/Ply, Corian (any polymer-based surface) &amp; Stone Surfaces.</td>
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</tr>
<tr>
<td>Tool</td>
<td>TCT, bi metal, or diamond grit hole saw Hand tool ok (if used with jig)</td>
<td>CNC / Routing</td>
</tr>
<tr>
<td>Top Surface Footprint</td>
<td>Horizontal: 3” (76mm) Ø Vertical: 0.063” (1.6mm) above surface</td>
<td>Charging Spot position marking for alignment</td>
</tr>
<tr>
<td>Bottom Surface Footprint</td>
<td>Width: 3.83” (97.3mm) Length: 7.02” (178.3mm) Thickness: 1.03” (26.2mm)</td>
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</tr>
<tr>
<td>LED location</td>
<td>Bottom protective cover</td>
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</tr>
</tbody>
</table>

Note: Charging Spots are made for indoor use only and should not be installed in metal cabinets or behind metal enclosures. The distance between a Charging Spot to the next nearest spot should be no more than 65.6’ (20m) and no less than 7.87” (20cm). The distance from the table edge should be at least 7” (18cm).
Easy Installation

Below are the high level installation steps for the mounted and the subsurface configurations.

1. Make a hole/cavity in furniture for the magnetic coil

   ![Mounted Installation](image)

   **Mounted:**
   - Diameter: 2.75" (70mm)

2. Insert the magnetic coil encasing into the hole

   ![Sub-surface Installation](image)

   **Sub-surface:**
   - Diameter: 2.75
   - Depth: 0.5

3. Connect and secure the electronics module

   ![Connect and Secure](image)

4. Fasten heat sink and electronics module to surface

   ![Fasten Heat Sink](image)

5. Insert power wires into push-button connectors

   ![Insert Power Wires](image)

6. Secure bottom cover housing

   ![Secure Bottom Cover](image)

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Charging Spot 3.1, Mounted SKU: CS-001-GEN3B-INT | Sub-surface SKU: CS-001-GEN3B-SIN