



# GPL Series

## Extended Discharge Tables

12V Top Terminal VRLA-AGM

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### GPL1272

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	32.3	20.3	15.1	8.65	4.99	3.60	2.84	2.05	1.34	0.882	0.719	0.375
<b>1.65V</b>	31.0	19.9	14.9	8.60	4.97	3.59	2.83	2.04	1.33	0.875	0.715	0.374
<b>1.67V</b>	30.5	19.8	14.9	8.58	4.96	3.58	2.82	2.04	1.32	0.873	0.713	0.373
<b>1.70V</b>	29.5	19.4	14.7	8.53	4.94	3.57	2.80	2.02	1.31	0.866	0.708	0.371
<b>1.75V</b>	27.5	18.5	14.3	8.39	4.88	3.53	2.77	1.98	1.28	0.850	0.695	0.366
<b>1.80V</b>	24.7	17.1	13.5	8.11	4.75	3.46	2.70	1.93	1.25	0.821	0.672	0.357
<b>1.85V</b>	21.3	15.3	12.2	7.60	4.50	3.30	2.58	1.85	1.19	0.784	0.642	0.343

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	338	221	167	100	57.4	41.6	33.0	23.7	15.6	10.6	8.56	4.45
<b>1.65V</b>	329	219	166	99.4	57.3	41.5	32.9	23.7	15.6	10.5	8.55	4.43
<b>1.67V</b>	325	217	166	99.2	57.2	41.4	32.8	23.6	15.5	10.5	8.55	4.43
<b>1.70V</b>	317	214	164	98.8	57.0	41.3	32.7	23.5	15.4	10.4	8.54	4.41
<b>1.75V</b>	298	206	160	97.4	56.3	40.9	32.4	23.4	15.3	10.3	8.53	4.35
<b>1.80V</b>	275	194	152	94.5	55.0	40.0	31.8	23.0	15.2	10.2	8.52	4.27
<b>1.85V</b>	246	177	139	89.2	52.2	38.1	30.4	22.1	14.8	10.1	8.51	4.12

### GPL12120

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	45.7	32.1	23.1	13.5	7.42	5.16	3.99	2.84	1.84	1.25	1.03	0.63
<b>1.65V</b>	44.5	31.6	23.0	13.4	7.35	5.12	3.97	2.82	1.83	1.24	1.02	0.62
<b>1.67V</b>	44.0	31.4	23.0	13.4	7.32	5.11	3.96	2.81	1.83	1.24	1.01	0.62
<b>1.70V</b>	42.8	30.8	22.6	13.2	7.27	5.08	3.94	2.80	1.81	1.23	1.00	0.61
<b>1.75V</b>	40.3	29.4	21.9	13.0	7.14	5.00	3.88	2.76	1.80	1.22	0.99	0.60
<b>1.80V</b>	37.6	27.5	20.7	12.6	6.92	4.87	3.80	2.70	1.77	1.20	0.97	0.59
<b>1.85V</b>	33.8	24.8	19.0	11.7	6.55	4.64	3.63	2.59	1.70	1.14	0.93	0.56

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	487	343	258	152	84.6	59.9	46.9	33.4	21.7	14.7	12.2	6.30
<b>1.65V</b>	478	340	256	151	84.5	59.8	46.7	33.3	21.6	14.6	12.1	6.26
<b>1.67V</b>	475	339	255	151	84.5	59.7	46.6	33.2	21.6	14.6	12.1	6.24
<b>1.70V</b>	466	333	252	150	84.1	59.2	46.1	33.1	21.5	14.5	12.0	6.23
<b>1.75V</b>	443	322	246	149	83.5	58.9	46.0	32.9	21.4	14.4	11.8	6.19
<b>1.80V</b>	416	306	235	144	81.0	57.4	44.9	32.0	21.0	14.2	11.6	6.09
<b>1.85V</b>	380	280	217	135	77.0	54.8	43.0	30.7	20.4	13.7	11.2	5.85



# GPL Series

## Extended Discharge Tables

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### GPL12260

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	108	73.2	53.3	31.5	19.0	13.9	11.1	7.99	5.20	3.44	2.97	1.49
<b>1.65V</b>	102	69.8	52.0	31.1	18.7	13.8	11.0	7.90	5.16	3.42	2.96	1.48
<b>1.67V</b>	100	68.4	51.5	30.9	18.6	13.7	11.0	7.86	5.14	3.41	2.95	1.48
<b>1.70V</b>	96.3	65.9	49.8	30.3	18.4	13.5	10.9	7.82	5.13	3.40	2.94	1.47
<b>1.75V</b>	88.4	61.2	47.0	29.3	17.9	13.3	10.8	7.66	5.03	3.34	2.90	1.45
<b>1.80V</b>	79.0	56.0	44.1	27.9	17.3	12.9	10.5	7.52	4.91	3.25	2.80	1.42
<b>1.85V</b>	68.9	51.0	40.4	26.3	16.6	12.4	10.1	7.14	4.66	3.11	2.69	1.36

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	1090	787	593	360	219	164	133	95.4	62.0	41.8	33.8	17.8
<b>1.65V</b>	1050	751	582	356	215	161	132	94.8	61.7	41.6	33.7	17.7
<b>1.67V</b>	1034	736	577	355	214	160	131	94.6	61.6	41.5	33.6	17.7
<b>1.70V</b>	992	714	556	350	213	159	130	94.3	61.5	41.0	33.5	17.6
<b>1.75V</b>	965	695	527	338	210	158	129	92.2	60.6	40.5	33.4	17.5
<b>1.80V</b>	892	643	496	323	204	155	127	91.1	59.9	39.4	32.2	17.4
<b>1.85V</b>	780	588	461	309	200	150	123	86.2	56.2	37.4	31.0	16.9

### GPL12400

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	166	111	83.7	49.0	28.6	20.8	16.5	11.9	7.68	5.12	4.21	2.25
<b>1.65V</b>	156	108	82.5	48.6	28.4	20.8	16.4	11.8	7.66	5.10	4.19	2.25
<b>1.67V</b>	153	107	82.0	48.5	28.4	20.7	16.4	11.8	7.65	5.09	4.18	2.24
<b>1.70V</b>	144	103	80.7	48.1	28.2	20.7	16.3	11.7	7.62	5.08	4.17	2.23
<b>1.75V</b>	130	96.2	77.5	46.9	27.8	20.5	16.2	11.6	7.56	5.04	4.14	2.22
<b>1.80V</b>	117	87.3	71.0	44.8	27.0	20.0	15.9	11.4	7.41	4.95	4.06	2.18
<b>1.85V</b>	94.2	78.1	61.8	41.3	25.4	19.1	15.1	10.9	7.09	4.74	3.90	2.10

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	1661	1162	905	548	326	240	191	138	91.1	60.8	50.0	26.8
<b>1.65V</b>	1583	1133	893	545	325	240	190	137	90.8	60.7	49.9	26.7
<b>1.67V</b>	1552	1122	888	544	324	239	190	137	90.8	60.6	49.8	26.7
<b>1.70V</b>	1497	1095	874	540	323	238	189	136	90.6	60.5	49.7	26.6
<b>1.75V</b>	1404	1038	837	530	319	237	188	135	90.0	60.1	49.4	26.5
<b>1.80V</b>	1226	967	776	511	311	233	185	134	88.5	59.1	48.5	26.1
<b>1.85V</b>	1011	853	689	478	295	222	177	129	85.1	56.8	46.7	25.1



# GPL Series

## Extended Discharge Tables

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### GPL12520

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	225	155	116	67.2	38.5	27.7	21.7	15.2	9.66	6.35	5.17	2.66
<b>1.65V</b>	213	147	112	65.4	38.2	27.5	21.5	15.1	9.60	6.32	5.16	2.65
<b>1.67V</b>	208	144	110	64.7	38.1	27.4	21.4	15.0	9.57	6.31	5.15	2.65
<b>1.70V</b>	195	138	108	63.6	37.8	27.3	21.3	14.9	9.53	6.28	5.14	2.64
<b>1.75V</b>	177	128	103	61.2	37.0	26.7	20.7	14.7	9.44	6.17	5.08	2.60
<b>1.80V</b>	159	119	95.7	58.7	35.7	26.0	20.3	14.3	9.22	6.04	4.94	2.56
<b>1.85V</b>	142	110	89.3	55.6	33.3	24.8	19.0	13.5	8.71	5.74	4.69	2.43

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	2392	1684	1290	770	447	325	250	176	114	74.7	61.6	31.7
<b>1.65V</b>	2238	1616	1251	754	446	324	248	175	113	74.5	61.3	31.6
<b>1.67V</b>	2176	1589	1235	748	445	323	247	175	113	74.4	61.2	31.6
<b>1.70V</b>	2081	1540	1208	737	443	322	246	174	112	74.2	60.7	31.4
<b>1.75V</b>	1914	1449	1160	710	434	315	242	171	111	73.9	60.3	31.3
<b>1.80V</b>	1747	1359	1093	683	419	308	235	169	110	72.4	59.5	30.7
<b>1.85V</b>	1584	1258	1031	649	395	295	223	161	105	69.6	56.7	29.4

### GPL12650

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	253	173	130	77.7	45.1	32.8	26.0	18.7	12.2	8.11	6.67	3.59
<b>1.65V</b>	238	166	128	77.0	44.8	32.6	25.9	18.7	12.1	8.07	6.63	3.57
<b>1.67V</b>	231	163	127	76.8	44.7	32.6	25.8	18.6	12.1	8.05	6.62	3.57
<b>1.70V</b>	222	157	124	76.0	44.4	32.5	25.7	18.5	12.0	8.02	6.60	3.55
<b>1.75V</b>	200	146	118	73.9	43.7	32.2	25.5	18.4	11.9	7.95	6.54	3.52
<b>1.80V</b>	173	133	107	70.2	42.3	31.4	25.0	18.0	11.7	7.80	6.41	3.45
<b>1.85V</b>	143	116	93.4	64.7	39.6	29.8	23.7	17.3	11.2	7.48	6.16	3.32

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	2573	1800	1420	877	516	379	300	217	143	95.0	78.2	42.7
<b>1.65V</b>	2443	1751	1394	871	514	378	300	216	142	94.7	78.0	42.5
<b>1.67V</b>	2392	1731	1384	868	513	378	299	216	142	94.6	77.9	42.5
<b>1.70V</b>	2303	1689	1357	861	511	377	299	215	142	94.4	77.7	42.4
<b>1.75V</b>	2093	1604	1291	841	504	374	296	214	141	93.6	77.0	42.0
<b>1.80V</b>	1856	1497	1192	807	490	366	291	210	138	92.0	75.7	41.3
<b>1.85V</b>	1602	1290	1058	751	463	349	278	202	133	88.6	73.0	39.9



# GPL Series

## Extended Discharge Tables

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### GPL12750

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	298	198	149	87.5	53.5	38.8	30.9	21.9	14.5	9.57	7.85	4.15
<b>1.65V</b>	281	193	147	86.9	53.3	38.7	30.8	21.8	14.4	9.49	7.80	4.14
<b>1.67V</b>	274	191	146	86.7	53.2	38.6	30.7	21.7	14.4	9.46	7.78	4.13
<b>1.70V</b>	265	187	144	86.1	52.4	38.1	30.5	21.5	14.3	9.40	7.76	4.11
<b>1.75V</b>	234	170	139	84.4	51.4	37.4	29.9	21.4	14.1	9.38	7.63	4.04
<b>1.80V</b>	210	158	131	81.9	50.2	36.8	29.5	21.0	13.8	9.17	7.55	3.97
<b>1.85V</b>	183	145	118	77.0	47.5	34.9	28.1	20.3	13.5	8.88	7.26	3.82

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	3013	2127	1654	1003	614	456	370	261	173	116	93.5	49.7
<b>1.65V</b>	2874	2079	1640	998	613	453	366	260	172	115	93.1	49.5
<b>1.67V</b>	2818	2060	1635	996	612	452	365	260	172	115	92.9	49.4
<b>1.70V</b>	2729	2022	1609	994	610	450	363	259	171	114	92.7	49.3
<b>1.75V</b>	2553	1927	1558	976	603	447	361	257	170	113	92.3	49.0
<b>1.80V</b>	2371	1815	1478	949	592	440	356	254	168	111	91.0	48.7
<b>1.85V</b>	2075	1667	1348	904	572	422	341	245	162	107	87.5	47.1

### GPL12800

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	298	198	149	87.5	53.5	38.8	30.9	21.9	14.5	9.57	7.85	4.15
<b>1.65V</b>	281	193	147	86.9	53.3	38.7	30.8	21.8	14.4	9.49	7.80	4.14
<b>1.67V</b>	274	191	146	86.7	53.2	38.6	30.7	21.7	14.4	9.46	7.78	4.13
<b>1.70V</b>	265	187	144	86.1	52.4	38.1	30.5	21.5	14.3	9.40	7.76	4.11
<b>1.75V</b>	234	170	139	84.4	51.4	37.4	29.9	21.4	14.1	9.38	7.63	4.04
<b>1.80V</b>	210	158	131	81.9	50.2	36.8	29.5	21.0	13.8	9.17	7.55	3.97
<b>1.85V</b>	183	145	118	77.0	47.5	34.9	28.1	20.3	13.5	8.88	7.26	3.82

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	3013	2127	1654	1003	614	456	370	261	173	116	93.5	49.7
<b>1.65V</b>	2874	2079	1640	998	613	453	366	260	172	115	93.1	49.5
<b>1.67V</b>	2818	2060	1635	996	612	452	365	260	172	115	92.9	49.4
<b>1.70V</b>	2729	2022	1609	994	610	450	363	259	171	114	92.7	49.3
<b>1.75V</b>	2553	1927	1558	976	603	447	361	257	170	113	92.3	49.0
<b>1.80V</b>	2371	1815	1478	949	592	440	356	254	168	111	91.0	48.7
<b>1.85V</b>	2075	1667	1348	904	572	422	341	245	162	107	87.5	47.1



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### GPL12800G

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	298	198	149	87.5	53.5	38.8	30.9	21.9	14.5	9.57	7.85	4.15
<b>1.65V</b>	281	193	147	86.9	53.3	38.7	30.8	21.8	14.4	9.49	7.80	4.14
<b>1.67V</b>	274	191	146	86.7	53.2	38.6	30.7	21.7	14.4	9.46	7.78	4.13
<b>1.70V</b>	265	187	144	86.1	52.4	38.1	30.5	21.5	14.3	9.40	7.76	4.11
<b>1.75V</b>	234	170	139	84.4	51.4	37.4	29.9	21.4	14.1	9.38	7.63	4.04
<b>1.80V</b>	210	158	131	81.9	50.2	36.8	29.5	21.0	13.8	9.17	7.55	3.97
<b>1.85V</b>	183	145	118	77.0	47.5	34.9	28.1	20.3	13.5	8.88	7.26	3.82

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	3013	2127	1654	1003	614	456	370	261	173	116	93.5	49.7
<b>1.65V</b>	2874	2079	1640	998	613	453	366	260	172	115	93.1	49.5
<b>1.67V</b>	2818	2060	1635	996	612	452	365	260	172	115	92.9	49.4
<b>1.70V</b>	2729	2022	1609	994	610	450	363	259	171	114	92.7	49.3
<b>1.75V</b>	2553	1927	1558	976	603	447	361	257	170	113	92.3	49.0
<b>1.80V</b>	2371	1815	1478	949	592	440	356	254	168	111	91.0	48.7
<b>1.85V</b>	2075	1667	1348	904	572	422	341	245	162	107	87.5	47.1

### GPL12880

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	349	232	175	103	62.8	45.5	36.3	25.6	17.0	11.3	9.21	4.87
<b>1.65V</b>	329	227	172	102	62.5	45.3	36.1	25.5	16.9	11.2	9.15	4.85
<b>1.67V</b>	321	225	171	102	62.4	45.2	36.0	25.5	16.9	11.2	9.12	4.84
<b>1.70V</b>	311	219	169	101	61.4	44.8	35.7	25.2	16.8	11.1	9.10	4.83
<b>1.75V</b>	274	199	163	99.0	60.3	43.9	35.1	25.1	16.6	11.0	8.96	4.74
<b>1.80V</b>	246	186	154	96.1	58.8	43.1	34.6	24.6	16.2	10.8	8.85	4.66
<b>1.85V</b>	215	170	138	90.3	55.8	41.0	32.9	23.8	15.8	10.4	8.51	4.48

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	3535	2496	1941	1177	720	535	434	306	203	136	110	58.3
<b>1.65V</b>	3372	2440	1925	1171	719	532	430	305	202	135	109	58.0
<b>1.67V</b>	3307	2417	1919	1169	719	531	428	305	202	135	109	57.9
<b>1.70V</b>	3202	2373	1888	1166	716	529	426	304	201	134	108	57.8
<b>1.75V</b>	2995	2261	1828	1145	707	524	424	301	200	132	107	57.5
<b>1.80V</b>	2782	2129	1734	1113	694	516	418	298	198	130	106	57.1
<b>1.85V</b>	2434	1955	1581	1061	671	495	400	287	190	125	103	55.3



# GPL Series

## Extended Discharge Tables

12V Top Terminal VRLA-AGM

\* Published specification data is subject to change without notice

### GPL121000

#### Constant Current Discharge Characteristics Unit: Amperes (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	423	277	212	127	73.0	52.1	41.1	29.1	18.9	12.2	10.00	5.27
<b>1.65V</b>	389	269	208	126	72.6	51.8	40.8	29.0	18.8	12.1	9.95	5.23
<b>1.67V</b>	375	266	207	125	72.4	51.7	40.7	29.0	18.8	12.1	9.93	5.22
<b>1.70V</b>	355	258	203	124	71.8	51.4	40.6	28.7	18.6	12.0	9.88	5.20
<b>1.75V</b>	317	240	194	120	71.1	50.9	40.2	28.6	18.5	11.9	9.81	5.19
<b>1.80V</b>	283	219	183	115	68.9	49.6	39.3	27.9	18.2	11.8	9.66	5.09
<b>1.85V</b>	245	196	164	106	65.2	47.2	37.6	26.8	17.4	11.4	9.45	4.92

#### Constant Power Discharge Characteristics Unit: Watts (25°C, 77°F)

F.V/Time	5 MIN	10MIN	15MIN	30MIN	60MIN	90MIN	2HR	3HR	5HR	8HR	10HR	20HR
<b>1.60V</b>	4159	2950	2331	1436	849	610	482	342	223	153	125	63.5
<b>1.65V</b>	4051	2869	2290	1422	845	608	481	341	222	152	124	63.4
<b>1.67V</b>	4008	2837	2273	1417	843	607	480	340	222	152	124	63.3
<b>1.70V</b>	3863	2772	2252	1404	840	604	478	339	221	151	123	63.2
<b>1.75V</b>	3572	2623	2181	1372	830	599	475	337	220	150	122	62.4
<b>1.80V</b>	3184	2442	2049	1316	809	585	465	331	217	148	121	61.4
<b>1.85V</b>	2769	2227	1856	1234	767	557	444	320	210	142	117	60.0