

# ELP-3340G

## LED DRIVER TESTING LOAD



POSITIVE PROBLEM SOLVING **+ =**

The ELP-3340G 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.

- + 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

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## FURTHER DETAILS

The specialised LED Mode is designed to test LED Drivers / LED Power Supplies. The ELP-3340G 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-3340G 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-3340G 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 ELP-3340G are ideal for general use.



## SELECTION TABLE

Part Number	Max Power	Voltage Range	Current Range	Module Weight	Dimensions [ W × H × D]
ELP-3341G	300W	0 - 300VDC	0 - 24A	3.5kg	108 × 143 × 405mm*
ELP-3342G	300W	0 - 500VDC	0 - 12A	3.5kg	108 × 143 × 405mm*
ELP-3343G	300W	0 - 500VDC	0 - 24A	3.5kg	108 × 143 × 405mm*
ELP-33401G	2 × 150W	0 - 500VDC	0 - 6A	3.5kg	108 × 143 × 405mm*

\*For mounting in 'F' series mainframes

## OPTIONS

CODE	DESCRIPTION
/3302F	Single slot mainframe (separate summary available)
/3305F	Dual slot mainframe (separate summary available)
/3300F	Four slot mainframe (separate summary available)
/LT	Mainframe selection includes IEEE488.2 (GPIB) interface card
/RS232	Mainframe selection includes RS-232 interface card
/LT+RS232	Mainframe selection includes RS-232 and IEEE488.2 interface 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 RS-232 cable
/9931	Remote controller

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### TECHNICAL DATA

	ELP-3341G	ELP-3342G	ELP-3343G	ELP-33401G
Min. Operating Voltage	3V at 24A	6V at 12A	6V at 24A	4V at 6A
Short Signal Output	12V / 100mA max.			
I <sub>monitor</sub>	2.4A / V	1.2A / V	2.4A / V	0.6A / V
Operating Temperature*	0 - 40°C, coefficient: 100ppm/°C [typical], all specifications apply for 25°C ± 5°C			
Input AC Power	115V/230 Vac ± 10%, 50/60Hz via 'F' series mainframe			
Cooling	Fan cooling according to load via mainframe			

#### CC MODE

Range*	0 - 6A	0 - 24A	0 - 3A	0 - 12A	0 - 6A	0 - 24A	0 - 1.5A	0 - 6A
Resolution	0.1mA	0.4mA	0.05mA	0.2mA	0.1mA	0.4mA	0.025mA	0.1mA
Accuracy	± 0.1% of [setting + range]							

\* 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.

#### CR MODE

Range [Ω to kΩ]	CRL: 0.125Ω - 1.5kΩ [150V]	CRH: 0.25Ω - 3kΩ [300V]	CRL: 0.5Ω - 1.5kΩ [300V]	CRH: 1Ω - 3kΩ [500V]	CRL: 0.25Ω - 3kΩ [300V]	CRH: 0.5Ω - 6kΩ [500V]	CRL: 1Ω - 3kΩ [300V]	CRH: 2Ω - 6kΩ [500V]
Resolution	133.333μS	66.666μS	33.333μS	16.666μS	66.666μS	33.333μS	16.666μS	8.333μS
Accuracy	± 0.2% of [setting + range]							

#### CV MODE

Range	30V / 150V / 300V	60V / 300V / 500V	60V / 300V / 500V	60V / 300V / 500V
Resolution	0.0005V / 0.0025V / 0.005V	0.001V / 0.005V / 0.01V	0.001V / 0.005V / 0.01V	0.001V / 0.005V / 0.01V
Accuracy	± 0.05% of [setting + range]			

#### CP MODE

Range [Resolution]	0 - 300W [0.005W]	0 - 300W [0.005W]	0 - 300W [0.005W]	N / A
Accuracy	± 0.5% of [setting + range]			N / A



## TECHNICAL DATA

	ELP-3341G	ELP-3342G	ELP-3343G	ELP-33401G
Dimming Control Level	Range: 0 - 12V, accuracy $\pm 1\%$ of [setting + range], resolution: 0.048V			
Dimming Control Frequency	Range: DC - 1kHz, resolution: 10Hz			
Dimming Control Duty	Range: 0.01 - 0.99 [1% - 99%], resolution: 0.01			

### LED MODE

Vo Voltage Range	LEDL:30V/LEDM:150V/ LEDH:300V	LEDL:60V/LEDM:300V/ LEDH:500V	LEDL:60V/LEDM:300V/ LEDH:500V	LEDL:60V/LEDM:300V/ LEDH:500V
Rd Resistance Range: LEDL	0.125 $\Omega$ - 125 $\Omega$ @ Vo-Vd = 0 - 3V	0.5 $\Omega$ - 100 $\Omega$ @ Vo-Vd = 0 - 6V	0.25 $\Omega$ - 125 $\Omega$ @ Vo-Vd = 0 - 6V	1 $\Omega$ - 200 $\Omega$ @ Vo-Vd = 0 - 6V
Rd Resistance Range: LEDL	1.25 $\Omega$ - 1.25k $\Omega$ @ Vo-Vd = 3 - 30V	5 $\Omega$ - 1k $\Omega$ @ Vo-Vd = 6 - 60V	2.5 $\Omega$ - 1.25k $\Omega$ @ Vo-Vd = 6 - 60V	10 $\Omega$ - 2k $\Omega$ @ Vo-Vd = 6 - 60V
Rd Resistance Range: LEDM	0.625 $\Omega$ - 625 $\Omega$ @ Vo-Vd = 0 - 15V	2.5 $\Omega$ - 500 $\Omega$ @ Vo-Vd = 0 - 30V	1.25 $\Omega$ - 625 $\Omega$ @ Vo-Vd = 0 - 30V	5 $\Omega$ - 1k $\Omega$ @ Vo-Vd = 0 - 30V
Rd Resistance Range: LEDM	6.25 $\Omega$ - 6.25k $\Omega$ @ Vo-Vd = 15 - 150V	25 $\Omega$ - 5k $\Omega$ @ Vo-Vd = 30 - 300V	12.5 $\Omega$ - 6.25k $\Omega$ @ Vo-Vd = 30 - 300V	50 $\Omega$ - 10k $\Omega$ @ Vo-Vd = 30 - 300V
Rd Resistance Range: LEDH	1.25 $\Omega$ - 1.25k $\Omega$ @ Vo-Vd = 0 - 30V	5 $\Omega$ - 1k $\Omega$ @ Vo-Vd = 0 - 60V	2.5 $\Omega$ - 1.25k $\Omega$ @ Vo-Vd = 0 - 60V	10 $\Omega$ - 2k $\Omega$ @ Vo-Vd = 0 - 60V
Rd Resistance Range: LEDH	12.5 $\Omega$ - 12.5k $\Omega$ @ Vo-Vd = 30 - 300V	50 $\Omega$ - 10k $\Omega$ @ Vo-Vd = 60 - 500V	25 $\Omega$ - 12.5k $\Omega$ @ Vo-Vd = 60 - 500V	100 $\Omega$ - 20k $\Omega$ @ Vo-Vd = 60 - 500V
Accuracy and Resolution	Vd: $\pm$ [0.05% of setting + 0.1% of range], Rd: $\pm$ [0.05% of setting + 0.1% of range], 16 Bits resolution			

### DYNAMIC MODE - TIMING

Thigh & Tlow	0.050 - 9.999 / 99.99 / 999.9 / 9999ms						N/A
Resolution	0.001 / 0.01 / 0.1 / 1ms						N/A
Accuracy	1 $\mu$ s / 10 $\mu$ s / 100 $\mu$ s / 1ms + 50ppm						N/A
Slew Rate	4.8 - 300mA / $\mu$ s	19.2 - 1200mA / $\mu$ s	2.4 - 150mA / $\mu$ s	9.6 - 600mA / $\mu$ s	4.8 - 300mA / $\mu$ s	19.2mA - 1.2A / $\mu$ s	N/A
Resolution	1.2mA / $\mu$ s	4.8mA / $\mu$ s	0.6mA / $\mu$ s	2.4mA / $\mu$ s	1.2mA / $\mu$ s	4.8mA / $\mu$ s	N/A
Min. Rise Time	20 $\mu$ s [Typical]						N/A
Current Range	0 - 6A	0 - 24A	0 - 3A	0 - 12A	0 - 6A	0 - 24A	N/A
Current Resolution	0.1mA	0.4mA	0.05mA	0.2mA	0.1mA	0.4mA	N/A
Current Accuracy	$\pm$ 0.1% of [setting + range]						

### VOLTAGE READBACK

Range	30V / 150V / 300V	60V / 300V / 500V	60V / 300V / 500V	60V / 300V / 500V
Resolution	0.5mV / 2.5mV / 5mV	1mV / 5mV / 10mV	1mV / 5mV / 10mV	1mV / 5mV / 10mV
Accuracy	$\pm$ 0.025% of [reading + range]			

### CURRENT READBACK

Range	0 - 6A	0 - 24A	0 - 3A	0 - 12A	0 - 6A	0 - 24A	0 - 1.5A	0 - 6A
Resolution	0.1mA	0.4mA	0.05mA	0.2mA	0.1mA	0.4mA	0.025mA	0.1mA
Accuracy	$\pm$ 0.1% of [reading + range]							

### POWER READBACK

Range	0 - 300W	0 - 300W	0 - 300W	0 - 150W
Accuracy	$\pm$ 0.1% of [reading + range]			

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd 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. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.



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Tel: +44 (0) 1246 452909  
Sales: 0800 612 95 75  
sales@etps.co.uk  
www.etps.co.uk

ETPS Ltd  
Unit 14, The Bridge  
Beresford Way, Chesterfield  
S41 9FG



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