

PEL-5000G Series

High Power DC Electronic Load

FEATURES

- 4 U/6 kW High Power Density Design Also for Bench Testing
- Turbo Mode Function, Which Allows 1.5 Times the Rated Power or Current to be Used Within Two Seconds
- Turbo Mode can be Used with OCP/OPP/BMS/Short Mode/ Surge Mode/Hot Plug-In Testing
- High Tolerance to Environmental Temperature, with 4 kW/5 kW Models not Affected by Environmental Temperature in Power Usage
- Can set the Power-on Status Value
- Short Circuit Duration Can be set Within Short Circuit Test Voltage
- Meter Display Can be Configured as Polarity Positive (”+”) or Negative("-")
- Optional Interface : GPIB, RS232, USB, LAN
- Protection Function Testing for Battery BMS
- Protection Against V, I, W, and ℃

GW INSTEK
Simply Reliable

High Power DC Electronic Load

	NORMAL MODE	TURBO MODE
PEL-5004G-150-400	150 V / 400 A / 4000 W	150 V / 600 A / 6000 W
PEL-5005G-150-500	150 V / 500 A / 5000 W	150 V / 750 A / 7500 W
PEL-5006G-150-600	150 V / 600 A / 6000 W	150 V / 900 A / 9000 W
PEL-5004G-600-280	600 V / 280 A / 4000 W	600 V / 420 A / 6000 W
PEL-5005G-600-350	600 V / 350 A / 5000 W	600 V / 525 A / 7500 W
PEL-5006G-600-420	600 V / 420 A / 6000 W	600 V / 630 A / 9000 W
PEL-5004G-1200-160	1200 V / 160 A / 4000 W	1200 V / 240 A / 6000 W
PEL-5005G-1200-200	1200 V / 200 A / 5000 W	1200 V / 300 A / 7500 W
PEL-5006G-1200-240	1200 V / 240 A / 6000 W	1200 V / 360 A / 9000 W





PEL-5000G Series

CE RS-232 GPIB USB LAN UKCA

DESCRIPTIONS

- PEL-5000G Series module has its own control and display panel, CC/CR/CV/CP/Dynamic modes, also can be controlled via RS232, Ethernet, USB and GPIB interface
- The new Turbo mode is designed for overload or protection testing, which includes OCP, OPP, Short for AC/DC or DC/DC power source; Over Charge/Discharge and Short for Battery BMS protection; and Blow/Not Blow testing for Fuse, Breaker or PTC Current Protection Components
- Support Short, OCCP and OCDP protection tests for battery BMS protection testing, the peak current before protection and protection response time are measured
- BMS, Fuse, OCP and OPP single-key test functions on the module make test more efficient
- Dynamic can be simulated under CC, CP mode. The current Rise/Fall slew rate can be adjusted individually and there is an external signal input so that load can have a simulated Specific Load Current Waveform
- SHORT duration setting and SHORT_VH, SHORT_VL setting function, also can measure Short Voltage and Current
- Programmable LOAD ON/OFF voltage, GO/NG meter check, Voltage meter display " + " or " – " is selectable and 150 sets Store/Recall larger memory is much advance feature for each different application
- 150 sets test parameter and status storage function can call the storage memory real time in accordance with the auto sequence requirement, at any time to tune out the stored memory for use

APPLICATIONS

- Voltage/Current Source SMPS Transient Response
- Voltage Source Current Limit Testing and Battery Emulation for Charger Testing
- Battery Discharge Capacity
- Lithium Battery BMS Charge and Discharge Protection
- R&D, Quality Control
- ATE System
- Production Testing

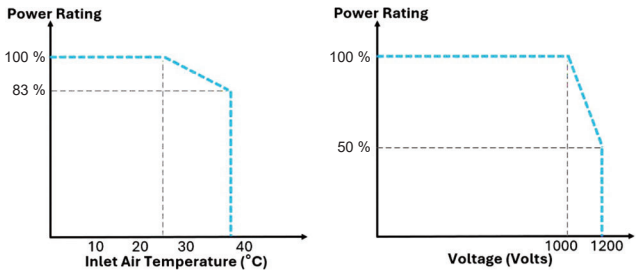
High Power DC Electronic Load

Understanding the knack of electronic load specifications

Electronic loads are like flight simulators, which provide a variety of flight scenarios to train pilots, through the selection of routes to simulate the normal takeoff, landing and abnormal contingency. Similarly, the main function of the electronic load is to simulate the power supply while encountering a variety of load scenarios to confirm the power supply design objectives and contingency through the setting of the current profile to form the specification of the constant current (C.C.), constant voltage (C.V.), and constant resistance (C.R.), and to absorb the output power of the power supply. Extensive applications of electronic load include tests of power supply, battery charger, batteries, solar panels and other power devices, and tests of components that are controlled by current and components that carry current such as: various types of current protection devices, switches, relays, fuses, cables... etc. The detailed test items of the power supply include power supply load adjustment rate, efficiency and temperature rise under different loads, etc., so where there is power supply, there is a need for load to conduct tests.

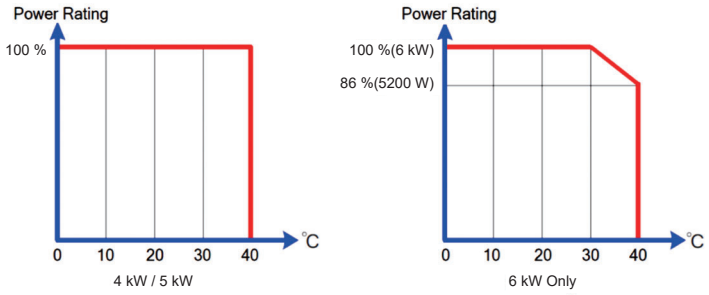
The specifications of electronic loads usually show the best conditions. The best condition is based on specific good operating conditions (warm-up 30 minutes to 60 minutes; power lab temperature (23.0 ± 2.0) °C), and the specification of an electronic load is subject to de-rating due to operating voltage, operating temperature, etc.

The following is the de-rating curve from 632XXA series specifications of the brand C . The left graph in Figure 1 shows that after exceeding the 25 °C power lab environment, the power rating capability decreases by 17 % (83 %) at an operating temperature of 40 °C, and by 50 % at an operating voltage of 1200 V.



Curve on the Brand C Catalog, Left is The Temperature De-rating Curve; Right is The Voltage De-rating Curve.

Figure 2 shows the derating curve for the 150 V/600 V models of the PEL-5000G series. The 4 kW/5 kW models still provide full power at 40 °C, while the 6 kW model's rated power drops by 14 % at 40 °C (leaving 86 %, 3 % higher than that of the competitor), and Figure 3 shows the derating curve for the 1200 V model of the PEL-5000G, with a 40 % drop in rated power (leaving 60 %, 10 % higher than the competitor). From this derated specification, if you are looking at the specifications for a 1200 V application from the brand C, the power is only 90 % of GW's product, so you have a quantitative benchmark in your mind of how much cheaper then GW's product in terms of the derating?



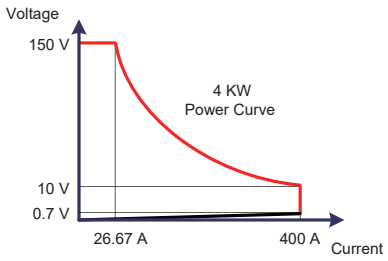
De-rating Curve of PEL-5000G 150 V/600 V Model

You may wonder why GW's products can achieve full power at 4 kW/5 kW. The reason is that the heat sinks for electronic loads usually have one set for every 1 kW. However, in the 4 kW/5 kW models, GW Instek uses the 6 kW heat sink design, which uses 6 sets of heat sinks. It means that the heat dissipation ability is better at 4 kW/5 kW, so that full power can be maintained, and because the single-set heat sink design is better than that of the brand C, the derating at 6 kW is still better than that of the competitor.

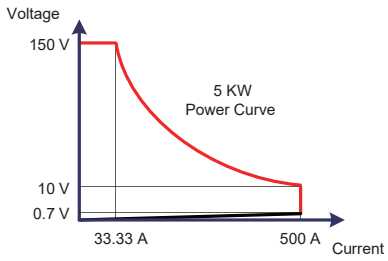


Derating Curve of PEL-5000G 1200 V Model

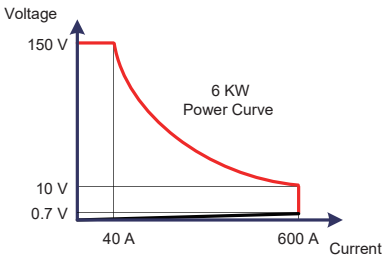
High Power DC Electronic Load



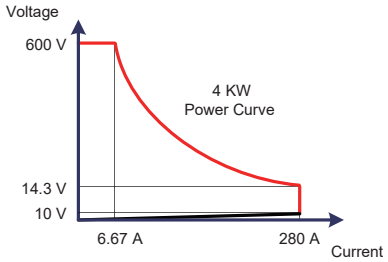
PEL-5004G-150-400



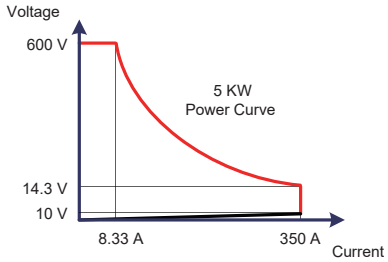
PEL-5005G-150-500



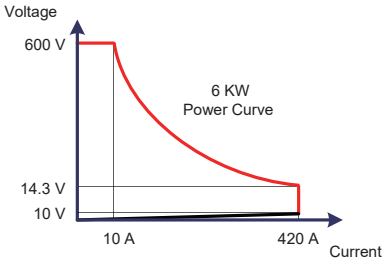
PEL-5006G-150-600



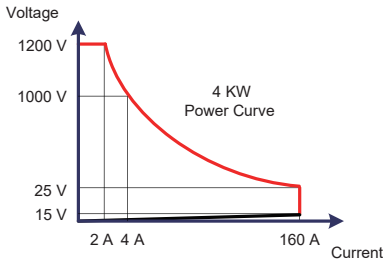
PEL-5004G-600-280



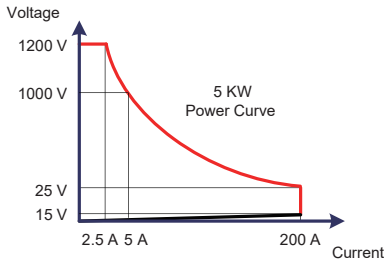
PEL-5005G-600-350



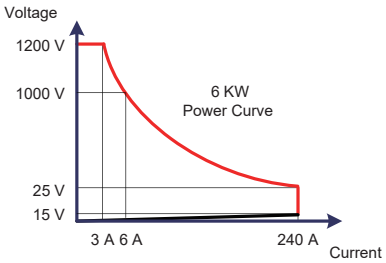
PEL-5006G-600-420



PEL-5004G-1200-160



PEL-5005G-1200-200



PEL-5006G-1200-240

How to Meet the Demand of Transient Load at a Lower Cost?

When testing the dynamic loading specifications of power supplies or testing fuses and circuit breakers, there are often applications required short periods of time and high currents. Of course, you can purchase higher power electronic loads to meet these needs, but this method requires an extra budget, and the extra budget will not be useful in general applications. The PEL-5000G 1.5x Turbo mode allows you to satisfy this type of test demand with a normal budget. 400 A model can withstand up to 600 A, 500 A model can withstand up to 750 A, and 600 A model can withstand up to 900 A. Why can GW's electronic loads have the function of Turbo mode? The reason is that we use 20 % more MOSFETs than the competitor to provide this 1.5 times (instantaneous 2 seconds) capability.

Conclusion: Understand the Specifications to Maximize Your Investment !

The PEL-5000G series of electronic loads are designed with the utmost care and materials to maximize the effectiveness of your investment. Full power or low dropout ratings allow you to get the true power for your budget, while the turbo mode satisfies instantaneous applications.



Turbo Mode logo of GW Instek Electronic Load

High Power DC Electronic Load

SPECIFICATIONS

	PEL-5004G-150-400		PEL-5005G-150-500		PEL-5006G-150-600	
Power *1	0 W to 4 kW	0 W to 6 kW max. *1	0 W to 5 kW	0 W to 7.5 kW max. *1	0 W to 6 kW	0 W to 9 kW max. *1
Current	0 A to 400 A	0 A to 600 A max. *1	0 A to 500 A	0 A to 750 A max. *1	0 A to 600 A	0 A to 900 A max. *1
Voltage	0 V to 150 V		0 V to 150 V		0 V to 150 V	
Min. Operating Voltage	0.7 V@400 A		0.7 V@500 A		0.7 V@600 A	
Protections						
Over Power	105%					
Over Current	104%					
Over Voltage	105%					
Over Temp Protection(OTP)	90 °C ± 5 °C					
Constant Current Mode						
Range *2	0 A to 40 A	0 A to 400 A	0 A to 50 A	0 A to 500 A	0 A to 60 A	0 A to 600 A
Resolution	0.64 mA	6.4 mA	0.80 mA	8.0 mA	0.96 mA	9.6 mA
Accuracy *3	± 0.05% of (Setting + Range)					
Constant Resistance Mode						
Range	22.5 kΩ to 0.375 Ω	0.375 Ω to 0.0018 Ω	18 kΩ to 0.3 Ω	0.3 Ω to 0.0015 Ω	15 kΩ to 0.25 Ω	0.25 Ω to 0.0012 Ω
Resolution	44 µS	6.25 µΩ	56 µS	5 µΩ	67 µS	4.167 µΩ
Accuracy	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.) *9	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.) *9	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.) *9
Constant Voltage Mode						
Range	0 to 150 V					
Resolution	2.5 mV					
Accuracy	± 0.05 % of (Setting + Range)					
Constant Power Mode						
Range	0 W to 400 W	400 to 4 kW	0 W to 500 W	500 W to 5 kW	0 W to 600 W	600 W to 6 kW
Resolution	6.4 mW	64 mW	8 mW	80 mW	9.6 mW	96 mW
Accuracy *4	± 0.2 % of (Setting + Range)					
Constant Voltage Mode + Current Limit Mode						
Range	150 V	400 A	150 V	500 A	150 V	600 A
Resolution	2.5 mV	6.4 mA	2.5 mV	8 mA	2.5 mV	9.6 mA
Accuracy *4	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Constant Voltage Mode + Power Limit Mode						
Range	150 V	4 kW	150 V	5 kW	150 V	6 kW
Resolution	2.5 mV	64 mW	2.5 mV	80 mW	2.5 mV	96 mW
Accuracy *4	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Turbo Mode *5	OFF	ON	OFF	ON	OFF	ON
Short / OCP / OPP Test Function						
Max. Current	400 A	600 A	500 A	750 A	600 A	900 A
Max. Power	4000 W	6000 W	5000 W	7500 W	6000 W	9000 W
Test Accuracy *6	± 1.0 % of (Reading + Range)					
Short Time	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms
Setting. Accuracy	±5 ms					
Short V Hi	Setting range : 0.00 V to 150.00 V / Resolution : 0.0025 V					
Short V Lo	Setting range : 0.00 V to 150.00 V / Resolution : 0.0025 V					
OCP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	±5 ms					
OCP ISTAR / ISTEP / ISTOP	Setting range : 0.00 A to 400.00 A / Resolution : 6.4 mA	Setting range : 0.00 A to 600.00 A / Resolution : 9.6 mA	Setting range : 0.00 A to 500.00 A / Resolution : 8.0 mA	Setting range : 0.00 A to 750.00 A / Resolution : 12 mA	Setting range : 0.00 A to 600.00 A / Resolution : 9.60 mA	Setting range : 0.00 A to 900.00 A / Resolution : 14.4 mA
OCP VTH	Setting range : 0.00 V to 150.00 V / Resolution : 0.0025 V					
OPP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	±5 ms					
OPP PSTAR / PSTEP / PSTOP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96.0 mW	Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW	Setting range : 0.00 W to 7500.0 W / Resolution : 120 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	Setting range : 0.00 W to 9000.0 W / Resolution : 144 mW
OPP VTH	Setting range : 0.00 V to 150.00 V / Resolution : 0.0025 V					
BMS Test Mode *7						
Max. Current	400 A	600 A	500 A	750 A	600 A	900 A
Meas. Accuracy *6	±3.0 % of (Reading + Range)					
Short test Time	0.05 ms to 10 ms / Resolution : 0.01 ms					
Meas. Accuracy	±0.02 ms					
Setting Accuracy	±0.05 ms					
Short ITH	Setting range : 0.19 A to 200.00 A / Resolution : 6.4 mA	Setting range : 0.28 A to 300.00 A / Resolution : 9.6 mA	Setting range : 0.24 A to 250.00 A / Resolution : 8.0 mA	Setting range : 0.36 A to 375.00 A / Resolution : 12 mA	Setting range : 0.28 A to 300.00 A / Resolution : 9.6 mA	Setting range : 0.43 A to 450.00 A / Resolution : 14.4 mA
OCP ISTAR	Setting range : 0.64 A to 400.00 A / Resolution : 6.4 mA	Setting range : 0.96 A to 600.00 A / Resolution : 9.6 mA	Setting range : 0.80 A to 500.00 A / Resolution : 8.0 mA	Setting range : 1.20 A to 750.00 A / Resolution : 12 mA	Setting range : 0.96 A to 600.00 A / Resolution : 9.6 mA	Setting range : 1.44 A to 900.00 A / Resolution : 14.4 mA

High Power DC Electronic Load

SPECIFICATIONS

	PEL-5004G-150-400		PEL-5005G-150-500		PEL-5006G-150-600	
OCP TSTEP	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms
Meas. Accuracy	± 0.1 ms / ± 0.5 ms	± 0.5 ms	± 0.1 ms / ± 0.5 ms	± 0.5 ms	± 0.1 ms / ± 0.5 ms	± 0.5 ms
OCP ISTEP	Setting range : 0.00 A to 400.00 A / Resolution : 6.4 mA	Setting range : 6.00 A to 600.00 A / Resolution : 9.6 mA	Setting range : 0.00 A to 500.00 A / Resolution : 8.0 mA	Setting range : 7.50 A to 750.00 A / Resolution : 12 mA	Setting range : 0.00 A to 600.00 A / Resolution : 9.6 mA	Setting range : 9.00 A to 900.00 A / Resolution : 14.4 mA
OCP ISTOP	Setting range : 0.64 A to 400.00 A / Resolution : 6.4 mA	Setting range : 0.96 A to 600.00 A / Resolution : 9.6 mA	Setting range : 0.80 A to 500.00 A / Resolution : 8.0 mA	Setting range : 1.20 A to 750.00 A / Resolution : 12 mA	Setting range : 0.96 A to 600.00 A / Resolution : 9.6 mA	Setting range : 1.44 A to 900.00 A / Resolution : 14.4 mA
OCP ITH	Setting range : 0.19 A to 200.00 A / Resolution : 6.4 mA	Setting range : 0.29 A to 300.00 A / Resolution : 9.6 mA	Setting range : 0.24 A to 250.00 A / Resolution : 8.0 mA	Setting range : 0.37 A to 375.00 A / Resolution : 12 mA	Setting range : 0.29 A to 300.00 A / Resolution : 9.6 mA	Setting range : 0.44 A to 450.00 A / Resolution : 14.4 mA
Surge Test Mode						
Surge Current	0 A to 600 A		0 A to 750 A		0 A to 900 A	
Normal Current	0 A to 300 A		0 A to 375 A		0 A to 450 A	
Surge Time	10 ms to 2000 ms		10 ms to 2000 ms		10 ms to 2000 ms	
Surge Step	1 to 5		1 to 5		1 to 5	
Batt test Mode						
Mode CC	Setting range : 0.00 A to 400.00 A / Resolution : 6.4 mA		Setting range : 0.00 A to 500.00 A / Resolution : 8.0 mA		Setting range : 0.00 A to 600.00 A / Resolution : 9.6 mA	
Mode CP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW		Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW		Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	
STOP Voltage (UVP)	Setting range : 0.00 V to 150.00 V / Resolution : 0.0025 V					
STOP TIME	Setting range : OFF , 1 sec. to 99999 sec. / Resolution : 1 sec.					
STOP CAP. AH	Setting range : OFF, 0.1 AH to 19999 AH / Resolution : 0.1 AH					
STOP CAP. WH	Setting range : OFF, 0.1 WH to 19999 WH / Resolution : 0.1 WH					
SEQ Load Mode (remote only)						
Load Mode	CC / CP					
Setting STEP	2 to 16					
Timing	20 µs to 1000 µs / 2 ms to 65535 ms / 66 sec to 999 sec.					
Resolution	10 µs / 1 ms / 1 sec.					
Dynamic Mode						
Timing Thigh & Tlow	0.010 ms to 9.999 ms/ 99.99 ms / 999.9 ms/ 9999 ms					
Resolution	0.001 ms / 0.01 ms/ 0.1 ms/ 1 ms					
Accuracy	1 µs / 10 µs / 100 µs / 1 ms + 50 ppm					
Slew Rate	0.0256 A/µs to 1.600 A/µs	0.2560 A/µs to 16.000 A/µs	0.0320 A/µs to 2.000 A/µs	0.3200 A/µs to 20.000 A/µs	0.0384 A/µs to 2.400 A/µs	0.3840 A/µs to 24.000 A/µs
Resolution	0.0064 A/µs	0.064 A/µs	0.008 A/µs	0.08 A/µs	0.0096 A/µs	0.096 A/µs
Min. Rise Time	25 µs(typical)					
Accuracy	±(5 % of Setting)±10 µs					
Current Range	0 A to 40 A	40 A to 400 A	0 A to 50 A	50 A to 500 A	0 A to 60 A	60 A to 600 A
Resolution	0.64 mA	6.4 mA	0.8 mA	8 mA	0.96 mA	9.6 mA
Conf Key Parameter						
LDon Voltage	Setting range : 0.25 V to 62.50 V / Resolution : 0.25 V					
LDoFF Voltage	Setting range : 0.000 V to 62.250 V / Resolution : 0.0025 V					
Average Times	0 to 64					
CV Res. Speed	1 to 4 (Fastest)					
Measurement						
Voltage Read Back	0 V to 15 V	15 V to 150 V	0 V to 15 V	15 V to 150 V	0 V to 15 V	15 V to 150 V
Resolution	0.25 mV	2.5 mV	0.25 mV	2.5 mV	0.25 mV	2.5 mV
Accuracy	± 0.025 % of (Reading + Range)					
Current Read Back	0 A to 40 A	40 A to 400 A	0 A to 50 A	50 A to 500 A	0 A to 60 A	60 A to 600 A
Resolution	0.64 mA	6.4 mA	0.8 mA	8 mA	0.96 mA	9.6 mA
Accuracy	± 0.05 % of (Reading + Range)					
Power Read Back	4 kW		5 kW		6 kW	
Resolution	0.01 W					
Accuracy[*4]	± 0.06 % of (Reading + Range)					
General						
Typical Short Resistance	1.8 mΩ		1.5 mΩ		1.2 mΩ	
Maximum Short Current	400 A		500 A		600 A	
Load ON Voltage	0.25 V to 62.5 V					
Load OFF Voltage	0 V to 62.25 V					
Input Range & Power Onsumption	100 Vac to 240 Vac,47 Hz to 63 Hz ; 550 VA(max.)					
Dimension(H x W x D)	177 mm x 440 mm x 745 mm					
Weight	32 kg ±0.5 kg		32.5 kg ± 0.5 kg		32.5 kg ± 0.5 kg	
Temperature[*8]	0 °C to 40 °C					
Safety & EMC	CE					

Note [*1] : The power rating specifications at ambient temperature = 25 °C
Note [*2] : The range is automatically or forcing to range II only in CC mode
Note [*3] : If the operating current is below range 0.1 %, the accuracy specification is 0.1 % F.S.
Note [*4] : Power range = Vrange x Irange
Note [*5] : Turbo mode for up to 1.5X Current rating & Power rating support Surge, Bms, Short/OCP/OPP test function
Note [*6] : The best accuracy of OCP/OPP test is Istep/Pstep = 1 % FS
Note [*7] : Bms Test function for Battery Management System Board SHORT, OCCP and OCDP Test
Note [*8] : Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C ± 5 °C, Except as noted
Note [*9] : The specification is valid only for input voltage >1.5 V and resistance setting > 0.0037 Ω(PEL-5004G-150-400), 0.003 Ω(PEL-5005G-150-500), 0.0025 Ω(PEL-5006G-150-600)

High Power DC Electronic Load

SPECIFICATIONS

	PEL-5004G-600-280		PEL-5005G-600-350		PEL-5006G-600-420	
Power[*1]	0 W to 4 kW	0 W to 6 kW max.[*1]	0 W to 5 kW	0 W to 7.5 kW max.[*1]	0 W to 6 kW	0 W to 9 kW max.[*1]
Current	0 A to 280 A	0 A to 420 A max.[*1]	0 A to 350 A	0 A to 525 A max.[*1]	0 A to 420 A	0 A to 630 A max.[*1]
Voltage	0 V to 600 V		0 V to 600 V		0 V to 600 V	
Min. Operating Voltage	10 V@280 A		10 V@350 A		10 V@420 A	
Protections						
Over Power	105%					
Over Current	104%					
Over Voltage	105%					
Over Temp Protection(OTP)	90 °C ± 5 °C					
Constant Current Mode						
Range[*2]	0 A to 28 A	0 A to 280 A	0 A to 35 A	0 A to 350 A	0 A to 42 A	0 A to 420 A
Resolution	0.448 mA	4.48mA	0.56 mA	5.6 mA	0.672 mA	6.72 mA
Accuracy[*3]	± 0.05 % of (Setting + Range)					
Constant Resistance Mode						
Range	128610 Ω to 2.1435 Ω	2.1435 Ω to 0.0357 Ω	102888 Ω to 1.7148 Ω	1.7148 Ω to 0.0285 Ω	85740 Ω to 1.4290 Ω	1.4290 Ω to 0.0238 Ω
Resolution	8 µS	35.73 µΩ	10 µS	28.584 µΩ	12 µS	23.82 µΩ
Accuracy	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)
Constant Voltage Mode						
Range	0 V to 600 V					
Resolution	10 mV					
Accuracy	± 0.05 % of (Setting + Range)					
Constant Power Mode						
Range	0 W to 400 W	400 W to 4 kW	0 W to 500 W	500 W to 5 kW	0 W to 600 W	600 W to 6 kW
Resolution	6.4 mW	64 mW	8 mW	80 mW	9.6 mW	96 mW
Accuracy[*4]	± 0.1 % of (Setting + Range)					
Constant Voltage Mode + Current Limit Mode						
Range	600 V	280 A	600 V	350 A	600 V	420 A
Resolution	10 mV	4.48 mA	10 mV	5.6 mA	10 mV	6.72 mA
Accuracy[*4]	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Constant Voltage Mode + Power Limit Mode						
Range	600 V	4 kW	600 V	5 kW	600 V	6 kW
Resolution	10 mV	64 mW	10 mV	80 mW	10 mV	96 mW
Accuracy[*4]	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Turbo Mode[*5]	OFF	ON	OFF	ON	OFF	ON
Short / OCP / OPP Test Function						
Max. Current	280 A	420 A	350 A	525 A	420 A	630 A
Max. Power	4000 W	6000 W	5000 W	7500 W	6000 W	9000 W
Test Accuracy[*6]	± 1.0 % of (Reading + Range)					
Short Time	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms
Setting. Accuracy	± 5 ms					
Short V Hi	Setting range : 0.00 V to 600.00 V / Resolution : 0.01 V					
Short V Lo	Setting range : 0.00 V to 600.00 V / Resolution : 0.01 V					
OCP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	± 5 ms					
OCP ISTAR / ISTEP / ISTOP	Setting range : 0.00 A to 280.00 A / Resolution : 4.48 mA	Setting range : 0.00 A to 420.00 A / Resolution : 6.72 mA	Setting range : 0.00 A to 350.00 A / Resolution : 5.6 mA	Setting range : 0.00 A to 525.00 A / Resolution : 8.4 mA	Setting range : 0.00 A to 420.00 A / Resolution : 6.72 mA	Setting range : 0.00 A to 630.00 A / Resolution : 10.08 mA
OCP VTH	Setting range : 0.00 V to 600.00 V / Resolution : 0.01 V					
OPP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	±5 ms					
OPP PSTAR / PSTEP / PSTOP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96.0 mW	Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW	Setting range : 0.00 W to 7500.0 W / Resolution : 120 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	Setting range : 0.00 W to 9000.0 W / Resolution : 144 mW
OPP VTH	Setting range : 0.00 V to 600.00 V / Resolution : 0.01 V					
BMS Test Mode *7						
Max. Current	280 A	420 A	350 A	525 A	420 A	630 A
Meas. Accuracy[*6]	± 3.0 % of (Reading + Range)					
Short test Time	0.05 ms to 10 ms / Resolution : 0.01 ms					
Meas. Accuracy	± 0.02 ms					
Setting Accuracy	± 0.05 ms					
Short ITH	Setting range : 0.13 A to 140.00 A / Resolution : 4.48 mA	Setting range : 0.20 A to 210.00 A / Resolution : 6.72 mA	Setting range : 0.16 A to 175.00 A / Resolution : 5.6 mA	Setting range : 0.25 A to 262.50 A / Resolution : 8.4 mA	Setting range : 0.20 A to 210.00 A / Resolution : 6.72 mA	Setting range : 0.30 A to 315.0 A / Resolution : 10.08 mA
OCP ISTAR	Setting range : 0.44 A to 280.00 A / Resolution : 4.48 mA	Setting range : 0.67 A to 420.00 A / Resolution : 6.72 mA	Setting range : 0.56 A to 350.00 A / Resolution : 5.6 mA	Setting range : 0.84 A to 525.00 A / Resolution : 8.4 mA	Setting range : 0.67 A to 420.00 A / Resolution : 6.72 mA	Setting range : 1.00 A to 630.00 A / Resolution : 10.08 mA
OCP TSTEP	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05ms to 10 ms

High Power DC Electronic Load

SPECIFICATIONS

	PEL-5004G-600-280		PEL-5005G-600-350		PEL-5006G-600-420	
Meas. Accuracy	±0.1 ms / ± 0.5 ms	± 0.5 ms	±0.1 ms / ± 0.5 ms	± 0.5 ms	±0.1 ms / ± 0.5 ms	± 0.5 ms
OCP ISTEP	Setting range : 0.00 A to 280.00 A / Resolution : 4.48 mA	Setting range : 4.20 A to 420.00 A / Resolution : 6.72 mA	Setting range : 0.00 A to 350.00 A / Resolution : 5.6 mA	Setting range : 5.25 A to 525.00 A / Resolution : 8.4 mA	Setting range : 0.00 A to 420.00 A / Resolution : 6.72 mA	Setting range : 6.30 A to 630.00 A / Resolution : 10.08 mA
OCP ISTOP	Setting range : 0.44 A to 280.00 A / Resolution : 4.48 mA	Setting range : 0.67 A to 420.00 A / Resolution : 6.72 mA	Setting range : 0.56 A to 350.00 A / Resolution : 5.6 mA	Setting range : 0.84 A to 525.00 A / Resolution : 8.4 mA	Setting range : 0.67 A to 420.00 A / Resolution : 6.72 mA	Setting range : 1.00 A to 630.00 A / Resolution : 10.08 mA
OCP ITH	Setting range : 0.13 A to 140.00 A / Resolution : 4.48 mA	Setting range : 0.20 A to 210.00 A / Resolution : 6.72 mA	Setting range : 0.17 A to 175.00 A / Resolution : 5.6 mA	Setting range : 0.26 A to 262.50 A / Resolution : 8.4 mA	Setting range : 0.20 A to 210.00 A / Resolution : 6.72 mA	Setting range : 0.30 A to 315.00 A / Resolution : 10.08 mA
Surge Test Mode						
Surge Current	0 A to 420 A		0 A to 525 A		0 A to 630 A	
Normal Current	0 A to 210 A		0 A to 262.5 A		0 A to 315 A	
Surge Time	10 ms to 2000 ms		10 ms to 2000 ms		10 ms to 2000 ms	
Surge Step	1 to 5		1 to 5		1 to 5	
Batt test Mode						
Mode CC	Setting range : 0.00 A to 280.00 A / Resolution : 4.48 mA		Setting range : 0.00 A to 350.00 A / Resolution : 5.6 mA		Setting range : 0.00 A to 420.00 A / Resolution : 6.72 mA	
Mode CP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW		Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW		Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	
STOP Voltage (UVP)	Setting range : 0.00 V to 600.00 V / Resolution : 0.01 V					
STOP TIME	Setting range : OFF, 1 sec. to 99999 sec. / Resolution : 1 sec.					
STOP CAP. AH	Setting range : OFF, 0.1 AH to 19999 AH / Resolution : 0.1 AH					
STOP CAP. WH	Setting range : OFF, 0.1 WH to 19999 WH / Resolution : 0.1 WH					
SEQ Load Mode (remote only)						
Load Mode	CC / CP					
Setting STEP	2 to 16					
Timing	20 µs to 1000 µs / 2 ms to 65535 ms / 66 sec. to 999 sec.					
Resolution	10 µs / 1 ms / 1 sec.					
Dynamic Mode						
Timing Thigh & Tlow	0.010 ms to 9.999 ms / 99.99 ms / 999.9 ms / 9999 ms					
Resolution	0.001 ms / 0.01 ms / 0.1 ms / 1 ms					
Accuracy	1 µs / 10 µs / 100 µs / 1 ms + 50 ppm					
Slew Rate	0.01792 A/µs to 1.120 A/µs	0.1792 A/µs to 11.200 A/µs	0.0224 A/µs to 1.400 A/µs	0.2240 A/µs to 14.00 A/µs	0.02688 A/µs to 1.680 A/µs	0.2688 A/µs to 16.800 A/µs
Resolution	0.00448 A/µs	0.0448 A/µs	0.0056 A/µs	0.056 A/µs	0.00672 A/µs	0.0672 A/µs
Min. Rise Time	25 µs(typical)					
Accuracy	±(5 % of Setting)±10 µs					
Current Range	0 A to 28 A	28 A to 280 A	0 A to 35 A	35 A to 350 A	0 A to 42 A	42 A to 420 A
Resolution	0.45 mA	4.48 mA	0.56 mA	5.6 mA	0.67 mA	6.72 mA
Conf Key Parameter						
LDon Voltage	Setting range : 0.4 V to 100.0 V / Resolution : 0.4 V					
LDoFF Voltage	Setting range : 0.000 V to 99.60 V / Resolution : 0. 01 V					
Average Times	0 to 64					
CV Res. Speed	1 to 4 (Fastest)					
Measurement						
Voltage Read Back Range (5 Digital)	0 V to 60 V	60 V to 600 V	0 V to 60 V	60 V to 600 V	0 V to 60 V	60 V to 600 V
Resolution	1.00 mV	10.0 mV	1.00 mV	10.0 mV	1.00 mV	10.0 mV
Accuracy	± 0.025 % of (Reading + Range)					
Current Read Back Range (5 Digital)	0 A to 28 A	28 A to 280 A	0 A to 35 A	35 A to 350 A	0 A to 42 A	42 A to 420 A
Resolution	0.448 mA	4.48 mA	0.56 mA	5.6 mA	0.672 mA	6.72 mA
Accuracy	± 0.05 % of (Reading + Range)					
Power Read Back Range (5 Digital)	4 kW		5 kW		6 kW	
Resolution	0.01 W					
Accuracy *4	± 0.06 % of (Reading + Range)					
General						
Typical Short Resistance	35.73 mΩ		28.584 mΩ		23.82 mΩ	
Maximum Short Current	280 A		350 A		420 A	
Load ON Voltage	0.4 V to 100 V					
Load OFF Voltage	0 V to 99.6 V					
Input Range & Power Onsumption	100 Vac to 240 Vac, 47 Hz to 63 Hz ; 550 VA (max.)					
Dimension(H x W x D)	177 mm x 440 mm x 745 mm					
Weight	32.5 kg ±0.5 kg		33 kg ± 0.5 kg		33 kg ± 0.5 kg	
Temperature *8	0 °C to 40 °C					
Safety & EMC	C E					

Note *1 : The power rating specifications at ambient temperature = 25 °C
Note *2 : The range is automatically or forcing to range II only in CC mode
Note *3 : If the operating current is below range 0.3 %, the accuracy specification is 0.1 % F.S.
Note *4 : Power range = Vrange x Irange (the specification is valid only for the model PEL-600-XXX with loading current > 0.03 % F.S.)
Note *5 : Turbo mode for up to 1.5X Current rating & Power rating support Surge, Bms, Short/OCP/OPP test function
Note *6 : The best accuracy of OCP/OPP test is Istep/Pstep = 1 % FS
Note *7 : Bms Test function for Battery Management System Board SHORT, OCCP and OCDP Test
Note *8 : Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C ± 5 °C, Except as noted

High Power DC Electronic Load

SPECIFICATIONS

	PEL-5004G-1200-160		PEL-5005G-1200-200		PEL-5006G-1200-240	
Power[*1]	0 W to 4 kW	0 W to 6 kW max.[*1]	0 W to 5 kW	0 W to 7.5 kW max.[*1]	0 W to 6 kW	0 W to 9 kW max.[*1]
Current	0 A to 160 A	0 A to 240 A max.[*1]	0 A to 200 A	0 A to 300 A max.[*1]	0 A to 240 A	0 A to 360 A max.[*1]
Voltage	0 V to 1200 V		0 V to 1200 V		0 V to 1200 V	
Min. Operating Voltage	15 V@160 A		15 V@200 A		15 V@240 A	
Protections						
Over Power	105%					
Over Current	104%					
Over Voltage	105%					
Over Temp Protection(OTP)	90 °C ± 5 °C					
Constant Current Mode						
Range[*2]	0 A to 16 A	0 A to 160 A	0 A to 20 A	0 A to 200 A	0 A to 24 A	0 A to 240 A
Resolution	0.256 mA	2.56 mA	0.32 mA	3.2 mA	0.384 mA	3.84 mA
Accuracy[*3]	± 0.05 % of (Setting + Range)					
Constant Resistance Mode						
Range	450 kΩ to 7.5 Ω	7.5 Ω to 0.0937 Ω	360 kΩ to 6 Ω	6 Ω to 0.075 Ω	300 kΩ to 5 Ω	5 Ω to 0.0625 Ω
Resolution	2.2 µS	125 µΩ	2.8 µS	100 µΩ	3.3 µS	83.34 µΩ
Accuracy	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)	± (0.1 %(Vin / Setting) + 0.1 % IF.S.)	± (0.2 %(Vin / Setting) + 0.5 % IF.S.)
Constant Voltage Mode						
Range	0 V to 1200 V					
Resolution	20 mV					
Accuracy	± 0.05 % of (Setting + Range)					
Constant Power Mode						
Range	0 W to 400 W	400 W to 4 kW	0 W to 500 W	500 W to 5 kW	0 W to 600 W	600 W to 6 kW
Resolution	6.4 mW	64 mW	8 mW	80 mW	9.6 mW	96 mW
Accuracy[*4]	± 0.2 % of (Setting + Range)					
Constant Voltage Mode + Current Limit Mode						
Range	1200 V	160 A	1200 V	200 A	1200 V	240 A
Resolution	20 mV	2.56 mA	20 mV	3.2 mA	20 mV	3.84 mA
Accuracy[*4]	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Constant Voltage Mode + Power Limit Mode						
Range	1200 V	4 kW	1200 V	5 kW	1200 V	6 kW
Resolution	20 mV	64 mW	20 mV	80 mW	20 mV	96 mW
Accuracy[*4]	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)	± 0.05 % of (Setting + Range)	± 1.0 % of (Setting + Range)
Turbo Mode[*5]	OFF	ON	OFF	ON	OFF	ON
Short / OCP / OPP Test Function						
Max. Current	160 A	240 A	200 A	300 A	240 A	360 A
Max. Power	4000 W	6000 W	5000 W	7500 W	6000 W	9000 W
Test Accuracy[*6]	± 1.0 % of (Reading + Range)					
Short Time	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms	100 ms to 10000 ms Continuous	100 ms to 2000 ms
Setting. Accuracy	±5 ms					
Short V Hi	Setting range : 0.25 V to 1200.0 V / Resolution : 0.02 V					
Short V Lo	Setting range : 0.000 V to 1200.0 V / Resolution : 0.02 V					
OCP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	±5 ms					
OCP ISTAR / ISTEP / ISTOP	Setting range : 0.00 A to 160.00 A / Resolution : 2.56 mA	Setting range : 0.00 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.00 A to 200.00 A / Resolution : 3.2 mA	Setting range : 0.00 A to 300.00 A / Resolution : 4.8 mA	Setting range : 0.00 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.00 A to 360.00 A / Resolution : 5.76 mA
OCP VTH	Setting range : 0.00 V to 1200.00 V / Resolution : 0.02 V					
OPP Time(Tstep)	100 ms	20 ms	100 ms	20 ms	100 ms	20 ms
Setting. Accuracy	±5 ms					
OPP PSTAR / PSTEP / PSTOP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96.0 mW	Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW	Setting range : 0.00 W to 7500.0 W / Resolution : 120 mW	Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	Setting range : 0.00 W to 9000.0 W / Resolution : 144 mW
OPP VTH	Setting range : 0.00 V to 1200.00 V / Resolution : 0.02 V					
BMS Test Mode *7						
Max. Current	160 A	240 A	200 A	300 A	240 A	360 A
Meas. Accuracy[*6]	± 3.0 % of (Reading + Range)					
Short test Time	0.05 ms to 10 ms / Resolution : 0.01 ms					
Meas. Accuracy	± 0.02 ms					
Setting Accuracy	± 0.05 ms					
Short ITH	Setting range : 0.07 A to 80.00 A / Resolution : 2.56 mA	Setting range : 0.11 A to 120.00 A / Resolution : 3.84 mA	Setting range : 0.09 A to 100.00 A / Resolution : 3.2 mA	Setting range : 0.14 A to 150.00 A / Resolution : 4.8 mA	Setting range : 0.11 A to 120.00 A / Resolution : 3.84 mA	Setting range : 0.17 A to 180.00 A / Resolution : 5.76 mA
OCP ISTAR	Setting range : 0.25 A to 160.00 A / Resolution : 2.56 mA	Setting range : 0.38 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.32 A to 200.00 A / Resolution : 3.2 mA	Setting range : 0.48 A to 300.00 A / Resolution : 4.8 mA	Setting range : 0.38 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.57 A to 360.00 A / Resolution : 5.76 mA
OCP TSTEP	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms	0.05 ms to 10 ms 11 ms to 1000 ms	0.05 ms to 10 ms

High Power DC Electronic Load

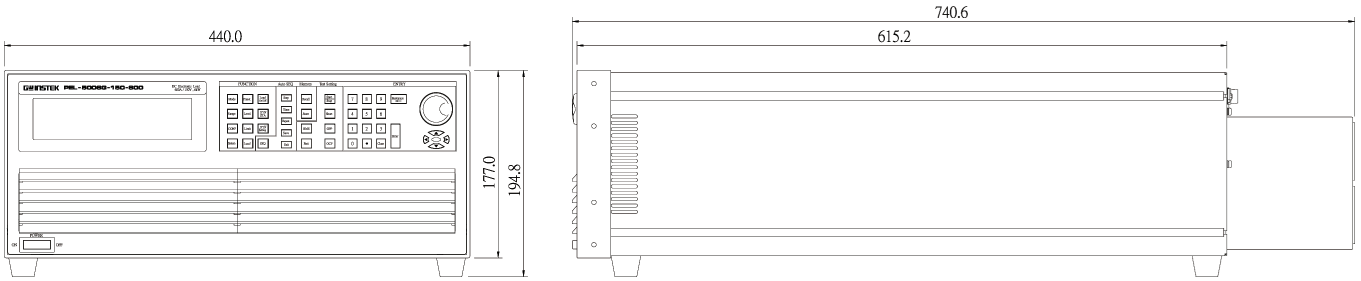
SPECIFICATIONS

	PEL-5004G-1200-160		PEL-5005G-1200-200		PEL-5006G-1200-240	
Meas. Accuracy	± 0.1 ms / ± 0.5 ms	± 0.5 ms	± 0.1 ms / ± 0.5 ms	± 0.5 ms	±0.1 ms / ±0.5 ms	± 0.5 ms
OCP ISTEP	Setting range : 0.00 A to 160.00 A / Resolution : 2.56 mA	Setting range : 2.40 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.00 A to 200.00 A / Resolution : 3.2 mA	Setting range : 3.00 A to 300.00 A / Resolution : 4.8 mA	Setting range : 0.00 A to 240.00 A / Resolution : 3.84 mA	Setting range : 3.60 A to 360.00 A / Resolution : 5.76 mA
OCP ISTOP	Setting range : 0.25 A to 160.00 A / Resolution : 2.56 mA	Setting range : 0.38 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.32 A to 200.00 A / Resolution : 3.2 mA	Setting range : 0.48 A to 300.00 A / Resolution : 4.8 mA	Setting range : 0.38 A to 240.00 A / Resolution : 3.84 mA	Setting range : 0.57 A to 360.00 A / Resolution : 5.76 mA
OCP ITH	Setting range : 0.10 A to 80.00 A / Resolution : 2.56 mA	Setting range : 0.15 A to 120.00 A / Resolution : 3.84 mA	Setting range : 0.10 A to 100.00 A / Resolution : 3.2 mA	Setting range : 0.15 A to 150.00 A / Resolution : 4.8 mA	Setting range : 0.10 A to 120.00 A / Resolution : 3.84 mA	Setting range : 0.15 A to 180.00 A / Resolution : 5.76 mA
Surge Test Mode						
Surge Current	0 A to 240 A		0 A to 300 A		0 A to 360 A	
Normal Current	0 A to 120 A		0 A to 150 A		0 A to 180 A	
Surge Time	10 ms to 2000 ms		10 ms to 2000 ms		10 ms to 2000 ms	
Surge Step	1 to 5		1 to 5		1 to 5	
Batt test Mode						
Mode CC	Setting range : 0.00 A to 160.00 A / Resolution : 2.56 mA		Setting range : 0.00 A to 200.00 A / Resolution : 3.2 mA		Setting range : 0.00 A to 240.00 A / Resolution : 3.84 mA	
Mode CP	Setting range : 0.00 W to 4000.0 W / Resolution : 64.0 mW		Setting range : 0.00 W to 5000.0 W / Resolution : 80.0 mW		Setting range : 0.00 W to 6000.0 W / Resolution : 96 mW	
STOP Voltage (UVP)	Setting range : 0.00 V to 1200.00 V / Resolution : 0.02 V					
STOP TIME	Setting range : OFF, 1 sec. - 99999 sec. / Resolution : 1 sec.					
STOP CAP. AH	Setting range : OFF, 0.1 AH to 19999 AH / Resolution : 0.1 AH					
STOP CAP. WH	Setting range : OFF, 0.1 WH to 19999 WH / Resolution : 0.1 WH					
SEQ Load Mode (Remote Only)						
Load Mode	CC / CP					
Setting STEP	2 to 16					
Timing	20 µs to 1000 µs / 2 ms to 65535 ms / 66 sec. to 999 sec.					
Resolution	10 µs / 1 ms / 1 sec.					
Dynamic Mode						
Timing Thigh & Tlow	0.010 ms to 9.999 ms / 99.99 ms / 999.9 ms / 9999 ms					
Resolution	0.001 ms / 0.01 ms / 0.1 ms / 1 ms					
Accuracy	1 µs / 10 µs / 100 µs / 1 ms + 50 ppm					
Slew Rate	0.01024 A/µs to 0.640 A/µs	0.1024 A/µs to 6.400 A/µs	0.0128 A/µs to 0.800 A/µs	0.1280 A/µs to 8.000 A/µs	0.01536 A/µs to 0.960 A/µs	0.1536 A/µs to 9.600 A/µs
Resolution	0.00256 A/µs	0.0256 A/µs	0.0032 A/µs	0.032 A/µs	0.00384 A/µs	0.0384 A/µs
Min. Rise Time	25 µs(typical)					
Accuracy	± (5 % of Setting) ± 10 µs					
Current Range	0 A to 16 A	16 A to 160 A	0 A to 20 A	20 A to 200 A	0 A to 24 A	42 A to 240 A
Resolution	0.26 mA	2.56 mA	0.32 mA	3.2 mA	0.38 mA	3.84 mA
Conf Key Parameter						
LDon Voltage	Setting range : 1 V to 250.0 V / Resolution : 1 V					
LDoFF Voltage	Setting range : 0.000 V to 249.0 V / Resolution : 0.02 V					
Average Times	0 to 64					
CV Res. Speed	1 to 4 (Fastest)					
Measurement						
Voltage Read Back Range (5 Digital)	0 V to 120 V	120 V to 1200 V	0 V to 120 V	120 V to 1200 V	0 V to 120 V	120 V to 1200 V
Resolution	2.00 mV	20.0 mV	2.00 mV	20.0 mV	2.00 mV	20.0 mV
Accuracy	± 0.025 % of (Reading + Range)					
Current Read Back Range (5 Digital)	0 A to 16 A	16 A to 160 A	0 A to 20 A	20 A to 200 A	0 A to 24 A	24 A to 240 A
Resolution	0.256 mA	2.56 mA	0.32 mA	3.2 mA	0.384 mA	3.84 mA
Accuracy	± 0.05 % of (Reading + Range)					
Power Read Back Range (5 Digital)	4 kW		5 kW		6 kW	
Resolution	0.01 W					
Accuracy[*4]	± 0.06 % of (Reading + Range)					
General						
Typical Short Resistance	93.75 mΩ		75 mΩ		62.505 mΩ	
Maximum Short Current	160 A		200 A		240 A	
Load ON Voltage	1 V to 250 V					
Load OFF Voltage	0 V to 249 V					
Input Range & Power	100 Vac to 240 Vac,47 Hz to 63 Hz ; 550 VA (max.)					
Dimension(H x W x D)	177 mm x 440 mm x 745 mm					
Weight	32 kg ± 0.5 kg		32.5 kg ± 0.5 kg		32.5 kg ± 0.5 kg	
Temperature[*8]	0 °C to 40 °C					
Safety & EMC	CE					

Note [*1] : The power rating specifications at ambient temperature = 25 °C
Note [*2] : The range is automatically or forcing to range II only in CC mode
Note [*3] : If the operating current is below range 0.1 %, the accuracy specification is 0.1 % F.S.
Note [*4] : Power range = Vrange x Irange
Note [*5] : Turbo mode for up to 1.5X Current rating & Power rating support Surge, Bms, Short /OCP/OPP test function
Note [*6] : The best accuracy of OCP /OPP test is Istep/Pstep = 1 % FS
Note [*7] : Bms Test function for Battery Management System Board SHORT, OCCP and OCDP Test
Note [*8] : Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C±5 °C, Except as noted

High Power DC Electronic Load

EXTERNAL DIMENSIONS



PEL-022
GPIB Card



PEL-023
RS-232 Card



PEL-024
LAN Card



PEL-025
USB Card



PEL-028
Handles



PEL-031
Rack Mount Kit



PEL-032
9923 Current Waveform Generator + RS232 Interface



ORDERING INFORMATION

PEL-5004G-150-400	150 V/400 A/4000 W High Power DC Electronic Load
PEL-5005G-150-500	150 V/500 A/5000 W High Power DC Electronic Load
PEL-5006G-150-600	150 V/600 A/6000 W High Power DC Electronic Load
PEL-5004G-600-280	600 V/280 A/4000 W High Power DC Electronic Load
PEL-5005G-600-350	600 V/350 A/5000 W High Power DC Electronic Load
PEL-5006G-600-420	600 V/420 A/6000 W High Power DC Electronic Load
PEL-5004G-1200-160	1200 V/160 A/4000 W High Power DC Electronic Load
PEL-5005G-1200-200	1200 V/200 A/5000 W High Power DC Electronic Load
PEL-5006G-1200-240	1200 V/240 A/6000 W High Power DC Electronic Load

PEL-5006G-1200-240
- Power rating: 6 -> 6 A kW
- Maximum output current: 240 -> 240 A
- Maximum output voltage: 1200 -> 1200 V

STANDARD ACCESSORIES
BANANA PLUGS x 2
HD-DSUB 15 PIN Parallel Cable x 1
PEL-028 HANDLES, U-shaped Handle (fixed to the bracket)
PEL-031 Rack Mount Kit For PEL-5000G

OPTIONAL ACCESSORIES

PEL-022	GPIB Card	**PEL-025**	USB Card	**GTL-246**	USB Cable, USB 2.0, A-B Type, 1200 mm
PEL-023	RS-232 Card	**PEL-030**	GPIB+RS-232 Card	**GTL-248**	GPIB Cable, Double Shielded, 2000 mm
PEL-024	LAN Card	**PEL-032**	9923 Current Waveform Generator + RS232 Interface		

Note: * Regarding the product delivery date, please contact your regional sales representative.

Specifications subject to change without notice. PEL-5000G_BH1_E_202507_1000

Global Headquarters
GOOD WILL INSTRUMENT CO., LTD.
No.7-1, Jhongsing Road, Tucheng Dist., New Taipei City 236, Taiwan
T +886-2-2268-0389 **F** +886-2-2268-0639
E-mail: marketing@goodwill.com.tw

China Subsidiary
GOOD WILL INSTRUMENT (SUZHOU) CO., LTD.
No. 521, Zhujiang Road, Snd, Suzhou Jiangsu 215011 China
T +86-512-6661-7177 **F** +86-512-6661-7277

Malaysia Subsidiary
GOOD WILL INSTRUMENT (SEA) SDN. BHD.
No. 1-3-18, Elit Avenue, Jalan Mayang Pasir 3,
11950 Bayan Baru, Penang, Malaysia
T +604-6111122 **F** +604-6115225

Europe Subsidiary
GOOD WILL INSTRUMENT EURO B.V.
De Run 5427A, 5504DG Veldhoven, THE NETHERLANDS
T +31(0)40-2557790 **F** +31(0)40-2541194

U.S.A. Subsidiary
INSTEK AMERICA CORP.
5198 Brooks Street Montclair, CA 91763, U.S.A.
T +1-909-399-3535 **F** +1-909-399-0819

Japan Subsidiary
TEXIO TECHNOLOGY CORPORATION.
7F Towa Fudosan Shin Yokohama Bldg., 2-18-13 Shin
Yokohama, Kohoku-ku, Yokohama, Kanagawa,
222-0033 Japan
T +81-45-620-2305 **F** +81-45-534-7181

Korea Subsidiary
GOOD WILL INSTRUMENT KOREA CO., LTD.
Room No.503, Gyeonginro 775 (Mullae-Dong 3Ga,
Ace Hightech-City B/D 1Dong), Yeongduengpo-Gu,
Seoul 150093, Korea
T +82-2-3439-2205 **F** +82-2-3439-2207

India Subsidiary
GW INSTEK INDIA LLP.
2F, No. 20/1, Salarpuria Galleria Building, Bellary Road,
Kashi Nagar, Byatarayanapura, Bangalore, Karnataka 560092 India
T +91-80-4203-3235

GW INSTEK

Simply Reliable

Website Facebook Catalog