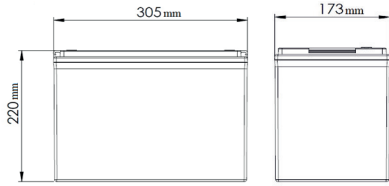


# NPE1290FR

Yellow Line 12V 90Ah

## Drawings



Physical Characteristics	SI Units	US Units
Length	305 mm	1.2 inc
Width	173 mm	6.8 inc
Height	220 mm	8.7 inc
Weight	32 kg	70.6 lbs

## Electrical Specifications

Nominal Voltage	12V
Number Of Cells	6
Rated Capacity	90 Ah (10 h rate to 1.80 Vpc at 25 °C)
Internal Resistance	5.1 mΩ (IEC 60 896 - 21/22)
Short Circuit Current	2 480 A (IEC 60 896 - 21/22)
Float Charge Voltage	2.27 V Per Cell (Vpc) at 25 °C)

## Design Features

Design Life at 20 °C	Long Life 10-12 Years
Plates	Tick Flat Pasted
Active Material	Very High Purity Virgin Lead
Grid Alloy	Lead - Calcium - Tin Alloy
Electrolyte	Sulphuric Acid, Analytical Grade
Separator	Absorbing Glass Mat (AGM)
Operating Temperature	-10 °C to +50 °C +15 °C to +25 °C (recommended)
Venting Valve	Rubber, One Way, Self Resealing (Opening Pressure: 1.7 PSI) (Resealing Pressure: 1.5 PSI)
Internal Gas Recombination Efficiency	More Than 99%
Flame Arrestor	Available
Storage Temperatures	-10 °C to +40 °C
Self Discharge	Less Than 2.0% Per Month at 20 °C
Storability Without Recharging	Up to 6 Months at 20 °C
Shelf Life	Up to 1 Year
Container / Lif Material	Shock Resistant ABS FR; Flammability Class UL94 V0
Terminal Position	Top
Terminal Sealing	Mechanical + Epoxy Double Sealing
Terminal Type	Brass; Female; M6 Thread
Terminal Torque	7 Nm
Transport Terminal Cover	Available
Carrying Handles	Available
Connectors and Bolts	Supplied as Standard
Applicable Standards and Rec.	IEC 60896-21/22; En 50272-2; IEC 61427-1/2; IEC 61056-1; BS 6290-4; IEEE 1184; IEEE 1187; IEEE 1188
Manufacture Standards	ISO 9001; ISO 14001; OHSAS 18001; AQAP 2110

### Discharge Performance at Constant Current Discharge (A) For Battery at 25°C°

Uf, Vpc	5min	10min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h
1.6	362	260	190	125	85	60.7	40	25.5	20	16.6	14.2	10.8	9.4
1.65	329	243	183	119	79	58	36.8	25.2	19.8	16.4	14	10.7	9.3
1.7	298	230	177	113	76	56.5	35.2	25	19.5	16.3	13.9	10.6	9.2
1.75	277	213	167	107	73	55.4	34.6	24.7	19.4	16.2	13.8	10.5	9.1
1.8	256	200	155	103	72	53.7	34	24.4	19.1	16	13.6	10.4	9
1.85	234	190	145	98	69	51	32.5	22.7	18.2	15.4	13.4	10.3	8.7

### Discharge Performance at Constant Power Discharge W (Per Cell) For Battery at 25°C°

Uf, Vpc	5min	10min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h
1.6	633	470	350	237	163	118	76	50	39.2	32.7	28.2	21.5	18.7
1.65	583	444	338	227	153	113	72	49.5	39	32.5	27.8	21.3	18.5
1.7	533	425	327	217	147	110	69	49.2	38.7	32.3	27.7	21.2	18.3
1.75	501	397	312	207	142	108	68	48.8	38.5	32.2	27.5	21	18.2
1.8	468	373	292	200	140	105	67	48.3	38.2	32	27.3	20.8	18
1.85	433	357	275	192	135	100	64	45	36.2	30.7	26.7	20.2	17.3

### Discharge Performance at Constant Power Discharge W (Per Block) For Battery at 25 C°

Uf, Vpc	5min	10min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h
1.6	3800	2820	2100	1420	980	710	452	298	235	196	169	129	112
1.65	3500	2663	2030	1360	920	680	432	297	234	195	167	128	111
1.7	3200	2550	1960	1300	880	660	414	295	232	194	166	127	110
1.75	3004	2383	1870	1240	850	650	408	293	231	193	165	126	109
1.8	2809	2240	1750	1197	840	630	402	290	229	192	164	125	108
1.85	2600	2140	1650	1150	810	600	384	270	217	184	160	121	104

### Temperature Correction Factor of Capacity at Constant Current Discharge

Discharge Time	-10 C°	0 C°	10 C°	15 C°	20 C°	25 C°	30 C°	35 C°	40 C°	50 C°
From 5 to 59 Minutes	0.7	0.8	0.9	0.95	0.97	1	1.05	1.1	1.13	1.15
From 1 to 20 Hours	0.82	0.88	0.94	0.97	0.98	1	1.03	1.05	1.07	1.08

### Battery Charge Conditions at 25 C° Constant Voltage and Limited Current (IU)

Charge Current Limit	Float Charge Voltage	Equalization Charge Voltage	Boost Charge Voltage
0.1 - 0.25C10 A Recommended: 0.2C10A	2.27V Per Cell at 25 °C; Temperature Correction: -3 mV / Cell /oC	2.32V Per Cell 25 °C Recommended: Every 3 Months For 24h During Long Time Float Operation	2.40V Per Cell at 25 °C; Temperature Correction: -4 mV / Cell /oC

Float Application: 0.20C10A / 2.27V Per Cell at 25 °C

Cycling Applications: 0.20C10A / 2.40V Per Cell at 25 °C;  
Recharge Ah Input at Least 105% From Previous Discharge Ah

