

PEL-5000G Series

High Power DC Electronic Load

FEATURES

- 4U/6K 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 4k/5kW 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 °C



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





PEL-5000G Series



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







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

MODEL	PEL-50040	G-150-400	PEL-5005C	G-150-500	PEL-5006G	-150-600		
Power ^{*1} Current	0 ~ 4kW 0 ~ 400A	0 ~ 6kW max.*1 0 ~ 600A max.*1	0 ~ 5kW 0 ~ 500A	0 ~ 7.5kW max.*1 0 ~ 750A max.*1	0 ~ 6kW 0 ~ 600A	0 ~ 9k\W max.*1 0 ~ 900A max.*1		
Voltage Min. Operating Voltage	0 ~ ° 0.7V@			150V @500A		0 ~ 150V 0.7V@600A		
Over Power Protection(OPP) Over Current Protection(OCP)				05%				
Over Voltage Protection(OVP) Over Temp Protection(OTP)			10 90°i	05% C±5°C				
Constant Current Mode Range 2	0 ~ 40A	0 ~ 400A	0 ~ 50A	0 ~ 500A	0 ~ 60A	0 ~ 600A		
Resolution Accuracy ³ Constant Resistance Mode	0.64mA	6.4mA	0.80mA ± 0.05% of (S	8.0mA etting + Range)	0.96mA	9.6mA		
Range Resolution	22.5kΩ ~ 0.375Ω 44μS	$0.375\Omega \sim 0.0018\Omega$ $6.25\mu\Omega$	18kΩ ~ 0.3Ω 56μS	$0.3\Omega \sim 0.0015\Omega$ $5\mu\Omega$	15kΩ ~ 0.25Ω 67μS	$0.25\Omega - 0.0012\Omega$ $4.167\mu\Omega$		
Accuracy Constant Voltage Mode	± 0.1%(Vin / Setting)±0.1% IF.S.	± 0.1% of (Setting + Range)±0.1% IF.S	± 0.1%(Vin / Setting)±0.1% IF.S.	± 0.1% of (Setting + Range)±0.1% IF.S	± 0.1%(Vin / Setting) ±0.1% IF.S	± 0.1% of (Setting + Range) ±0.1% IF.S		
Range Resolution Accuracy			2.	150V 5mV etting + Range)				
Constant Power Mode Range	0 ~ 400W	400 ~ 4kW	0 - 500W	500 ~ 5kW	0 ~ 600W	600 ~ 6kW		
Resolution Accuracy*4	6.4mW	64mW	8mW ± 0.2% of (S	80mW etting + Range)	9.6mW	96mW		
Constant Voltage Mode + Current Limit Range Resolution	150V 2.5mV	400A 6.4mA	150V 2.5mV	500A 8mA	150V 2.5mV	600A 9.6mA		
Accuracy ^{©4} Constant Voltage Mode + Power Limit M	± 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)		
Range Resolution	150V 2.5mV	4kW 64mW	150V 2.5mV	5kW 80mW	150V 2.5mV	6kW 96mW		
Accuracy ** Turbo Mode ** Short / OCP / OPP Test Function	± 0.05% of (Setting + Range) OFF	± 1.0% of (Setting + Range) ON	± 0.05% of (Setting + Range) OFF	± 1.0% of (Setting + Range) ON	± 0.05% of (Setting + Range) OFF	± 1.0% of (Setting + Range) ON		
Max. Current Max. Power	400A 4000W	600A 6000W	500A 5000W	750A 7500W	600A 6000W	900A 9000W		
Test Accuracy ^{®6} Short Time	100 ~ 10000ms	100 – 2000ms	± 1.0% of (Re	rading + Range) 100 ~ 2000ms	100 ~ 10000ms	100 ~ 2000ms		
Setting. Accuracy Short V Hi	Continuous		Continuous ±:	5ms 0.00V / Resolution : 0.0025V	Continuous			
Short V Hi Short V Lo OCP Time (Tstep)	100ms	20ms		0.00V / Resolution : 0.0025V 0.00V / Resolution : 0.0025V 20ms	100ms	20ms		
Setting. Accuracy OCP ISTAR / ISTEP / ISTOP	Setting range : 0.00A - 400.00A /	Setting range: 0.00A - 600.00A /	±: Setting range : 0.00A - 500.00A /	Setting range : 0.00A - 750.00A /	Setting range : 0.00A - 600.00A /	Setting range : 0.00A - 900.00A /		
OCP VTH	Resolution : 6.4mA	Resolution : 9.6mA	Resolution: 8.0mA Setting range: 0.00V - 150	Resolution : 12mA 0.00V / Resolution : 0.0025 V	Resolution : 9.60mA	Resolution : 14.4mA		
OPP Time (Tstep) Setting. Accuracy	100ms Setting range : 0.00W - 4000.0W /	20ms Setting range : 0.00W - 6000.0W /	100ms ±: Setting range : 0.00W - 5000.0W /	20ms 5ms Setting range : 0.00W - 7500.0W /	100ms Setting range : 0.00W - 6000.0W /	20ms Setting range: 0.00W - 9000.0W /		
OPP PSTAR / PSTEP / PSTOP OPP VTH	Resolution : 64.0mW	Resolution : 96.0mW	Resolution: 80.0mW	Resolution : 120mW 0.00V / Resolution : 0.0025V	Resolution : 96mW	Resolution: 144mW		
BMS Test Mode*7 Max. Current	400A	600A	500A	750A	600A	900A		
Meas. Accuracy ** Short test Time Meas. Accuracy			0.05ms~10ms / F	ading + Range) Resolution : 0.01 ms 02ms				
Setting Accuracy	Setting range : 0.19A - 200.00A /	Setting range : 0.28A - 300.00A /		05ms Setting range: 0.36A - 375.00A /	Setting range : 0.28A - 300.00A /	Setting range : 0.43A - 450.00A /		
Short ITH OCP ISTAR	Resolution : 6.4mA Setting range : 0.64A - 400.00A /	Resolution : 9.6mA Setting range : 0.96A - 600.00A /	Resolution: 8.0mA Setting range: 0.80A - 500.00A /	Resolution: 12mA Setting range: 1.20A - 750.00A /	Resolution : 9.6mA Setting range : 0.96A - 600.00A /	Resolution: 14.4mA Setting range: 1.44A - 900.00A /		
OCP TSTEP	Resolution : 6.4mA 0.05 ~ 10ms	Resolution : 9.6mA 0.05 – 10ms	Resolution : 8.0mA 0.05 ~ 10ms	Resolution : 12mA 0.05 ~ 10ms	Resolution : 9.6mA 0.05 ~ 10ms	Resolution : 14.4mA 0.05 ~ 10ms		
Meas. Accuracy	11 ~ 1000ms ±0.1ms / ±0.5ms Setting range : 0.00A - 400.00A /	±0.5ms Setting range : 6.00A - 600.00A /	11 ~ 1000ms ±0.1ms / ±0.5ms Setting range : 0.00A - 500.00A /	±0.5ms Setting range : 7.50A - 750.00A /	11 ~ 1000ms ±0.1ms / ±0.5ms Setting range: 0.00A - 600.00A /	±0.5ms Setting range: 9.00A - 900.00A /		
OCP ISTEP OCP ISTOP	Resolution : 6.4mA Setting range : 0.64A - 400.00A /	Resolution: 9.6mA Setting range: 0.96A - 600.00A /	Resolution: 8.0mA Setting range: 0.80A - 500.00A /	Resolution : 12mA Setting range : 1.20A - 750.00A /	Resolution: 9.6mA Setting range: 0.96A - 600.00A /	Resolution: 14.4mA Setting range: 1.44A - 900.00A /		
OCPISTOP	Resolution : 6.4mA Setting range : 0.19A - 200.00A /	Resolution : 9.6mA Setting range : 0.28A - 300.00A /	Resolution: 8.0mA Setting range: 0.24A - 250.00A /	Resolution: 12mA Setting range: 0.36A - 375.00A /	Resolution: 9.6mA Setting range: 0.28A - 300.00A /	Resolution: 14.4mA Setting range: 0.43A - 450.00A /		
Surge Test Mode	Resolution : 6.4mA	Resolution : 9.6mA	Resolution : 8.0mA	Resolution : 12mA	Resolution : 9.6mA	Resolution : 14.4mA		
Surge Current Normal Current Surge Time	0 ~ 6	00A	0 - 750A 0 - 375A 10 - 2000ms		0 – 900A 0 – 450A 10 – 2000ms			
Surge Step Batt test Mode	1.	- 5	1~5		1-5			
Mode CC Mode CP	Setting range : 0.004 - 400.004 / Resolution : 6.4mA Setting range : 0.004 - 500.004 / Resolution : 8.0mA Setting range : 0.004 - 600.004 / Resolution : 9.6mA Setting range : 0.00W - 4000.0W / Resolution : 64.0mW Setting range : 0.00W - 5000.0W / Resolution : 80.0mW Setting range : 0.00W - 6000.0W / Resolution : 96mW					0.00A / Resolution : 9.6mA 00.0W / Resolution : 96mW		
STOP Voltage(UVP) STOP TIME STOP CAP.AH	Setting range: 0.00V - 150.00V / Resolution: 0.0025V Setting range: OFF 1 - 99999s / Resolution: 1s Setting range: OFF 1 - 19999AH / Resolution: 0.1AH							
STOP CAP.WH SEQ Load Mode (remode only)			Setting range : OFF 0.1 - 1	9999WH / Resolution : 0.1WH				
Load mode Setting STEP Timing	CC / CP 2 - 16 20 - 1000 ts / 2 - 65535ms / 66 - 999sec							
Resolution Dynamic Mode				Ims / 1sec				
Timing Thigh & Tlow	0.010-9.999 / 99.99 / 9999ms							
Resolution Accuracy	0001 / 001 / 001 / 011 / 11 × 15 105 / 1005 / 1000 / 1000 / 11 × 1500 / 1000							
Slew Rate Resolution Min. Rise Time	0.0256~1.600A / μs 0.0064A / μs	0.2560~16.000A / μs 0.064A / μs	0.0320-2.000A / μs 0.008A / μs 25 μs	0.3200-20.000A / μs 0.08A / μs (typical)	0.0384~2.400A / μs 0.0096A / μs	0.3840-24.000A / μs 0.096A / μs		
Accuracy Current			±(5% of Se	etting)±10 μs				
Range Resolution	0 ~ 40A 0.64mA	40 ~ 400A 6.4mA	0 ~ 50A 0.8mA	50 ~ 500A 8mA	0 ~ 60A 0.96mA	60 ~ 600A 9.6mA		
Conf Key Parameter LDon Voltage LDoFF Voltage			Setting range: 0.25V - 6	2.50V / Resolution : 0.25V .250V / Resolution : 0.0025V				
Average Time CV Res. Speed			0	~ 64 (Fastest)				
Measurement Voltage Read Back Range (5 Digital)	0 ~ 15V	15 ~ 150V	0 ~ 15V	15 ~ 150V	0 ~ 15V	15 ~ 150V		
Resolutior Accuracy Current Read Back Range (5 Digital)	0.25mV 0 ~ 40A	2.5mV 40 ~ 400A	0.25mV ± 0.025% of (F 0 ~ 50A	2.5mV Reading + Range) 50 ~ 500A	0.25mV 0 ~ 60A	2.5mV 60 ~ 600A		
Resolutior Accuracy	0.64mA	6.4mA	0.8mA	8mA eading + Range)	0.96mA	9.6mA		
Power Read Back Range (5 Digital) Resolutior	44	W	5 0.	kW D1W	6	kW		
Accuraci ⁵⁴ General Typical Short Resistance	10	mû.		eading + Range) 5mΩ	1.0	ľmΩ		
Maximum Short Current Load ON Voltage	40		0.25	00A ~ 62.5V		00A		
Load OFF Voltage Power Consumption			55	52.25V 0VA				
Dimension(H x W x D) Weight		· · · · · · · · · · · · · · · · · · ·	2	0mm x 745mm 8kg 40°C	<u> </u>			
Temperature ^{"8} Safety & EMC				CE 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%F5 Note *7: Bms Test function for Battery Management System Board SHORT, OCCP and OCDP Test Note *8: Operating temperature range is 0–40 $^{\circ}$ C, All specifications apply for 25 $^{\circ}$ C±5 $^{\circ}$ C, Except as noted

MODEL	PEL-50046	G-600-280	PEL-5005G	-600-350	PEL-5006G	-600-420			
Power ^{*1} Current	0 ~ 4kW 0 ~ 280A	0 – 6kW max. *1 0 – 420A max. *1	0 ~ 5kW 0 ~ 350A	0 ~ 7.5kW max.*1 0 ~ 525A max.*1	0 ~ 6kW 0 ~ 420A	0 ~ 9kW max. *1 0 ~ 630A max. *1			
Voltage Min. Operating Voltage	0 ~-	600V @280A	0 ~ 6	000V 2350A	0~	0 ~ 630A max. 600V 0420A			
Protections Over Power Protection(OPP)	105% 104%								
Over Current Protection(OCP) Over Voltage Protection(OVP) Over Temp Protection(OTP)			10:	14% 15% E±5°C					
Constant Current Mode Range 22	0 ~ 28A	0 ~ 280A	0 ~ 35A	0 ~ 350A	0 ~ 42A	0 ~ 420A			
Resolution Accuracy ³	0.448mA	4.48mA	0.56mA ± 0.05% of (Se	5.6mA etting + Range)	0.672mA	6.72mA			
Constant Resistance Mode Range Resolution	128610Ω ~ 2.1435Ω 8 μS	$2.1435\Omega \sim 0.0357\Omega$ 35.73 $\mu\Omega$	102888Ω ~ 1.7148Ω 10 uS	1.7148Ω ~ 0.0285Ω 28.584μΩ	85740Ω ~ 1.4290Ω 12 μS	1.4290Ω ~ 0.0238Ω 23.82μΩ			
Accuracy Constant Voltage Mode	± 0.1%(Vin / Setting)±0.1% IF.S.	± 0.1% of (Setting + Range)±0.1% IF.S		± 0.1% of (Setting + Range)±0.1% IF.S		± 0.1% of (Setting + Range) ±0.1% IF.			
Range Resolution	0 – 600V 10mV								
Accuracy Constant Power Mode				etting + Range)					
Range Resolution	0 ~ 400W 6.4mW	400 ~ 4kW 64mW	0~500W 8mW ± 0.2% of (Set	500~5kW 80mW	0~600W 9.6mW	600~6kW 96mW			
Accuracy ⁻⁴ Constant Voltage Mode + Current Limit Mo Range	ode I 600V	280A	600V	350A	I 600V	I 420A			
Resolution Accuracy* ⁴	10mV ± 0.05% of (Setting + Range)	4.48mA ± 1.0% of (Setting + Range)	10mV ± 0.05% of (Setting + Range)	5.6mA ± 1.0% of (Setting + Range)	10mV ± 0.05% of (Setting + Range)	6.72mA ± 1.0% of (Setting + Range)			
Constant Voltage Mode + Power Limit Mod Range	600V	4kW	600V	5kW	600V	6kW			
Resolution Accuracy 4	10mV ± 0.05% of (Setting + Range) OFF	64mW ± 1.0% of (Setting + Range) ON	10mV ± 0.05% of (Setting + Range) OFF	80mW ± 1.0% of (Setting + Range)	10mV ± 0.05% of (Setting + Range) OFF	96mW ± 1.0% of (Setting + Range) ON			
Turbo Mode "S Short / OCP / OPP Test Function Max. Current	280A	420A	350A	525A	420A	630A			
Max. Power Test Accuracy 66	4000W	6000W	5000W ± 1.0% of (Rea	7500W ading + Range)	6000W	9000W			
Short Time	100 ~ 10000ms Continuous	100 ~ 2000ms	100 ~ 10000ms Continuous	100 ~ 2000ms	100 ~ 10000ms Continuous	100 ~ 2000ms			
Setting. Accuracy Short V Hi Short V Lo			Setting range: 0.00V - 600	ims 0.00V					
OCP Time (Tstep) Setting. Accuracy	100ms	20ms	100ms ±5	20ms ims	100ms	20ms			
OCP ISTAR / ISTEP / ISTOP	Setting range : 0.00A - 280.00A / Resolution : 4.48mA	Setting range : 0.00A - 420.00A / Resolution : 6.72mA	Setting range : 0.00A - 350.00A / Resolution : 5.6mA	Setting range : 0.00A - 525.00A / Resolution : 8.4mA	Setting range : 0.00A - 420.00A / Resolution : 6.72mA	Setting range : 0.00A - 630.00A / Resolution : 10.08mA			
OCP VTH OPP Time(Tstep) Setting Accuracy	100ms	20ms	100ms	0.00V / Resolution : 0.01 V 20ms	100ms	20ms			
Setting. Accuracy OPP PSTAR / PSTEP / PSTOP	Setting range : 0.00W - 4000.0W / Resolution : 64.0mW	Setting range : 0.00W - 6000.0W / Resolution : 96.0mW	Setting range : 0.00W - 5000.0W / Resolution : 80.0mW	Setting range : 0.00W - 7500.0W / Resolution : 120mW	Setting range : 0.00W - 6000.0W / Resolution : 96mW	Setting range : 0.00W - 9000.0W / Resolution : 144mW			
OPP VTH BMS Test Mode*7	Resolution : 04.011W	Resolution: 50.011W	Setting range : 0.00V - 600	0.00V / Resolution : 0.01V	Resolution . Somw	Resolution . 14411W			
Max. Current Meas. Accuracy 6	280A	420A	350A ±3.0% of (Rea	525A ading + Range)	420A	630A			
Short test Time Meas. Accuracy			±0.0	Resolution : 0.01ms D2ms D5ms					
Setting Accuracy Short ITH	Setting range : 0.13A - 140.00A / Resolution : 4.48mA	Setting range : 0.20A - 210.00A / Resolution : 6.72mA	Setting range : 0.16A - 175.00A / Resolution : 5.6mA	Setting range : 0.25A - 262.50A / Resolution : 8.4mA	Setting range : 0.20A - 210.00A / Resolution : 6.72mA	Setting range : 0.30A - 315.0 A / Resolution : 10.08mA			
OCP ISTAR	Setting range : 0.44A - 280.00A / Resolution : 4.48mA	Setting range : 0.67A - 420.00A / Resolution : 6.72mA	Setting range : 0.56A - 350.00A / Resolution : 5.6mA	Setting range : 0.84A - 525.00A / Resolution : 8.4mA	Setting range: 0.67A - 420.00A / Resolution: 6.72mA	Setting range : 1.00A - 630.00A / Resolution : 10.08mA			
OCP TSTEP	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms			
Meas. Accuracy OCP ISTEP	±0.1ms / ±0.5ms Setting range : 0.00A - 280.00A /	±0.5ms Setting range : 4.20A - 420.00A /	±0.1ms / ±0.5ms Setting range : 0.00A - 350.00A /	±0.5ms Setting range : 5.25A - 525.00A /	±0.1ms / ±0.5ms Setting range : 0.00A - 420.00A /	±0.5ms Setting range : 6.30A - 630.00A /			
OCP ISTOP	Resolution : 4.48mA Setting range : 0.44A - 280.00A / Resolution : 4.48mA	Resolution : 6.72mA Setting range : 0.67A - 420.00A / Resolution : 6.72mA	Resolution: 5.6mA Setting range: 0.56A - 350.00A / Resolution: 5.6mA	Resolution : 8.4mA Setting range : 0.84A - 525.00A / Resolution : 8.4mA	Resolution : 6.72mA Setting range : 0.67A - 420.00A / Resolution : 6.72mA	Resolution: 10.08mA Setting range: 1.00A - 630.00A / Resolution: 10.08mA			
OCP ITH	Setting range: 0.13A - 140.00A / Resolution: 4.48mA	Setting range : 0.20A - 210.00A / Resolution : 6.72mA	Setting range : 0.16A - 175.00A / Resolution : 5.6mA	Setting range : 0.25A - 262.50A / Resolution : 8.4mA	Setting range: 0.20A - 210.00A / Resolution: 6.72mA	Setting range : 0.30A - 315.00A / Resolution : 10.08mA			
Surge Test Mode Surge Current	0~	420A	0~5	525A	0~	630A			
Normal Current Surge Time	10 ~ 2	210A 2000ms	0 ~ 262.5A 10 ~ 2000ms		0 ~ 315A 10 ~ 2000ms				
Surge Step Batt test Mode Mode CC	1-5 1-5 1-5 1-5								
Mode CP STOP Voltage (UVP)	Setting range : 0.00A - 280.00A / Resolution : 4.48mA Setting range : 0.00A - 350.00A / Resolution : 5.6mA Setting range : 0.00A - 420.00A / Resolution : 6.72mA								
STOP TIME STOP CAP.AH			Setting range : OFF 1 - Setting range : OFF 0.1 - 19	99999s / Resolution : 1s 9999AH / Resolution : 0.1AH					
STOP CAP.WH SEQ Load Mode (remode only) Load Mode				1999WH / Resolution : 0.1WH					
Setting STEP Timing	CC / CP 2 – 16 20 ~ 1000 µs / 2 ~ 65335ms / 66 ~ 999sec								
Resolution Dynamic Mode			10 μs / 1	ms / 1sec					
Timing Thigh & Tlow Resolution			0.010~9.999 / 99.9	99 / 999.9 / 9999ms 1 / 0.1 / 1ms					
Accuracy Slew Rate	0.01792-1.120A / μs	0.1792-11.200А / µs		μs / 1ms + 50ppm 0.2240~14.00A / μs	0.02688~1.680A / μs	0.2688~16.800A / µs			
Resolution Min. Rise Time	0.00448A / μs	0.0448A / μs	0.0056A / μs 25 μs(t	0.056A / μs typical)	0.00672A / μs	0.0672A / μs			
Accuracy Current	0.204	20 2004		tting)±10 μs	0 (2)	42 4224			
Range Resolution Conf Key Parameter	0 ~ 28A 0.45mA	28 ~ 280A 4.48mA	0 ~ 35A 0.56mA	35 ~ 350A 5.6mA	0 ~ 42A 0.67mA	42 ~ 420A 6.72mA			
LDon Voltage LDoFF Voltage			Setting range: 0.000V - 9	00.0V / Resolution : 0.4V 19.60V / Resolution : 0. 01V					
Average Time CV Res. Speed			0 ~	~ 64 Fastest)					
Measurement Voltage Read Back Range (5 Digital) Resolution	0 ~ 60V 1.00mV	60~ 600V 10.0mV	0 ~ 60V	60 ~ 600V 10.0mV	0 ~ 60V 1.00mV	60 ~ 600V 10.0mV			
Accuracy Current Read Back Range (5 Digital)	0 ~ 28A	28 ~ 280A	± 0.025% of (Re 0 ~ 35A	eading + Range) 35 ~ 350A	0 ~ 42A	42 ~ 420A			
Resolution Accuracy	0.448mA	4.48mA		5.6mA eading + Range)	0.672mA	6.72mA			
Power Read Back Range (5 Digital) Resolution	41	lkW	5k 0.0 + 0.06% of (Re-	kW DTW eading + Range)	6	kW			
Accuracy ⁹⁴ General Typical Short Resistance	35.7	73mΩ		eading + Kange) 84mΩ	23.5	32mΩ			
Maximum Short Current Load ON Voltage		80A	35 0.4 ~	50A - 100V		20A			
	0 - 99.6V 550VA								
Load OFF Voltage Power Consumption			550	DVA 745					
Load OFF Voltage			177mm x 440	Omm x 745mm Okg					

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 he operating current is below range 0.3%, 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 0-40°C, All specifications apply for 25°C±5°C, Except as noted

MODEL	PEL-	5004G-1200-160	PEL-50050	G-1200-200	PEL-5006G-120	00-240			
Power ^{*1} Current	0 ~ 4kW 0 ~ 160A	0 ~ 6kW max.*1 0 ~ 240A max.*1	0 ~ 5kW 0 ~ 200A	0 ~ 7.5kW max.*1 0 ~ 300A max.*1	0 ~ 6kW 0 ~ 240A	0 ~ 9kW max. *1 0 ~ 360A max. *1			
Voltage Min. Operating Voltage Protections	0 – 1200V 0 – 1200V 0 – 1200V 15V@100A 15V@200A 15V@240A								
Over Power Protection(OPP) Over Current Protection(OCP)			10	5% 4%					
Over Voltage Protection(OVP) Over Temp Protection(OTP) Constant Current Mode			10 90°C	5% E±5°C					
Range ^{®2}	0 ~ 16A 0.256mA	0 ~ 160A 2.56mA	0 ~ 20A 0.32mA	0 ~ 200A 3.2mA	0 ~ 24A 0.384mA	0 ~ 240A 3.84mA			
Accuracy 3 Constant Resistance Mode	450k0 ~ 7.50	7.50 ~ 0.09370		etting + Range)	I 300kO ~ 50	50 ~ 0.06250			
Range Resolution Accuracy	450KΩ ~ 7.5Ω 2.2 μS ± 0.1%(Vin / Setting)±0.1% IF.S.	$7.5\Omega \sim 0.0937\Omega$ $125\mu\Omega$ ± 0.1% of (Setting + Range)±0.1% IF.S	360kΩ ~ 6Ω 2.8 μS ± 0.1%(Vin / Setting)±0.1% IF.S.	100μΩ ± 0.1% of (Setting + Range)±0.1% IF.S	3.3 μS ± 0.1%(Vin / Setting) ±0.1% IF.S	83.34μΩ ± 0.1% of (Setting + Range) ±0.1% IF			
Constant Voltage Mode Range	0–1200V 20mV								
Resolution Accuracy Constant Power Mode				etting + Range)					
tange tesolution	0 ~ 400W 6.4mW	400 ~ 4kW 64mW	0~500W 8mW	500~5kW 80mW	0~600W 9.6mW	600~6kW 96mW			
occuracy ³⁴ Constant Voltage Mode + Current Limit Me Range	ode 1200V	160A	± 0.2% of (Se	tting + Range)	1200V	240A			
esolution couracy*4	20mV ± 0.05% of (Setting + Range)	2.56mA ± 1.0% of (Setting + Range)	20mV ± 0.05% of (Setting + Range)	3.2mA ± 1.0% of (Setting + Range)	20mV ± 0.05% of (Setting + Range)	3.84mA ± 1.0% of (Setting + Range)			
onstant Voltage Mode + Power Limit Mod lange	1200V	4kW	1200V	5kW	1200V	6kW			
esolution ccuracy ³⁴ urbo Mode ⁵⁵	20mV ± 0.05% of (Setting + Range) OFF	64mW ± 1.0% of (Setting + Range) ON	20mV ± 0.05% of (Setting + Range) OFF	80mW ± 1.0% of (Setting + Range) ON	20mV ± 0.05% of (Setting + Range) OFF	96mW ± 1.0% of (Setting + Range) ON			
hort / OCP / OPP Test Function fax. Current	160A	240A	200A	300A	240A	360A			
Max. Power est Accuracy ^{°6}	4000W 100 ~ 10000ms	6000W	5000W ± 1.0% of (Rea	7500W ading + Range)	6000W 100 ~ 10000ms	9000W			
hort Time etting. Accuracy	Continuous	100 ~ 2000ms	Continuous ±5	100 ~ 2000ms	Continuous	100 ~ 2000ms			
hort V Hi hort V Lo	100ms	20	Setting range : 0.25V - 12 Setting range : 0.000V - 12 100ms	00.0V / Resolution : 0.02V 200.0V / Resolution : 0.02V 1 20ms	100ms	20			
OCP Time(Tstep) Setting. Accuracy	100ms Setting range : 0.00A - 160.00A /	20ms Setting range : 0.00A - 240.00A /		20ms ms Setting range : 0.00A - 300.00A /	100ms Setting range : 0.00A - 240.00A /	20ms Setting range : 0.00A - 360.00A /			
OCP VTH	Resolution : 2.56mA	Resolution : 3.84mA	Resolution : 3.2mA Setting range : 0.00V - 120	Resolution : 4.8mA 00.00V / Resolution : 0.02V	Resolution : 3.84mA	Resolution : 5.76mA			
OPP Time(Tstep) Setting. Accuracy	100ms Setting range : 0.00W - 4000.0W /	20ms Setting range : 0.00W - 6000.0W /	100ms ±5 Setting range : 0.00W - 5000.0W /	20ms ms Setting range : 0.00W - 7500.0W /	100ms Setting range: 0.00W - 6000.0W /	20ms Setting range : 0.00W - 9000.0W /			
OPP PSTAR / PSTEP / PSTOP OPP VTH	Resolution : 64.0mW	Resolution : 96.0mW	Resolution: 80.0mW	Resolution : 120mW 00.00V / Resolution : 0.02V	Resolution : 96mW	Resolution: 144mW			
MS Test Mode*7 Max. Current	160A	240A	200A ±3.0% of (Rea	300A	240A	360A			
Meas. Accuracy b hort test Time Meas. Accuracy			0.05ms~10ms / R ±0.0	tesolution : 0.01ms D2ms					
etting Accuracy hort ITH	Setting range : 0.07A - 80.00A /	Setting range : 0.11A - 120.00A /	Setting range : 0.09A - 100.00A /	05ms Setting range : 0.14A - 150.00A /	Setting range : 0.11A - 120.00A /	Setting range : 0.17A - 180.00A /			
DCP ISTAR	Resolution : 2.56mA Setting range : 0.25A - 160.00A / Resolution : 2.56mA	Resolution : 3.84mA Setting range : 038A - 240.00A / Resolution : 3.84mA	Resolution : 3.2mA Setting range : 0.32A - 200.00A / Resolution : 3.2mA	Resolution : 4.8mA Setting range : 048A - 300.00A / Resolution : 4.8mA	Resolution : 3.84mA Setting range : 0.38A - 240.00A / Resolution : 3.84mA	Resolution : 5.76mA Setting range : 057A - 360.00A / Resolution : 5.76mA			
OCP TSTEP	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms	0.05 ~ 10ms 11 ~ 1000ms	0.05 ~ 10ms			
Meas. Accuracy OCP ISTEP	±0.1ms / ±0.5ms Setting range : 0.00A - 160.00A /	±0.5ms Setting range : 2.40A - 240.00A /	±0.1ms / ±0.5ms Setting range : 0.00A - 200.00A /	±0.5ms Setting range : 3.00A - 300.00A /	±0.1ms / ±0.5ms Setting range : 0.00A - 240.00A /	±0.5ms Setting range : 3.60A - 360.00A /			
OCP ISTOP	Resolution : 2.56mA Setting range : 0.25A - 160.00A / Resolution : 2.56mA	Resolution : 3.84mA Setting range : 0.38A - 240.00A / Resolution : 3.84mA	Resolution : 3.2mA Setting range : 0.32A - 200.00A / Resolution : 3.2mA	Resolution : 4.8mA Setting range : 0.48A - 300.00A / Resolution : 4.8mA	Resolution : 3.84mA Setting range : 0.38A - 240.00A / Resolution : 3.84mA	Resolution : 5.76mA Setting range : 0.57A - 360.00A / Resolution : 5.76mA			
OCP ITH	Setting range : 0.07A - 80.00A / Resolution : 2.56mA	Setting range : 0.11A - 120.00A / Resolution : 3.84mA	Setting range : 0.09A - 100.00A / Resolution : 3.2mA	Setting range : 0.14A - 150.00A / Resolution : 4.8mA	Setting range : 0.11A - 120.00A / Resolution : 3.84mA	Setting range : 0.17A - 180.00A / Resolution : 5.76mA			
urge Test Mode urge Current Iormal Current		240A 120A	0 ~ 300A 0 ~ 150A		0 ~ 360A 0 ~ 180A				
iurge Time iurge Step	10~:	2000ms ~ 5	10 ~ 2000ms 11 ~ 5		10~2000ms 1~5				
Act test Mode Mode CC Mode CP	Setting range : 0.00A - 160	0.00A / Resolution : 2.56mA	Setting range: 0.00A -200.00A / Resolution: 3.2mA Setting range: 0.00W - 5000.0W / Resolution: 80.0mW		Setting range: 0.00A - 240.00A / Resolution: 3.84mA				
TOP Voltage (UVP) TOP TIME	Setting range : 0.00W - 4000.0W / Resolution : 64.0mW Setting range : 0.00W - 5000.0W / Resolution : 80.0mW Setting range : 0.00W - 5000.0W / Resolution : 0.02V Setting range : 0.00V - 1200.00V / Resolution : 0.02V Setting range : 0.00W - 5000.0W / Resolution : 15								
TOP CAP.AH TOP CAP.WH			Setting range: OFF 0.1 - 19	9999AH / Resolution : 0.1AH 999WH / Resolution : 0.1WH					
EQ Load Mode (remode only) oad Mode etting STEP				/ CP - 16					
iming lesolution				535ms / 66 ~ 999sec ms / 1sec					
Dynamic Mode iming high & Tlow			0.010-9.999 / 99.9	19 / 999.9 / 9999ms					
esolution ccuracy			1 μs / 10 μs / 100	/ 0.1 / 1ms μs / 1ms + 50ppm					
lew Rate esolution fin. Rise Time	0.01024 ~ 0.640A / μs 0.00256A / μs	0.1024 ~ 6.400A / μs 0.0256A / μs	0.0128~0.800A / μs 0.0032A / μs 25 μs/	0.1280~8.000A / μs 0.032A / μs typical)	0.01536~0.960A / μs 0.00384A / μs	0.1536~9.600A / μs 0.0384A / μs			
ccuracy urrent			±(5% of Se	tting)±10 μs					
ange esolution onf Key Parameter	0 ~ 16A 0.26mA	16 ~ 160A 2.56mA	0 ~ 20A 0.32mA	20 ~ 200A 3.2mA	0 ~ 24A 0.38mA	42 ~ 240A 3.84mA			
On Key Parameter Don Voltage DoFF Voltage			Setting range : 0.000V - 2	50.0V / Resolution : 1V 49.0V / Resolution : 0.02V					
			0 ~						
V Res. Speed		120 ~ 1200V	0 ~ 120V 2.00mV	120 ~ 1200V 20.0mV	0 ~ 120V 2.00mV	120 ~ 1200V 20.0mV			
V Res. Speed leasurement oltage Read Back Range (5 Digital)	0 – 120V 2.00mV	20.0mV		eading + Range)					
V Res. Speed leasurement oltage Read Back Range (5 Digital) Resolution Accuracy urrent Read Back Range (5 Digital)	2.00mV 0 ~ 16A	16 ~ 160A	0 ~ 20A	20 ~ 200A	0 ~ 24A	24 ~ 240A			
IV Res. Speed fleasurement oitage Read Back Range [5 Digital] Resolution Accuracy urrent Read Back Range [5 Digital] Resolution Accuracy	2.00mV 0 ~ 16A 0.256mA		0 ~ 20A 0.32mA	3.2mA ading + Range)	0.384mA	24 ~ 240A 3.84mA			
V Res. Speed feasurement oltage Read Back Range (5 Digital) Resolution Accuracy urrent Read Back Range (5 Digital) Resolution Accuracy ower Read Back Range (5 Digital) Resolution Accuracy Accuracy Accuracy Accuracy Accuracy	2.00mV 0 ~ 16A 0.256mA	16 ~ 160A 2.56mA	0 ~ 20A 0.32mA ± 0.05% of (Re	3.2mA ading + Range)	0.384mA	3.84mA			
V Res. Speed feasurement oltage Read Back Range (5 Digital) Resolution Accuracy urrent Read Back Range (5 Digital) Resolution Accuracy ower Read Back Range (5 Digital) Resolution Accuracy Accurac	2.00mV 0 – 16A 0.256mA 4	16 – 160A 2.56mA kW	0 ~ 20A 0.32mA ± 0.05% of (Re 51 0.0. ± 0.06% of (Re	3.2mA ading + Range) W DIW ading + Range) mΩ	0.384mA 6H	3.84mA εW			
V.V. Res., Speed desaurement foltage Read Back Range [5 Digital) Accuracy current Read Back Range [5 Digital) Resolution Accuracy fower Read Back Range [5 Digital) Accuracy Accu	2.00mV 0 – 16A 0.256mA 4	16 ~ 160A 2.56mA	0 - 20A 0.32mA ± 0.05% of Re 0.05 ± 0.06% of (Re 75 20 1 ~ 2 0 ~ 2	3.2mA ading + Range) W W W W W W W M M M M M M	0.384mA 6H	3.84mA			
Accuracy Current Read Back Range (5 Digital) Resolution Accuracy Power Read Back Range (5 Digital) Resolution	2.00mV 0 – 16A 0.256mA 4	16 – 160A 2.56mA kW	0 - 20A 0.32mA ± 0.05% of Re 0.05 ± 0.06% of (Re 75 20 1 ~ 2 0 ~ 3 5 1 0 . 0 1 ~ 2 1 ~ 3 1 ~ 3	3.2mA ading + Range) W ading + Range) mft 100A 2550 3.2mA	0.384mA 6H	3.84mA «W			

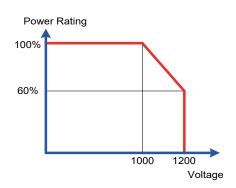
Note *1 : The power rating specifications at ambient temperature = 25 °C Note *2 : The range is automatically or forcing to range II only in CC mode Note *3 : If the operating current is below range 0.1%, the accuracy specification is 0.1% F.S. Note *4 : Power range = Vrange x Irange

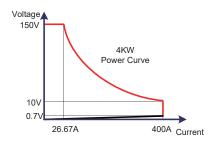
Note \$5: Turbo mode for up to 1.5X Current rating & Power rating support Surge, Bms, Short /OCP /OPP test function Note \$6: The best accuracy of OCP /OPP test is Istep /Pstep=1%FS Note \$7: Bms Test function for Battery Management System Board SHORT, OCCP and OCDP Test Note \$8: Operating temperature range is 0-40 $^{\circ}$ C, All specifications apply for 25 $^{\circ}$ C±5 $^{\circ}$ C, Except as noted

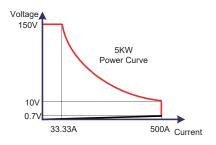
Power Curve

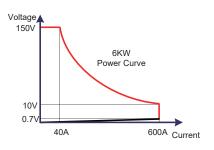








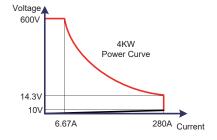


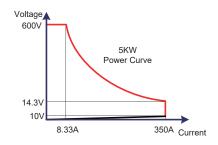


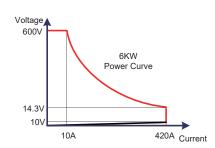
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PEL-5005G-150-500

PEL-5006G-150-600



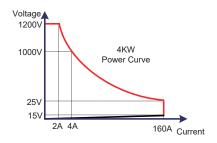


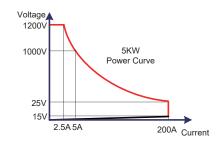


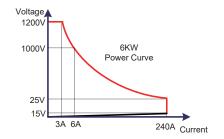
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PEL-5005G-600-350

PEL-5006G-600-420





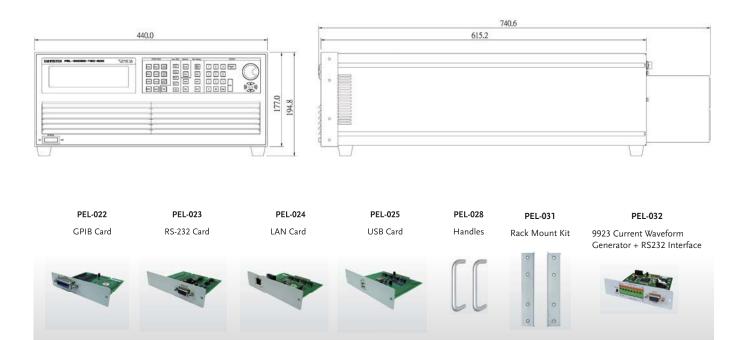


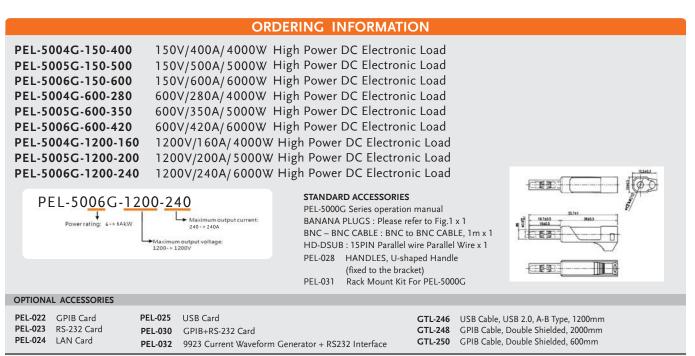
PEL-5004G-1200-160

PEL-5005G-1200-200

PEL-5006G-1200-240

EXTERNAL DIMENSIONS





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

