

Technical Note

Performance and  
Durability Requirements for  
Rechargeable Industrial, LMT  
and Electric Vehicle Batteries

Version 1.1

December 2024

## Revision History

Version	Date	Description
1.1	December 2024	Updated title of document and added CSS-OD Battery Cabinet 102.4 kWh
1.0	September 2024	Initial Version

## Overview

CSS-OD Battery Cabinet 102.4 kWh in accordance with Article 10 of Regulation (EU) 2023/1542

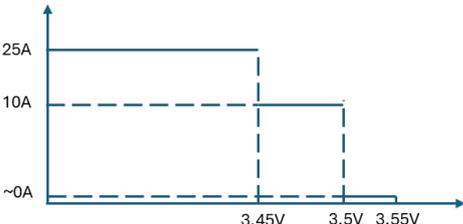
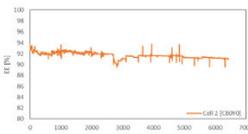
**Name:** Outdoor Commercial Storage System (CSS-OD)

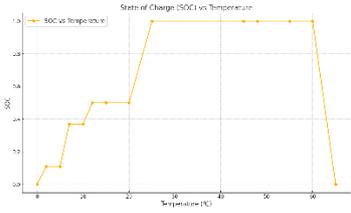
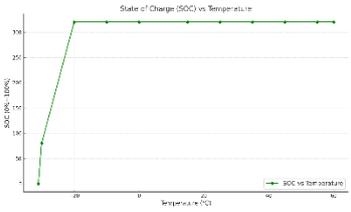
**Model:** CSS-OU-20

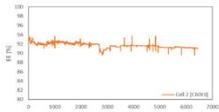
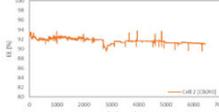
**Ratings:** 102.4KWh

**Manufacturer:** SolarEdge Technologies GmbH

**Address:** Werner-Eckert-Straße 6 81829 München, Germany

No.	Technical Parameters	Parameter Value	Test Condition & Method																		
1	Rated capacity (Ah)	2*100 Ah	<p>The battery cabinet contains two clusters of 512V/100Ah each. The capacity test procedure below is per cluster:</p> <ol style="list-style-type: none"> <li>1. Fully discharge the battery at constant current of 50A to minimum cell voltage of 2.8V.</li> <li>2. Fully charge the battery at constant current of 50A to maximum cell voltage of 3.45V, then charge at a decreasing current (see curve below) to maximum cell voltage of 3.6V.</li> <li>3. Repeat step 1 and record the capacity obtained.</li> </ol> 																		
2	Capacity fading (%)	<p>20% at 3500 cycles</p> <p>30% at 6000 cycles</p>	<p>Capacity fading is measured according to the procedure described in item no.1 (Rated capacity).</p> <p>Test conditions:</p> <ul style="list-style-type: none"> <li>• Ambient temperature: 25±2°C</li> <li>• Charging and discharging C-rate: 0.5C</li> </ul> <p>Energy Efficiency at 25°C cycle life 25°C 100%DOD 1C</p>  <table border="1" data-bbox="853 1657 1212 1713"> <thead> <tr> <th>[CBOV]</th> <th>Cycle</th> <th>Capacity Retention (%)</th> <th>Capacity Vs Nominal (%)</th> <th>EE (%)</th> <th>average T<sub>max</sub> (°C) (cycling)</th> </tr> </thead> <tbody> <tr> <td>Cell 2 BOL</td> <td>1</td> <td>100.00</td> <td>105.67</td> <td>93.56</td> <td>30.88</td> </tr> <tr> <td>Cell 2 EOL</td> <td>6437</td> <td>71.53</td> <td>75.16</td> <td>91.02</td> <td>30.88</td> </tr> </tbody> </table>	[CBOV]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T <sub>max</sub> (°C) (cycling)	Cell 2 BOL	1	100.00	105.67	93.56	30.88	Cell 2 EOL	6437	71.53	75.16	91.02	30.88
[CBOV]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T <sub>max</sub> (°C) (cycling)																
Cell 2 BOL	1	100.00	105.67	93.56	30.88																
Cell 2 EOL	6437	71.53	75.16	91.02	30.88																

No.	Technical Parameters	Parameter Value	Test Condition & Method																								
3	Power (W)	Per each Cluster: <ul style="list-style-type: none"> <li>• 25.2kW at 20% SoC</li> <li>• 25.6kW at 0%-100% SOC @ -20 to 60°C</li> </ul>	Test conditions: <ul style="list-style-type: none"> <li>• 50A discharge current</li> </ul> <table border="1"> <thead> <tr> <th>cell temperature/°C</th> <th>-31</th> <th>-30</th> <th>-20</th> <th>-10</th> <th>0</th> <th>15</th> <th>25</th> <th>35</th> <th>45</th> <th>55</th> <th>60</th> </tr> </thead> <tbody> <tr> <td>SOC</td> <td>0%-100%</td> <td>0</td> <td>80</td> <td>320</td> <td>320</td> <td>320</td> <td>320</td> <td>320</td> <td>320</td> <td>320</td> <td>320</td> </tr> </tbody> </table>	cell temperature/°C	-31	-30	-20	-10	0	15	25	35	45	55	60	SOC	0%-100%	0	80	320	320	320	320	320	320	320	320
cell temperature/°C	-31	-30	-20	-10	0	15	25	35	45	55	60																
SOC	0%-100%	0	80	320	320	320	320	320	320	320	320																
4	Power fading (%)	<ul style="list-style-type: none"> <li>• 0%-100% SoC</li> <li>• Charging                             <ul style="list-style-type: none"> <li>• 7&lt;°C&lt;10: 26%</li> <li>• 2&lt;°C&lt;5: 78%</li> </ul> </li> <li>• Discharging                             <ul style="list-style-type: none"> <li>• -20&lt;°C&lt;-30: 75%</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Charging                              </li> <li>• Discharging                              </li> </ul>																								
5	Internal resistance (Ω)	0.27±0.05mΩ per cell	Impedance (1KHz)																								
6	Internal resistance increase (%)	2.6% at 3500 cycles 8.8% at 6000 cycles	Test conditions: <ul style="list-style-type: none"> <li>• Ambient temperature: 25±2°C</li> </ul>																								

No.	Technical Parameters	Parameter Value	Test Condition & Method																																																																																																																																																																																																																																																																																																																																				
7	Energy round trip efficiency (%)	91% EoL	<p>Energy round trip efficiency is measured according to the procedure described in item #1 (Rated capacity).</p> <p>Test conditions:</p> <ul style="list-style-type: none"> <li>Ambient temperature: 25±2°C</li> </ul>  <table border="1"> <thead> <tr> <th>[CBOVS]</th> <th>Cycle</th> <th>Capacity Retention (%)</th> <th>Capacity Vs Nominal (%)</th> <th>EE (%)</th> <th>average T max (All cycling)</th> </tr> </thead> <tbody> <tr> <td>Cell 2 BOL</td> <td>1</td> <td>100.00</td> <td>105.67</td> <td>93.58</td> <td>30.88</td> </tr> <tr> <td>Cell 2 EoL</td> <td>6437</td> <td>71.53</td> <td>75.16</td> <td>91.02</td> <td>30.88</td> </tr> </tbody> </table>	[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)	Cell 2 BOL	1	100.00	105.67	93.58	30.88	Cell 2 EoL	6437	71.53	75.16	91.02	30.88																																																																																																																																																																																																																																																																																																																		
[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)																																																																																																																																																																																																																																																																																																																																		
Cell 2 BOL	1	100.00	105.67	93.58	30.88																																																																																																																																																																																																																																																																																																																																		
Cell 2 EoL	6437	71.53	75.16	91.02	30.88																																																																																																																																																																																																																																																																																																																																		
8	Energy round trip efficiency fading (%)	2.74% BoL to EoL	<ul style="list-style-type: none"> <li>According to test results:</li> </ul> $(93.58\% - 91.02\%) / 92.58\% = 2.74\%$  <table border="1"> <thead> <tr> <th>[CBOVS]</th> <th>Cycle</th> <th>Capacity Retention (%)</th> <th>Capacity Vs Nominal (%)</th> <th>EE (%)</th> <th>average T max (All cycling)</th> </tr> </thead> <tbody> <tr> <td>Cell 2 BOL</td> <td>1</td> <td>100.00</td> <td>105.67</td> <td>93.58</td> <td>30.88</td> </tr> <tr> <td>Cell 2 EoL</td> <td>6437</td> <td>71.53</td> <td>75.16</td> <td>91.02</td> <td>30.88</td> </tr> </tbody> </table>	[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)	Cell 2 BOL	1	100.00	105.67	93.58	30.88	Cell 2 EoL	6437	71.53	75.16	91.02	30.88																																																																																																																																																																																																																																																																																																																		
[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)																																																																																																																																																																																																																																																																																																																																		
Cell 2 BOL	1	100.00	105.67	93.58	30.88																																																																																																																																																																																																																																																																																																																																		
Cell 2 EoL	6437	71.53	75.16	91.02	30.88																																																																																																																																																																																																																																																																																																																																		
9	Expected lifetime in cycle-life	A least 6000 cycles (with 70% capacity fading)	<p>Testing Method:</p>  <table border="1"> <thead> <tr> <th>[CBOVS]</th> <th>Cycle</th> <th>Capacity Retention (%)</th> <th>Capacity Vs Nominal (%)</th> <th>EE (%)</th> <th>average T max (All cycling)</th> </tr> </thead> <tbody> <tr> <td>Cell 2 BOL</td> <td>1</td> <td>100.00</td> <td>105.67</td> <td>93.58</td> <td>30.88</td> </tr> <tr> <td>Cell 2 EoL</td> <td>6437</td> <td>71.53</td> <td>75.16</td> <td>91.02</td> <td>30.88</td> </tr> </tbody> </table> <p>DCIR at 50% SOC - 25°C</p> <p>cycle life 25°C 100%DOD 1C according to RPT tests</p> <table border="1"> <thead> <tr> <th>Cell 2 (E3091E)</th> <th>cycle number</th> <th>DCIR (Ω)</th> </tr> </thead> <tbody> <tr> <td></td> <td>400</td> <td>0.0052</td> </tr> <tr> <td></td> <td>1000</td> <td>0.0051</td> </tr> <tr> <td></td> <td>2000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>3000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>4000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>5000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>6000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>7000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>8000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>9000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>10000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>11000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>12000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>13000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>14000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>15000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>16000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>17000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>18000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>19000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>20000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>21000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>22000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>23000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>24000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>25000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>26000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>27000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>28000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>29000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>30000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>31000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>32000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>33000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>34000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>35000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>36000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>37000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>38000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>39000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>40000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>41000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>42000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>43000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>44000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>45000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>46000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>47000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>48000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>49000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>50000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>51000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>52000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>53000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>54000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>55000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>56000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>57000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>58000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>59000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>60000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>61000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>62000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>63000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>64000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>65000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>66000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>67000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>68000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>69000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>70000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>71000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>72000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>73000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>74000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>75000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>76000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>77000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>78000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>79000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>80000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>81000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>82000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>83000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>84000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>85000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>86000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>87000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>88000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>89000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>90000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>91000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>92000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>93000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>94000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>95000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>96000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>97000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>98000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>99000</td> <td>0.0050</td> </tr> <tr> <td></td> <td>100000</td> <td>0.0050</td> </tr> </tbody> </table>	[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)	Cell 2 BOL	1	100.00	105.67	93.58	30.88	Cell 2 EoL	6437	71.53	75.16	91.02	30.88	Cell 2 (E3091E)	cycle number	DCIR (Ω)		400	0.0052		1000	0.0051		2000	0.0050		3000	0.0050		4000	0.0050		5000	0.0050		6000	0.0050		7000	0.0050		8000	0.0050		9000	0.0050		10000	0.0050		11000	0.0050		12000	0.0050		13000	0.0050		14000	0.0050		15000	0.0050		16000	0.0050		17000	0.0050		18000	0.0050		19000	0.0050		20000	0.0050		21000	0.0050		22000	0.0050		23000	0.0050		24000	0.0050		25000	0.0050		26000	0.0050		27000	0.0050		28000	0.0050		29000	0.0050		30000	0.0050		31000	0.0050		32000	0.0050		33000	0.0050		34000	0.0050		35000	0.0050		36000	0.0050		37000	0.0050		38000	0.0050		39000	0.0050		40000	0.0050		41000	0.0050		42000	0.0050		43000	0.0050		44000	0.0050		45000	0.0050		46000	0.0050		47000	0.0050		48000	0.0050		49000	0.0050		50000	0.0050		51000	0.0050		52000	0.0050		53000	0.0050		54000	0.0050		55000	0.0050		56000	0.0050		57000	0.0050		58000	0.0050		59000	0.0050		60000	0.0050		61000	0.0050		62000	0.0050		63000	0.0050		64000	0.0050		65000	0.0050		66000	0.0050		67000	0.0050		68000	0.0050		69000	0.0050		70000	0.0050		71000	0.0050		72000	0.0050		73000	0.0050		74000	0.0050		75000	0.0050		76000	0.0050		77000	0.0050		78000	0.0050		79000	0.0050		80000	0.0050		81000	0.0050		82000	0.0050		83000	0.0050		84000	0.0050		85000	0.0050		86000	0.0050		87000	0.0050		88000	0.0050		89000	0.0050		90000	0.0050		91000	0.0050		92000	0.0050		93000	0.0050		94000	0.0050		95000	0.0050		96000	0.0050		97000	0.0050		98000	0.0050		99000	0.0050		100000	0.0050
[CBOVS]	Cycle	Capacity Retention (%)	Capacity Vs Nominal (%)	EE (%)	average T max (All cycling)																																																																																																																																																																																																																																																																																																																																		
Cell 2 BOL	1	100.00	105.67	93.58	30.88																																																																																																																																																																																																																																																																																																																																		
Cell 2 EoL	6437	71.53	75.16	91.02	30.88																																																																																																																																																																																																																																																																																																																																		
Cell 2 (E3091E)	cycle number	DCIR (Ω)																																																																																																																																																																																																																																																																																																																																					
	400	0.0052																																																																																																																																																																																																																																																																																																																																					
	1000	0.0051																																																																																																																																																																																																																																																																																																																																					
	2000	0.0050																																																																																																																																																																																																																																																																																																																																					
	3000	0.0050																																																																																																																																																																																																																																																																																																																																					
	4000	0.0050																																																																																																																																																																																																																																																																																																																																					
	5000	0.0050																																																																																																																																																																																																																																																																																																																																					
	6000	0.0050																																																																																																																																																																																																																																																																																																																																					
	7000	0.0050																																																																																																																																																																																																																																																																																																																																					
	8000	0.0050																																																																																																																																																																																																																																																																																																																																					
	9000	0.0050																																																																																																																																																																																																																																																																																																																																					
	10000	0.0050																																																																																																																																																																																																																																																																																																																																					
	11000	0.0050																																																																																																																																																																																																																																																																																																																																					
	12000	0.0050																																																																																																																																																																																																																																																																																																																																					
	13000	0.0050																																																																																																																																																																																																																																																																																																																																					
	14000	0.0050																																																																																																																																																																																																																																																																																																																																					
	15000	0.0050																																																																																																																																																																																																																																																																																																																																					
	16000	0.0050																																																																																																																																																																																																																																																																																																																																					
	17000	0.0050																																																																																																																																																																																																																																																																																																																																					
	18000	0.0050																																																																																																																																																																																																																																																																																																																																					
	19000	0.0050																																																																																																																																																																																																																																																																																																																																					
	20000	0.0050																																																																																																																																																																																																																																																																																																																																					
	21000	0.0050																																																																																																																																																																																																																																																																																																																																					
	22000	0.0050																																																																																																																																																																																																																																																																																																																																					
	23000	0.0050																																																																																																																																																																																																																																																																																																																																					
	24000	0.0050																																																																																																																																																																																																																																																																																																																																					
	25000	0.0050																																																																																																																																																																																																																																																																																																																																					
	26000	0.0050																																																																																																																																																																																																																																																																																																																																					
	27000	0.0050																																																																																																																																																																																																																																																																																																																																					
	28000	0.0050																																																																																																																																																																																																																																																																																																																																					
	29000	0.0050																																																																																																																																																																																																																																																																																																																																					
	30000	0.0050																																																																																																																																																																																																																																																																																																																																					
	31000	0.0050																																																																																																																																																																																																																																																																																																																																					
	32000	0.0050																																																																																																																																																																																																																																																																																																																																					
	33000	0.0050																																																																																																																																																																																																																																																																																																																																					
	34000	0.0050																																																																																																																																																																																																																																																																																																																																					
	35000	0.0050																																																																																																																																																																																																																																																																																																																																					
	36000	0.0050																																																																																																																																																																																																																																																																																																																																					
	37000	0.0050																																																																																																																																																																																																																																																																																																																																					
	38000	0.0050																																																																																																																																																																																																																																																																																																																																					
	39000	0.0050																																																																																																																																																																																																																																																																																																																																					
	40000	0.0050																																																																																																																																																																																																																																																																																																																																					
	41000	0.0050																																																																																																																																																																																																																																																																																																																																					
	42000	0.0050																																																																																																																																																																																																																																																																																																																																					
	43000	0.0050																																																																																																																																																																																																																																																																																																																																					
	44000	0.0050																																																																																																																																																																																																																																																																																																																																					
	45000	0.0050																																																																																																																																																																																																																																																																																																																																					
	46000	0.0050																																																																																																																																																																																																																																																																																																																																					
	47000	0.0050																																																																																																																																																																																																																																																																																																																																					
	48000	0.0050																																																																																																																																																																																																																																																																																																																																					
	49000	0.0050																																																																																																																																																																																																																																																																																																																																					
	50000	0.0050																																																																																																																																																																																																																																																																																																																																					
	51000	0.0050																																																																																																																																																																																																																																																																																																																																					
	52000	0.0050																																																																																																																																																																																																																																																																																																																																					
	53000	0.0050																																																																																																																																																																																																																																																																																																																																					
	54000	0.0050																																																																																																																																																																																																																																																																																																																																					
	55000	0.0050																																																																																																																																																																																																																																																																																																																																					
	56000	0.0050																																																																																																																																																																																																																																																																																																																																					
	57000	0.0050																																																																																																																																																																																																																																																																																																																																					
	58000	0.0050																																																																																																																																																																																																																																																																																																																																					
	59000	0.0050																																																																																																																																																																																																																																																																																																																																					
	60000	0.0050																																																																																																																																																																																																																																																																																																																																					
	61000	0.0050																																																																																																																																																																																																																																																																																																																																					
	62000	0.0050																																																																																																																																																																																																																																																																																																																																					
	63000	0.0050																																																																																																																																																																																																																																																																																																																																					
	64000	0.0050																																																																																																																																																																																																																																																																																																																																					
	65000	0.0050																																																																																																																																																																																																																																																																																																																																					
	66000	0.0050																																																																																																																																																																																																																																																																																																																																					
	67000	0.0050																																																																																																																																																																																																																																																																																																																																					
	68000	0.0050																																																																																																																																																																																																																																																																																																																																					
	69000	0.0050																																																																																																																																																																																																																																																																																																																																					
	70000	0.0050																																																																																																																																																																																																																																																																																																																																					
	71000	0.0050																																																																																																																																																																																																																																																																																																																																					
	72000	0.0050																																																																																																																																																																																																																																																																																																																																					
	73000	0.0050																																																																																																																																																																																																																																																																																																																																					
	74000	0.0050																																																																																																																																																																																																																																																																																																																																					
	75000	0.0050																																																																																																																																																																																																																																																																																																																																					
	76000	0.0050																																																																																																																																																																																																																																																																																																																																					
	77000	0.0050																																																																																																																																																																																																																																																																																																																																					
	78000	0.0050																																																																																																																																																																																																																																																																																																																																					
	79000	0.0050																																																																																																																																																																																																																																																																																																																																					
	80000	0.0050																																																																																																																																																																																																																																																																																																																																					
	81000	0.0050																																																																																																																																																																																																																																																																																																																																					
	82000	0.0050																																																																																																																																																																																																																																																																																																																																					
	83000	0.0050																																																																																																																																																																																																																																																																																																																																					
	84000	0.0050																																																																																																																																																																																																																																																																																																																																					
	85000	0.0050																																																																																																																																																																																																																																																																																																																																					
	86000	0.0050																																																																																																																																																																																																																																																																																																																																					
	87000	0.0050																																																																																																																																																																																																																																																																																																																																					
	88000	0.0050																																																																																																																																																																																																																																																																																																																																					
	89000	0.0050																																																																																																																																																																																																																																																																																																																																					
	90000	0.0050																																																																																																																																																																																																																																																																																																																																					
	91000	0.0050																																																																																																																																																																																																																																																																																																																																					
	92000	0.0050																																																																																																																																																																																																																																																																																																																																					
	93000	0.0050																																																																																																																																																																																																																																																																																																																																					
	94000	0.0050																																																																																																																																																																																																																																																																																																																																					
	95000	0.0050																																																																																																																																																																																																																																																																																																																																					
	96000	0.0050																																																																																																																																																																																																																																																																																																																																					
	97000	0.0050																																																																																																																																																																																																																																																																																																																																					
	98000	0.0050																																																																																																																																																																																																																																																																																																																																					
	99000	0.0050																																																																																																																																																																																																																																																																																																																																					
	100000	0.0050																																																																																																																																																																																																																																																																																																																																					