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ELP-3340F

LED Driver Testing Load

Description

The ELP-3340F series of DC loads feature a dedicated LED simulation mode. This is in addition to the standard constant current, resistance, voltage and power operating modes. High resolution setting and measurement is provided with dual ranges ensuring precision operation at low values. The 5-digit LCD shows voltage, power and current simultaneously. A full dynamic mode is also provided. This allows the unit to simulate real world load conditions by switching between current levels and adjusting the rise and fall times. The specialised LED Mode is designed to test LED Drivers / LED Power Supplies. The ELP-3340F can be used to simulate a single LED or a string containing up to 90 LEDs. The forward bias voltage (Vd) and operating impedance (Rd) can be adjusted along with the nominal operating voltage (Vo). The ELP-3340F are also built with a fast response dimming control function. This provides a 0-10V signal to the LED driver to check its dimming control. A range between DC to 1kHz at a duty cycle of 1-99% is possible. In addition to the standard short test function a dedicated LED short test signal provides a 12Vdc output for connection to an external relay. The ELP-3340F load modules are mounted into the 'F' series mainframes. Models are available that will house 1, 2 or 4 load modules. The mainframes provide the AC power conversion, cooling and the optional computer interfaces. The front panel memory function allows test set ups and routines to be easily saved and recalled. Along with testing LED drivers the 3340F are ideal for general use.



- Control signal for TRIAC & PWM dimming test
- LED forward Bias and resistance simulation
- CC, CR, CV, CP, LED & dynamic mode
- Short circuit, OCP & OPP tests

Selection Table

Part Number	Maximum Power	Maximum Voltage	Maximum Current	Dimensions* (Width x Height x Depth)
ELP-3340F	150W	0 - 300VDC	0 - 2A	108 x 143 x 412mm
ELP-3341F	300W	0 - 100VDC	0 - 20A	108 x 143 x 412mm
ELP-3342F	300W	0 - 500VDC	0 - 2A	108 x 143 x 412mm

* For mounting in 'F' series mainframes

Options Table

Code	Description
/3302F.....	Single slot mainframe (separate summary available)
/3305F.....	Dual slot mainframe (separate summary available)
/3300F.....	Four slot mainframe (separate summary available)
/GPIB.....	Mainframe selection includes GPIB interface card
/RS232.....	Mainframe selection includes RS232 interface card
/RS232+GPIB.....	Mainframe selection includes combined RS232 and GPIB card
/LAN.....	Mainframe selection includes LAN interface card
/USB.....	Mainframe selection includes USB interface card
/DSK.....	Disable short test function key
/0001.....	1m IEEE488.2 cable
/0002.....	2m IEEE488.2 cable
/0003.....	2m RS232 cable
/9931.....	Remote controller

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ET must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. Please note that your actual unit may differ from that shown.



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Technical Data

	ELP-3340F		ELP-3341F		ELP-3342F	
CC Mode						
Range*	0 - 0.6A	0 - 2A	0 - 6A	0 - 20A	0 - 0.6A	0 - 2A
Resolution	0.01mA	0.04mA	0.1mA	0.4mA	0.01mA	0.04mA
Accuracy	± 0.1% of (setting + range)					
CR Mode						
Range	0.125 - 125KΩ	3.00 - 125Ω	0.005 - 5KΩ	0.05 - 5Ω	0.25 - 250KΩ	3.0 - 250Ω
Resolution	0.133μS	2.0833mΩ	3.3μS	0.0833mΩ	0.0666μS	4.1666mΩ
Accuracy	± 0.2% of (setting + range)					
CV Mode						
Range	0 - 30V	0 - 300V	0 - 12V	0 - 100V	0 - 60V	0 - 500V
Resolution	0.0005V	0.005V	0.0002V	0.002V	0.001V	0.01V
Accuracy	± 0.05% of (setting + range)					
CP Mode						
Range	0 - 150W		0 - 300W		0 - 300W	
Resolution	0.0025W		0.005W		0.005W	
Accuracy	± 0.5% of (setting + range)					
LED Mode						
Vo Voltage Range	0 - 300V		0 - 100V		0 - 500V	
No of simulated LEDs	1 to 90		1 to 30		1 to 90	
Rd Resistance Range	2.5 - 120Ω @ Vo-Vd = 0 - 6V 12.5 - 600Ω @ Vo-Vd = 6 - 30V 125 - 6KΩ @ Vo-Vd = 30 - 300V		0.125 - 60Ω @ Vo-Vd = 0 - 3V 0.5 - 240Ω @ Vo-Vd = 3 - 12V 5.0 - 2.4KΩ @ Vo-Vd = 12 - 100V		2.5 - 120Ω @ Vo-Vd = 0 - 6V 25 - 1.2KΩ @ Vo-Vd = 6 - 60V 250 - 12KΩ @ Vo-Vd = 60 - 500V	
Resolution	16 Bits					
Accuracy	Vd: ± (0.05% of setting + 0.1% of range), Rd: ± (0.05% of setting + 0.1% of range)					
LED Short Signal Output	12V/100 mAmax					
Dimming Control						
Level	Range: 0 - 10V (± 1% of (setting + range))			Resolution: 0.05V		
Frequency	Range: DC - 1kHz			Resolution: 10Hz		
Duty	Range: 0.01 - 0.99 (1% - 99%)			Resolution: 0.01		
Dynamic Mode - Timing						
Thigh & Tlow	0.050 - 9.999 / 99.99 / 999.9 / 9999mS					
Resolution	0.001 / 0.01 / 0.1 / 1ms					
Accuracy	1μs / 10μs / 100μs / 1ms + 50ppm					
Slew Rate	0.48 - 30mA/μs	1.92 - 120mA/μs	4.8 - 300mA/μs	19.2 - 1200mA/μs	0.48 - 30mA/μs	1.92 - 120mA/μs
Resolution	0.12mA/μs	0.48mA/μs	1.2mA/μs	4.8mA/μs	0.12mA/μs	0.48mA/μs
Min. Rise Time	20μs (Typical)					
Voltage Read Back						
Range	60V	300V	30V	100V	60V	500V
Resolution	1mV	5mV	0.5mV	2mV	1mV	10mV
Accuracy	± 0.025% of (reading + range)					
Current Read Back						
Range	0 - 0.6A	0 - 2A	0 - 6A	0 - 20A	0 - 0.6A	0 - 2A
Resolution	0.01mA	0.04mA	0.1mA	0.4mA	0.01mA	0.04mA
Accuracy	± 0.5% of (reading + range)					
Power Read Back						
Range	15W	150W	30W	300W	30W	300W
Resolution	0.25mW	2.5mW	0.5mW	5mW	0.5mW	5mW
Accuracy	± 0.1% of (reading + range)					
General						
Temperature Coefficient	100ppm/°C (typical)					
Operating Temperature	0 - 40°C					
Input AC Power	115V/230 Vac ± 10%, 50/60Hz via 'F' series mainframe					
Cooling	Fan cooling according to load via mainframe					
Weight	3.7kgs per load module					

* In CC mode, the unit can be forced to operate only in Range 2. In all other operating modes the actual range is decided automatically.