Nheohybrid power LED Street Light (56W, single arm)

I. System configuration

S/N	Item	Model no.	Description/Specification	Qty
1	W ind turbine	nheowind 3D04	rated 300W , 24V, horizontal axis, 3 blades, downwind, noise level less than 35dB@ 12m /s	1
2	~~Solar panel~~	~~M-060/12~~	~~60W monocrystalline silicon solar modules~~	~~2~~
3	LED lam p	G108	56P*1W bridgelux LED (white), 24VDC, 23 lux@ 7m height (from lam p to ground)	1
4	Hybrid controller	W S06A-24	24VDC, light control + tim e control, start charging from low voltage 4V	1
5	Gel battery	CG12-80	80AH/12VDC, deep cycled, m aintenance-free	2
6	Battery box	ZD-7	underground type, IP67, engineering plastic	1
7	Bracket of PV panel	/	Q235A steel sprayed with plastic powder paint,	1
8	Lamp post	/	9m high, hot-dip galvanized steel with 4mm wall thickness, sprayed with plastic powder paint, including LED lamp arm and anchor bolts	1
9	Accessories	/	cable, fastening, connector, pipe etc	1

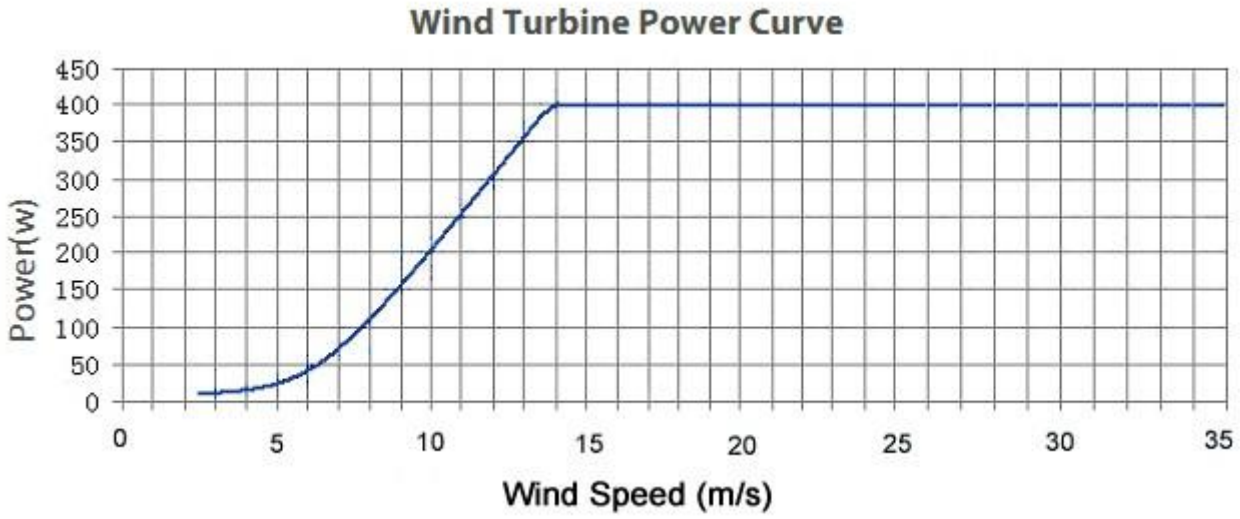
Remarks:

1) Above system could provide LED lamp daily power consumption for **10 hours** (5 hours full energy mode + 5 hours energy saving mode- half power); Continuously working days: **3~4 days.**
2) Recommended installed environmental condition at average wind speed **4m /s+**, sun radiation **5kwh/m^2/d+**.
3) The system configuration could **be customized** according to the local installation environment and illumination regulation.

II. Technical specification of main parts

1. 3D wind turbine

Model	Nheowind 3D04
Rated Power	300W
Maximum Power	400W
Rated Voltage	25VAC
Rated W ind Speed	12m/s
Cut-in W ind Speed	2.5m/s
Survival W ind Speed	45m/s
Qty of Blades	3pcs
Rotor Diameter	1.5m
Noise Level	＜35dB@ 12m/s
W orking Temperature	-40~60℃
W eight (turbine only)	30kg

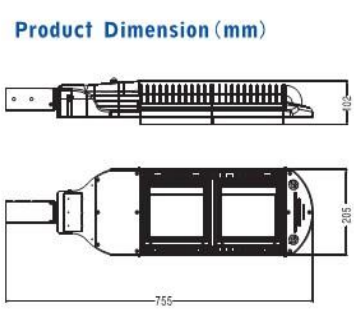




LED lamp

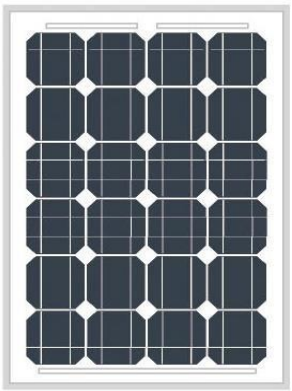
Model	G108
Optical Spec	
LED Spec & Quantity	56 x 1W LED (W hite)
LED Color Temperature	3000-3500K/4000-4500K/5000-7000K
Luminaire Efficiency	90%
LED Efficiency	＞105Lm/W
Initial Delivered Lumen Tj=25℃	5400Lm
Normal Luminous Flux Tj=66℃	5000Lm
Illuminance & Scope at 6M	28Lux, 21mx9.75m
Illuminance & Scope at 8M	16Lux, 28mx13m
Color Rendering Index	Ra＞75
Beam Angel	130°x 80°
Electrical Spec	
Input Voltage & Frequency	DC24V 50~60Hz
Power Factor	＞0.95
Input Current	0.33A (220V)
Total Power Consumption	72W
Temperature Spec	
Shell Temperature (Ta=30℃)	51℃
Junction Temperature (Ta=30℃)	64℃
Shell Temperature Rise (Ta=30℃)	21℃
Junction Temperature Rise (Ta=30℃)	34℃
Other Spec	
Operating Temperature & Humidity	-20℃-40℃/ 10~90RH
Storage Temperature	-20℃-45℃
Dimension	L755xW 205xH102mm
Net W eight	5.75kg
IP Rating	IP65
Designing Lifespan	50,000h
56W LED Street Light Equivalent to 150W HPS Lamp	

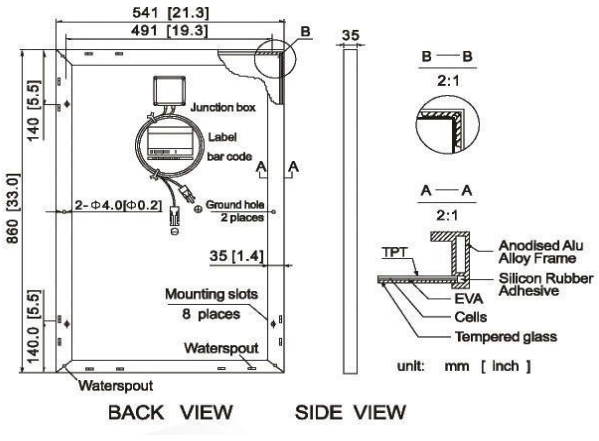




Solar panel

Model	M60
Electric Spec	
Pm	60
Vmp	18.4
Imp	3.27
Voc	22.2
Isc	3.54
Maximum System Voltage	715VDC
STC: Irradiance 1000W /m2, Temperature 2 5℃,AM=1.5	
Mechanical Spec	
Cell Size (mm)	125x41.6
Modules Size (mm)	860x541x35
No. of Cells	72 (4x18)
W eight(KG)	6
No. of Mounting Holes	4
No. of W aterspout	16
Temperature Coefficient	
NOCT	47℃±2℃
Temperature coefficient of Isc	+0.03%/℃
Temperature coefficient of Voc	-0.333%/℃
Temperature coefficient of Pmax	-0.459%/℃
Power Tolerance	±3%

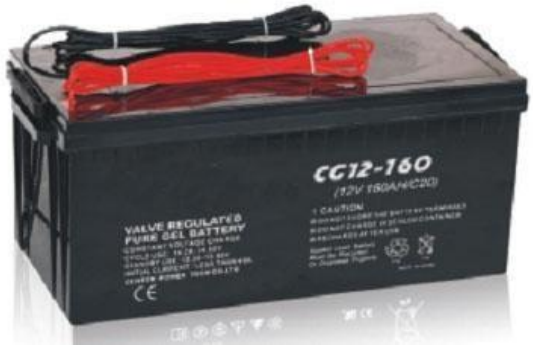


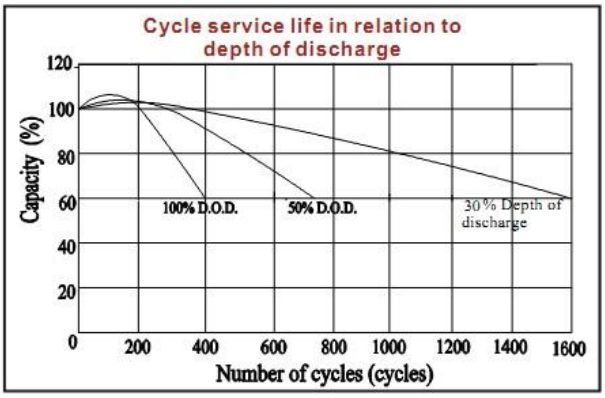


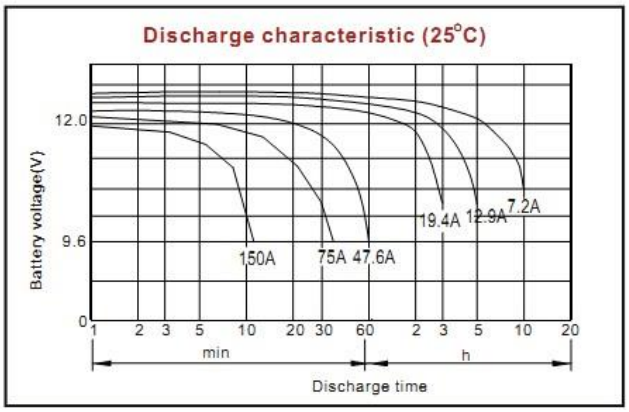
BACK VIEW SIDE VIEW

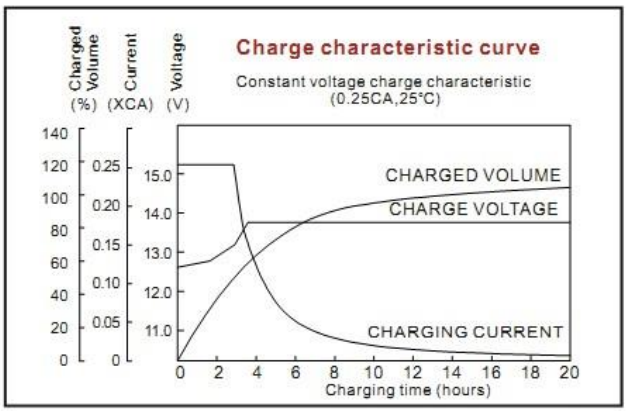
Gel battery

Model	CG12-80Z-TA
Cells Per Unit	6
Voltage Per Unit	12
Capacity	80Ah@ 10hr-rate to 1.80V per cell @ 25℃
W eight	24kg
Max. Discharge Current	750A (5 sec)
Internal Resistance	Approx. 5.5m Ω
Operating Temperature Range	Discharge:-20℃~60℃ Charge: -10℃~60℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	less than 3% per month at 25℃
Dimension(mm)	L350xW167xH179







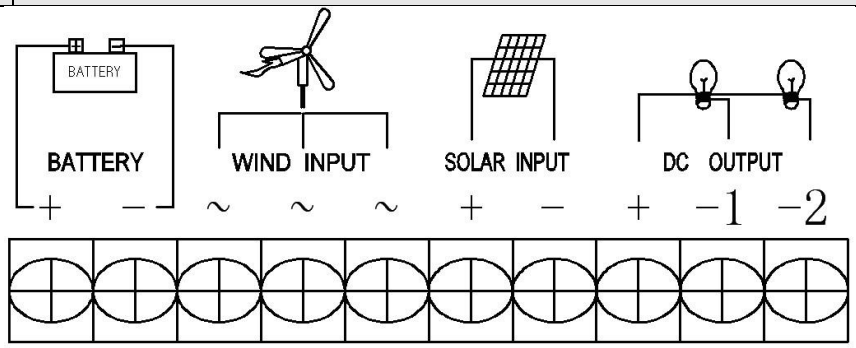


Wind + Solar hybrid controller

Model	W S06A-24
Rated Battery Voltage	24V
Rated W ind Turbine Power	600W
W ind Turbine Maximum Input Current	40A
W ind Turbine Maximum Input Power	1000W
Unload Voltage（factory default）	28V
Unload Current（factory default）	25A
Rated Solar Power	240W
Battery Over Discharge Voltage Shutoff	22V
Battery Over Discharge Recovery	24V
Output Protection Voltage	32V
PV Voltage Of Light-Control On	Adjustable（2V）
PV Voltage Of Light-Control Off	Adjustable（3V）
Load 1 Rated Output Current	10A
Load 2 Rated Output Current	10A
Load 1 Output Mode(Factory Default)	3 Modes Selection（Light-Control On and Light-Control Off）
Load 2 Output Mode(Factory Default)	3 Modes Selection（Light-control On and Time-Control 5 hours）
Control Mode	PWM
Display Mode	LCD
Display Parameters	W ind Turbine Power, W ind Turbine Voltage, W ind Turbine Current, PV Voltage, PV Charge Current, PV Power, Battery Voltage, Over Voltage, Under Voltage, Over Load, Short Circuit, Night. Etc
W orking Temperature & Humidity	-20~+55℃35~85% RH（W ithout Condensation）
Temperature Compensation （optional）	4mV/℃2V ,–35℃-+80℃ Precision：±1℃

Communication Mode（optional）	RS232、RS485、RJ45、GPRS. Etc
Quiescent Current	≤20mA
Protection Function	Solar reverse charge protection , Solar reverse connection protection, Battery over charge protection, Battery over discharge protection, Battery reverse connection protection, Lightning protection W ind turbine current limiting, W ind turbine automatic brake and manual brake..
Low Voltage Charge Function	W ith this function Controller can start charging battery when wind turbine voltage is lower than battery bank voltage , For example ,Controller can start charging battery from 4V if runs in 24V battery bank





IV. Packing information

1. Wind turbine & Hybrid power controller

Packing: 1 carton (1pcs wind turbine + 1pcs controller in one carton)

Carton size (mm): L1062*W 697*H352

G.W (kg): 37





2. Solar panel

Packing: 1 carton (2pcs solar panels in one carton)

Carton size (mm): L900*W 581*H85

G.W (kg): 14





3. LED lamp

Packing: 1 carton (1pcs lamp)

Carton size (mm): L920*W 350*H240

G.W (kg): 8





4. Battery

Packing: 2 cartons (1pcs battery per carton)

Carton size (mm): L402*W 220*H235/carton

G.W (kg): 24.5kg/carton





5. Lamp post

Packing: nude pack with bubble bag cover

Carton size (mm): L9000*W 500*H500

6. Others (PV bracket, lamp arm, etc.)





★Referenced container-load packing inform ation

1x 40ft container (open top type) can be loaded fifteen (15) sets of nheohybrid 400 LED Street Light (whole packages). For lamp post, bracket and lamp arm , we recommend that customer could find one local supplier to arrange the production according to our drawings, which to avoid the high transportation cost of long vehicle and save loading space in container.

G.W (kg): 270









