# Application Note

<table>
<thead>
<tr>
<th><strong>PRODUCT NAME</strong></th>
<th>POWER SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OUR MODEL NO</strong></td>
<td>CGSW48-120-3750II</td>
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<tr>
<td><strong>STANDARD</strong></td>
<td>UL60950 FCC PART.15</td>
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<tr>
<td><strong>RATING</strong></td>
<td>I/P: AC100-240V 1.5A 50-60HZ</td>
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<td>O/P: DC12V 3750mA</td>
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<td><strong>REMARK</strong></td>
<td>UL</td>
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<tr>
<td><strong>REVISION</strong></td>
<td>00</td>
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<tr>
<td><strong>CERTIFICATION</strong></td>
<td>NOM-001-SCFI-2018 (NMX-I-60950-1-NYCE-2015)</td>
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Model: CGSW48-120-3750II

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1.0 INTRODUCTION

This specification defines the performance characteristics for a class 2 adapter, single-phase watt single output level power supply

◆ Very low standby power achieved
◆ Over load Latch-Off protection during either (a) specified power threshold requirements or (b) Short circuit condition
◆ Reliability level or 50,000 hours MTBF & 0.5% annual field failure rate @ 25°C

2.0 INPUT REQUIREMENTS

◆ AC Input voltage rating 100Vac to 240Vac
◆ AC Input voltage range 90Vac to 254Vac
◆ AC Input frequency range 47Hz to 63Hz
◆ Max. In-rush current 30A for 100Vac at full load
  75A for 240Vac at full load
◆ Input current 1.5A Max @ 90V/60Hz full load
◆ Standby power 2.5W Max @ 254V/50Hz no load

3.0 OUTPUT REQUIREMENTS

◆ Output voltage +12V
◆ Output voltage tolerance +/-0.6V
◆ Min load current 0 mA
◆ Max load current 3750mA
◆ Line regulation +/-1%
◆ Load regulation +/-5%
◆ Ripple & Noise 120mVp-p (max)
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DC-20MHz/Ripple and Noise is measured on output connector with 20MHz oscilloscope bandwidth differentially with a 10uF electrolytic and 0.1uF ceramic capacitors across output

4.0 PERFORMANCE SPEC

◆ Total output power 45W typical  
◆ Efficiency 75% min@100~240Vac50/60Hz with full load  
◆ Hold up time 10 sec. min.@ 100Vac/60Hz with full load  
◆ Turn on delay time 3sec.max.@ 100Vac/60Hz with full load  
◆ Switching frequency 65K Hz typical

5.0 PROTECTION FEATURE

◆ Over-voltage protection Output shut down when output voltage exceeds  
◆ Over-current protection Output shut down(Auto restart)when output voltage exceeds  
◆ Short circuit protection Output shut down(Auto restart)  
◆ Over-temperature protection output shut down when case face temperature exceeds 65°C
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6.0 ENVIRONMENTAL

- Operation temperature: -20°C to +40°C
- Operation humidity: 20% to 90% R.H.
- Storage temperature: -20°C to +75°C
- Storage humidity: 0% to 90% R.H.

7.0 SAFETY REQUIREMENTS AND CERTIFICATION

7.1 Regulatory Standard
- The power supply shall comply with the following international regulatory standards

7.2 Dielectric withstand (Hi-pot) test
- Input to output: 3000Vac 10mA /min

7.3 Insulation
- Input to output: DC 500V 10M ohm min
8.0 APPEARANCE DRAWING