

	PEL-2040A PEL-2040B		PEL-2041A PEL-2041B		PEL-2020A(100Wx2) PEL-2020B(100Wx2)		PEL-2030A(250W/30W) PEL-2030B(250W/30W)											
CHANNEL	one channel		one channel		L/R	L/R	Left	Right	Right									
RANGE	LOW	HIGH	LOW	HIGH	LOW	HIGH	N/A	LOW	HIGH									
POWER	350W		350W		100W	100W	30W	250W	250W									
CURRENT	0~7A	0~70A	0~1A	0~10A	0~2A	0~20A	0~5A	0~4A	0~40A									
VOLTAGE	0~80V		0~500V		0~80V		0~80V											
MIN.OPERATING VOLTAGE(dc)(Typ.)	0.4V at 7A	0.8V at 70A	0.4V at 1A	0.8V at 10A	0.4V at 2A	0.8V at 20A	0.8V at 5A	0.4V at 4A	0.8V at 40A									
	0.2V at 3.5A	0.4V at 35A	0.2V at 0.5A	0.4V at 5A	0.2V at 1A	0.4V at 10A	0.4V at 2.5A	0.2V at 2A	0.4V at 20A									
STATIC MODE																		
CONSTANT CURRENT MODE																		
	Operating Range	0~7A	0~70A	0~1A	0~10A	0~2A	0~20A	0~5A	0~4A	0~40A								
	Setting Range	0~7.14A	0~71.4A	0~1.02A	0~10.2A	0~2.04A	0~20.4A	0~5.1A	0~4.08A	0~40.8A								
	Resolution	0.2mA	2mA	0.05mA	0.5mA	0.1mA	1mA	0.125mA	0.1mA	1mA								
	Accuracy	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.2%F.S)	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.2%F.S)	±(0.1%set + 0.1%F.S.)	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.2%F.S)								
CONSTANT RESISTANCE MODE																		
	Operating Range	0.025Ω~100Ω		1.25Ω~5KΩ(350W/125V)		0.075Ω~300Ω		0.3Ω~1.2KΩ(30W/16V)		0.0375Ω~150Ω								
		1.25Ω~5K(350W/80V)		50Ω~200K(350W/500V)		3.75Ω~15K(100W/80V)		15Ω~60K(30W/80V)		1.875Ω~7.5K(250W/80V)								
	Setting Range	0.025Ω~100Ω		1.25Ω~5KΩ(350W/125V)		0.075Ω~300Ω		0.3Ω~1.2KΩ(30W/16V)		0.0375Ω~150Ω								
		1.25Ω~5K(350W/80V)		50Ω~200K(350W/500V)		3.75Ω~15K(100W/80V)		15Ω~60K(30W/80V)		1.875Ω~7.5K(250W/80V)								
	Resolution	1mS(350W/16V)		20uS(350W/125V)		0.333mS(100W/16V)		83.333uS(30W/16V)		0.666mS(250W/16V)								
		20 uS(350W/80V)		0.5uS(350W/500V)		6.667uS(100W/80V)		1.666uS(30W/80V)		13.333uS(250W/80V)								
	Accuracy	100Ω : ±(0.2%set + 0.1S)		5KΩ : ±(0.2%set + 0.02S)		300Ω : ±(0.2%set + 0.1S)		1.2KΩ : ±(0.2%set + 0.1S)		150Ω : ±(0.2%set + 0.1S)								
		5KΩ: ±(0.1%set + 0.01S)		200KΩ: ±(0.1%set +		15KΩ: ±(0.1%set + 0.01S)		60KΩ: ±(0.1%set + 0.01S)		7.5KΩ: ±(0.1%set +								
With >2.5V at input																		
CONSTANT VOLTAGE + CONSTANT CURRENT MODE																		
	Operating Range	1~80V		2.5~500V		1~80V		1~80V										

	Setting Range	0~81.6V		0~510V		0~81.6V		0~81.6V		0~81.6V	
	Resolution	2mV		10mV		2mV		2mV		2mV	
	Accuracy	$\pm(0.05\% \text{set} + 0.1\% \text{F.S.})$		$\pm(0.05\% \text{set} + 0.1\% \text{F.S.})$							
	Current Setting Range	0~70A		0~10A		0~20A		0~5A		0~40A	
	Resolution	2mA		0.5mA		1mA		0.125mA		1mA	
	Accuracy	$\pm(0.1\% \text{set} + 0.2\% \text{F.S.})$		$\pm(0.1\% \text{set} + 0.2\% \text{F.S.})$							
<b>CONSTANT POWER MODE</b>											
	Operating Range*	1~35W	1~350W	1~35W	1~350W	1~10W	1~100W	1~30W	1~25W	1~250W	
	Setting Range	0~35.7W	0~357W	0~35.7W	0~357W	0~10.2W	0~102W	0~30.6W	0~25.5W	0~255W	
	Resolution	1mW	10mW	1mW	10mW	1mW	10mW	1mW	1mW	10mW	
	Accuracy	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.2\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	$\pm(0.5\% \text{set} + 0.5\% \text{F.S.})$	
<b>DYNAMIC MODE</b>											
	T1&T2	0.025mS ~ 10mS / Res :		0.025mS ~ 10mS / Res :		0.025mS ~ 10mS / Res :		0.025mS ~ 10mS / Res : 1uS			
		10mS ~ 30S / Res : 1mS		10mS ~ 30S / Res : 1mS		10mS ~ 30S / Res : 1mS		10mS ~ 30S / Res : 1mS			
	Accuracy	1uS / 1mS $\pm 100\text{ppm}$									
<b>CONSTANT CURRENT MODE</b>											
	Slew Rate	0.001 ~ 0.28A/uS	0.01 ~ 2.8A/uS	0.16 ~ 40mA/uS	1.6 ~ 400mA/uS	0.32 ~ 80mA/uS	3.2 ~ 800mA/uS	0.8 ~ 200mA/uS		0.64 ~ 160mA/uS	6.4 ~ 1600mA/uS
	Slew Rate Resolution	0.001A/uS	0.01A/uS	0.16mA/uS	1.6mA/uS	0.32mA/uS	3.2mA/uS	0.8mA/uS		0.64mA/uS	6.4mA/uS
	Slew Rate Accuracy of setting	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$		$\pm(10\% + 15\text{us})$	$\pm(10\% + 15\text{us})$
	Current Setting Range	0~7A	0~70A	0~1A	0~10A	0~2A	0~20A	0~5A		0~4A	0~40A
	Current Resolution	0.2mA	2mA	0.05mA	0.5mA	0.1mA	1mA	0.125mA		0.1mA	1mA
	Current Accuracy	$\pm 0.4\% \text{F.S.}$									
<b>CONSTANT RESISTANCE MODE</b>											
	Slew Rate	0.001 ~ 0.28A/uS	0.01 ~ 2.8A/uS	0.16 ~ 40mA/uS	1.6 ~ 400mA/uS	0.32 ~ 80mA/uS	3.2 ~ 800mA/uS	0.8 ~ 200mA/uS		0.64 ~ 160mA/uS	6.4 ~ 1600mA/uS

	Slew Rate Resolution	0.001A/uS	0.01A/uS	0.16mA/uS	1.6mA/uS	0.32mA/uS	3.2mA/uS	0.8mA/uS	0.64mA/uS	6.4mA/uS
	Slew Rate Accuracy of setting	±(10% + 15us)								
	Resistance Setting Range	0.025Ω~100Ω	1.25Ω~5KΩ(350W/125V)	0.075Ω~300Ω	0.3Ω~1.2KΩ(30W/16V)	0.0375Ω~150Ω				
		1.25Ω~5K(350W/80V)	50Ω~200K(350W/500V)	3.75Ω~15K(100W/80V)	15Ω~60K(30W/80V)	1.875Ω~7.5K(250W/80V)				
	Resistance Resolution	1mS(350W/16V)	20uS(350W/125V)	0.333mS(100W/16V)	83.333uS(30W/16V)	0.666mS(250W/16V)				
		20 uS(350W/80V)	0.5uS(350W/500V)	6.667uS(100W/80V)	1.666uS(30W/80V)	13.333uS(250W/80V)				
	Resistance Resolution	100Ω : ±(0.5%set + 0.1S)	5KΩ : ±(0.5%set + 0.02S)	300Ω : ±(0.5%set + 0.1S)	1.2KΩ : ±(0.5%set + 0.1S)	150Ω : ±(0.5%set + 0.1S)				
	Resistance Accuracy	5KΩ: ±(0.5%set + 0.01S)	200KΩ: ±(0.5%set +	15KΩ: ±(0.5%set + 0.01S)	60KΩ: ±(0.5%set + 0.01S)	7.5KΩ: ±(0.5%set +				
MEASUREMENT										
VOLTAGE READBACK										
	Range	0~16V	0~80V	0~125V	0~500V	0~16V	0~80V	0~16V	0~80V	0~16V
	Resolution	0.32mV	1.6mV	2.5mV	10mV	0.32mV	1.6mV	0.32mV	1.6mV	0.32mV
	Accuracy	±(0.025%set + 0.025% F.S.)								
CURRENT READBACK										
	Range	0~7A	0~70A	0~1A	0~10A	0~2A	0~20A	0~5A	0~4A	0~40A
	Resolution	0.14mA	1.4mA	0.02mA	0.2mA	0.04mA	0.4mA	0.1mA	0.08mA	0.8mA
	Accuracy	±(0.05%set + 0.05% F.S.)								
POWER READBACK										
	Range	0~35W	0~350W	0~35W	0~350W	0~10W	0~100W	0~30W	0~25W	0~250W
	Accuracy	±(0.1%set + 0.1% F.S. <sup>*1</sup> )								
NOTE : *1 : Power F.S. = Vrange F.S. x Irange F.S.										
PROTECTIVE										
Over Power Protection										
	Range	1~357W		1~357W		1~102W		1~30.6W		1~255W
	Resolution	1.75W		1.75W		0.5W		0.15W		1.25W
	Accuracy	±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)						

Over Current Protection						
	Range	0~71.4A	0~10.2A	0~20.4A	0~5.1A	0~40.8A
Resolution		0.175A	0.025A	0.05A	0.0125A	0.1A
Accuracy		$\pm(2\% \text{set} + 0.25\%\text{F.S})$				
Over Voltage Protection						
Range		1~81.6V	1~510V	1~81.6V	1~81.6V	1~81.6V
Resolution		0.2V	1.25V	0.2V	0.2V	0.2V
Accuracy		$\pm(2\% \text{set} + 0.25\%\text{F.S})$				
Over Temperature		$\approx 85^\circ\text{C}$				
Rated Power Protection						
Value		385W	385W	110W	33W	275W
Accuracy		$\pm 2\% \text{set}$				
GENERAL						
SHORT CIRCUIT						
Current(CC)		$\approx 7.7/7\text{A}$	$\approx 77/70\text{A}$	$\approx 1.1/1\text{A}$	$\approx 11/10\text{A}$	$\approx 2.2/2\text{A}$
Voltage(CV)		0V	0V	0V	0V	0V
Resistance(CR)		$\approx 1.25\Omega$	$\approx 0.025\Omega$	$\approx 50\Omega$	$\approx 1.25\Omega$	$\approx 3.75\Omega$
INPUT RESISTANCE(LOAD OFF)		500K $\Omega$ (Typical)				
POWER SOURCE						
WEIGHT	APPROX. 3.8kg					
DIMENSIONS & WEIGHT(PEL-2020A)	272(W) X 200(H) X 581(D) mm; Approx. 16.0kg(Full)					
DIMENSIONS & WEIGHT(PEL-2030A)	435(W) X 200(H) X 581(D) mm; Approx. 28.4kg(Full)					
DIMENSIONS & WEIGHT(PEL-2020B)	272(W) X 200(H) X 581(D) mm; Approx. 16.1kg(Full modules)					
DIMENSIONS & WEIGHT(PEL-2030B)	435(W) X 200(H) X 581(D) mm; Approx. 24.8kg(Full modules)					

### ORDERING INFORMATION

PEL-2020A/PEL-2020B Dual Channel Module, (0~80V, 0~20A, 100W) x2

PEL-2030A / PEL-2030B Dual Channel Module, (1~80V, 0~5A, 30W)+(1~80V, 0~40A, 250W)

PEL-2040A / PEL-2040B Single Channel Module, (0~80V, 0~70A, 350W)

PEL-2041A / PEL-2041B Single Channel Module, (0~500V, 0~10A, 350W)

PEL-2004A 4-Slot Programmable DC Electronic Load Mainframe

PEL-2002A 2-Slot Programmable DC Electronic Load Mainframe

note: Load module cannot be used without a mainframe

#### ACCESSORIES:

PEL-2002A/2004A                          User Manual x1, Power Cord x1

PEL-2020A/2030A/2040A/2041A                          GTL-120 Test Lead x 1, GTL-121 Sense Lead x 1  
PEL-2020B/2030B/2040B/2041B

PEL-003 x 3 (PEL-2004A); PEL-003 x 1(PEL-2002A)

#### OPTIONAL ACCESSORIES

PEL-001 GPIB Card

PEL-002 PEL-2000 Series Rack Mount Kit

PEL-003 Panel Cover

GTL-251 GPIB-USB-HS(High Speed)

GTL-248 GPIB Cable (2m)

GTL-249 Frame Link Cable

GTL-246 USB Cable, USB 2.0 A-B TYPE CABLE, 4P

GTL-232 RS-232C Cable, 9-pin, F-F Type, null modem, 2000mm