3340G Series

LED DC Electronic Load Simulator

FEATURES

- LED mode load for LED Power Driver test.
- CC, CR, CV, CP, LED and Dynamic mode.
- Simulate LED Forward Bias Voltage (Vd) and Resistance (Rd).
- Not only CC, CR, and CP mode have parallel operation functions, but CV mode also has parallel operation functions.
- Fast Response for PWM dimming test.
- Built-in dimming control signal for PWM dimming test.
- Short circuit test by external relay (built-in short relay driver circuit).
- 5 digital V / A / W Meter.
- Protections against V, I, W, and ℃.
- Voltage can be increased to 600 V (Option)
- The power input dimming frequency of 3345G & 33402G is up to 25 KHz that is the fastest and widest of bandwidth electronic load in the market.

GW INSTEK
Simply Reliable

3340G Series
LED DC Electronic Load Simulator

3341G	300V,	24A,	300W
3342G	500V,	12A,	300W
3343G	500V,	24A,	300W
3345G	120V,	4A,	150W
3346G	120V,	12A,	300W
33401G	500V,	6A,	150Wx2
33402G	120V,	2A,	75Wx2
33403G	120V,	6A,	150Wx2

Voltage can be increased to 600V（option）

Features

- LED mode load for LED Power Driver test.
- CC, CR, CV, CP, LED and Dynamic mode.
- Simulate LED Forward Bias Voltage (Vd) and Resistance (Rd).
- Not only CC, CR, and CP mode have parallel operation functions, but CV mode also has parallel operation functions.
- Fast Response for PWM dimming test.
- Built-in dimming control signal for PWM dimming test.
- Short circuit test by external relay (built-in short relay driver circuit).
- 5 digital V / A / W Meter.
- Protections against V, I, W, and ℃.
- Can be configured in the Mainframe of 3302G〔Single Solt Mainframe〕、3305G〔Two Solt Mainframe〕or 3300G〔Four Solt Mainframe〕，each mainframe has up to 150 sets Store/Recall memory.
- Voltage can be increased to 600V（option）
- Optional Interface：GPIB、RS232、USB、LAN.
- The power input dimming frequency of 3345G & 33402G is up to 25KHZ that is the fastest and widest of bandwidth electronic load in the market.
- The dimming control output of 3345G & 33402G is DC-10KHZ

Descriptions

- Each 3340G Series module has its own control and display panel, LED/CC/CR/CV/CP/ Dynamic modes, plug in 3300F with 150 sets Store/Recall memory which provides load set-up more efficiently，also can be controlled intranet via RS232、Ethernet、USB and GPIB interface.
- Short circuit test by external relay (there is an optional fixture for short), Short Time can be set and Short Voltage can be measured.
- Built-in dimming control signal output is for PWM dimming test.
- Simulate LED forword Bias voltage (Vd) and Resistance (Rd).
- 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.

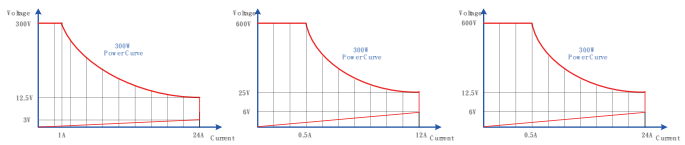
Applications

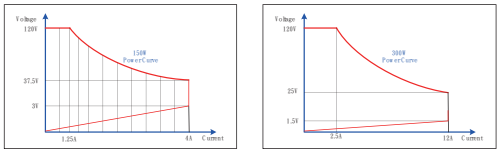
- LED Driver
- Voltage / Current source
- SMPS transient response
- Current limit testing and battery emulation
- Battery charger
- Battery discharge
- R&D / Quality Control
- ATE system
- Production testing

SPECIFICATIONS

MODEL	3341G		3342G		3343G		3345G		3346G	
Power	300 W		300 W		300 W		150 W		300 W	
Current	0 A to 6 A	0 A to 24 A	0 A to 3 A	0 A to 12 A	0 A to 6 A	0 A to 24 A	0 A to 1.2 A	0 A to 4 A	0 A to 3 A	0 A to 12 A
Voltage	0 V to 300 V		0 V to 500 V		0 V to 500 V		0 V to 120 V		0 V to 120 V	
Min. Operating Voltage	3 V @ 24 A		6 V @12 A		6 V @ 24 A		3 V @ 4 A		1.5 V @ 12 A	
Constant Current Mode										
Range *1	0 A to 6 A	0 A to 24 A	0 A to 3 A	0 A to 12 A	0 A to 6 A	0 A to 24 A	0 A to 1.2 A	0 A to 4 A	0 A to 3 A	0 A to 12 A
Resolution	0.1 mA	0.4 mA	0.05 mA	0.2 mA	0.1 mA	0.4 mA	0.02 mA	0.08 mA	0.05 mA	0.2 mA
Accuracy	± 0.1 % OF(SETTING + RANGE)									
Constant Resistance Mode										
Range	CRL:0.125 Ω to 1.5 KΩ(150 V)	CRH:0.25 Ω to 3 KΩ(300 V)	CRL:0.5 Ω to 1.5 KΩ(300 V)	CRH:1 Ω to 3 KΩ(500 V)	CRL:0.25 Ω to 3 KΩ(300 V)	CRH:0.5 Ω to 6 KΩ(500 V)	CRL:0.75 Ω to 750 Ω(60 V)	CRH:1.5 Ω to 1.5 KΩ(120 V)	CRL:0.1 Ω to 1.2 KΩ(60 V)	CRH:0.2 Ω to 2.4 KΩ(120 V)
Resolution *4	133.333 µS	66.666 µS	33.333 µS	16.666 µS	66.666 µS	33.333 µS	66.666 µS	33.333 µS	166.66 µS	83.333 µS
Accuracy	± 0.2 % OF (SETTING + RANGE)									
Constant Voltage Mode										
Range	30 V/150 V/300 V		60 V/300 V/500 V		60 V/300 V/500 V		30 V/60 V/120 V		12 V/60 V/120 V	
Resolution	0.0005 V/0.0025 V/0.005 V		0.001 V/0.005 V/0.01 V		0.001 V/0.005 V/0.01 V		0.0005 V/0.001 V/0.002 V		0.0002 V / 0.001 V / 0.002 V	
Accuracy	± 0.05 % OF (SETTING + RANGE)									
Constant Power Mode										
Range	0 W to 300 W		0 W to 300 W		0 W to 300 W		0 W to 300 W		0 W to 300 W	
Resolution	0.005 W		0.005 W		0.005 W		0.005 W		0.005 W	
Accuracy	± 0.5 % OF (SETTING + RANGE)									
LED Mode										
Vo Voltage Range	LEDL:30 V / LEDM:150 V / LEDH:300 V		LEDL:60 V / LEDM:300 V / LEDH:500 V		LEDL:60 V / LEDM:300 V / LEDH:500 V		LEDL:30 V / LEDM:60 V / LEDH:120 V		LEDL:12 V / LEDM:60 V / LEDH:120 V	
Rd Resistance Range	LEDL : 0.125 Ω to 125 Ω @ Vo-Vd = 0 V to 3 V LEDL : 1.25 Ω to 1.25 KΩ @ Vo-Vd = 3 V to 30 V LEDM: 0.625 Ω to 625 Ω @ Vo-Vd = 0 V to 15 V LEDM: 6.25 Ω to 6.25 KΩ @ Vo-Vd = 15 V to 150 V LEDH: 1.25 Ω to 1.25 KΩ @ Vo-Vd = 0 V to 30 V LEDH: 12.5 Ω to 12.5 KΩ @ Vo-Vd = 30 V to 300 V		LEDL : 0.5 Ω to 100 Ω @ Vo-Vd = 0 V to 6 V LEDL : 5 Ω to 1 KΩ @ Vo-Vd = 6 V to 60 V LEDM: 2.5 Ω to 500 Ω @ Vo-Vd = 0 V to 30 V LEDM: 25 Ω to 5 KΩ @ Vo-Vd = 30 V to 300 V LEDH: 5 Ω to 1 KΩ @ Vo-Vd = 0 V to 60 V LEDH: 50 Ω to 10 KΩ @ Vo-Vd = 60 V to 500 V		LEDL : 0.25 Ω to 125 Ω @ Vo-Vd = 0 V to 6 V LEDL : 2.5 Ω to 1.25 KΩ @ Vo-Vd = 6 V to 60 V LEDM: 1.25 Ω to 625 Ω @ Vo-Vd = 0 V to 30 V LEDM: 12.5 Ω to 6.25 KΩ @ Vo-Vd = 30 V to 300 V LEDH: 2.5 Ω to 1.25 KΩ @ Vo-Vd = 0 V to 60 V LEDH: 25 Ω to 12.5 KΩ @ Vo-Vd = 60 V to 500 V		LEDL :0.625 Ω to 0.75 KΩ @ Vo-Vd = 0 V to 3 V LEDL : 6.25 Ω to 7.5 KΩ @ Vo-Vd = 3 V to 30 V LEDM: 1.25 Ω to 1.5 KΩ @ Vo-Vd = 0 V to 6 V LEDM: 12.5 Ω to 15 KΩ @ Vo-Vd = 6 V to 60 V LEDH: 2.5 Ω to 3 KΩ @ Vo-Vd = 0 V to 12 V LEDH: 25 Ω to 30 KΩ @ Vo-Vd = 12 V to 120 V		LEDL : 0.1 Ω to 120 Ω @ Vo-Vd = 0 V to 1.2 V LEDL : 1 Ω to 1.2 KΩ @ Vo-Vd = 1.2 V to 12 V LEDM: 0.5 Ω to 600 Ω @ Vo-Vd = 0 V to 12 V LEDM: 5 Ω to 6 KΩ @ Vo-Vd = 12 V to 60 V LEDH: 1 Ω to 1.2 KΩ @ Vo-Vd = 0 V to 60 V LEDH: 10 Ω to 12 KΩ @ Vo-Vd = 60 V to 120 V	
Resolution	16 Bits									
Accuracy	Vd : ± (0.05 % OF SETTING + 0.1 % OF RANGE), Rd : ± (0.05 % OF SETTING + 0.1 % OF RANGE)									
Dynamic Mode										
Timing										
THIGH & TLOW	0.050 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	4.8 mA /µs to 300 mA/µs	19.2 mA/µs to 1200 mA/µs	2.4 mA/µs to 150 mA/µs	9.6 mA/µs to 600 mA/µs	4.8 mA/µs to 300 mA/µs	19.2 mA/µs to 1200 mA/µs	0.96 mA/µs to 60 mA/µs	3.84 mA/µs to 240 mA/µs	2.4 mA/µs to 150 mA/µs	9.6 mA/µs to 600 mA/µs
Resolution	1.2 mA/µs	4.8 mA/µs	0.6 mA/µs	2.4 mA/µs	1.2 mA/µs	4.8 mA/µs	0.24 mA/µs	0.96 mA/µs	0.6 mA/µs	2.4 mA/µs
Accuracy	± (5 % OF SETTING)±10 µs									
Min. Rise Time	20 µs (Typical)		20 µs (Typical)		20 µs (Typical)		20 µs (Typical)		20 µs (Typical)	
Current										
Range	0 A to 6 A	0 A to 24 A	0 A to 3 A	0 A to 12 A	0 A to 6 A	0 A to 24 A	0 A to 1.2 A	0 A to 4 A	0 A to 3 A	0 A to 12 A
Resolution	0.1 mA	0.4 mA	0.05 mA	0.2 mA	0.1 mA	0.4 mA	0.02 mA	0.08 mA	0.05 mA	0.2 mA
Accuracy	± 0.1 % OF(SETTING + RANGE)									
Measturement										
Voltage Read Back										
Range	30 V/150 V/300 V		60 V/300 V/500 V		60 V/300 V/500 V		30 V/60 V/120 V		12 V/60 V/120 V	
Resolution	0.5 mV/2.5 mV/5 mV		1 mV/5 mV/10 mV		1 mV/5 mV/10 mV		0.5 mV/1 mV/2 mV		0.2 mV/1 mV/2 mV	
Accuracy	± 0.025 % OF (READING + RANGE)									
Current Read Back										
Range	6 A	24 A	3 A	12 A	6 A	24 A	1.2 A	4 A	3 A	12 A
Resolution	0.1 mA	0.4 mA	0.05 mA	0.2 mA	0.1 mA	0.4 mA	0.02 mA	0.08 mA	0.05 mA	0.2 mA
Accuracy	± 0.1 % OF (READING + RANGE)									
Power Read Back										
Range	300 W		300 W		300 W		150 W		300 W	
Accuracy *2	± 0.1 % OF (READING + RANGE)									
Gernaral										
Imonitor	2.4 A/V		1.2 A/V		2.4 A/V		0.4 A/V		1.2 A/V	
Accuracy	± 0.5 % OF (READING + RANGE)									
Short Signal Output	12 V/100 mAmax		12 V/100 mAmax		12 V/100 mAmax		12 V/100 mAmax		12 V/100 mAmax	
Dimming Control										
Level Range	0 V to 12 V									
Resolution	0.048 V									
Accuracy	1 % OF (SETTING + RANGE)									
Frequency Range	DC to 1 KHz						DC to 10 KHz		DC to 1 KHz	
Resolution	10 Hz						100 Hz		10 Hz	
Duty Range	0.01 to 0.99(1 % to 99 %)						0.01 to 0.99(1 % to 99 %)		0.01 to 0.99(1 % to 99 %)	
Resolution	0.01						0.1		0.01	
Temperature Coefficient	100 ppm/°C(typical)									
Power	Supply from mainframe									
Operating Temperature *3	0 °C to 40 °C									
Dimension(HxWxD)	143 mm x 108 mm x 405 mm									
Weight	3.5 Kg		3.5 Kg		3.5 Kg		3.5 Kg		3.5 Kg	
Safety & EMC	CE									

Note *1 : The range is automatically or forcing to range II only in CC mode
Note *2 : Power F.S. = Vrange F.S. x Irange F.S.
Note *3 : Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C±5 °C, Except as noted
Note *4 : µS (microsiemens) is the unit of conductance(G), one siemens equal to 1/Ω





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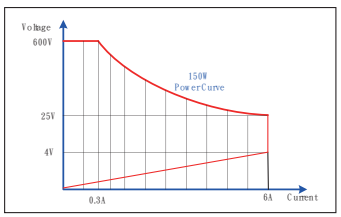
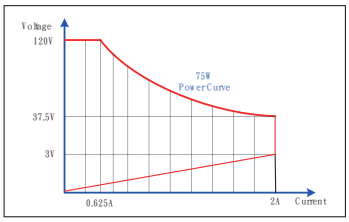
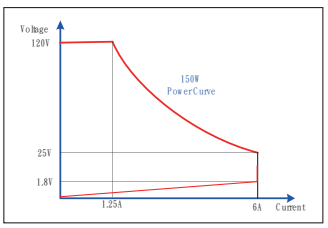
SPECIFICATIONS

MODEL	33401G		33402G		33403G	
Power	150 W × 2		75 W × 2		150 W × 2	
Current	0 A to 1.5 A	0 A to 6 A	0 A to 0.6 A	0 A to 2 A	0 A to 1.5 A	0 A to 6 A
Voltage	0 V to 600 V		0 V to 120 V		0 V to 120 V	
Min. Operating Voltage	4 V @ 6 A		3 V @ 2 A		1.8 V @ 6 A	
Constant Current Mode						
Range *1	0 A to 1.5 A	0 A to 6 A	0 A to 0.6 A	0 A to 2 A	0 A to 1.5 A	0 A to 6 A
Resolution	0.025 mA	0.1 mA	0.01 mA	0.04 mA	0.025 mA	0.1 mA
Accuracy	± 0.1 % OF(SETTING + RANGE)					
Constant Resistance Mode						
Range	CRL:1 Ω to 3 KΩ(300 V)	CRH:2 Ω to 6 KΩ(600 V)	CRL:1.5 Ω to 1.5 KΩ(60 V)	CRH:3 Ω to 3 KΩ(120 V)	CRL:0.2 Ω to 2.4 KΩ(60 V)	CRH:0.4 Ω to 4.8 KΩ(120 V)
Resolution *4	16.666 µS	8.333 µS	33.33 µS	16.66 µS	83.333 µS	41.666 µS
Accuracy	± 0.2 % OF (SETTING + RANGE)					
Constant Voltage Mode						
Range	60 V/300 V/600 V		30 V/60 V/120 V		12 V/60 V/120 V	
Resolution	0.001 V/0.005 V/0.01 V		0.0005 V/0.001 V/0.002 V		0.0002 V / 0.001 V / 0.002 V	
Accuracy	± 0.05 % OF (SETTING + RANGE)					
LED Mode						
Vo Voltage Range	LEDL:60 V / LEDM:300 V / LEDH:600 V		LEDL:30 V / LEDM:60 V / LEDH:120 V		LEDL:12 V / LEDM:60 V / LEDH:120 V	
Rd Resistance Range	LEDL : 1 Ω to 200 Ω @ Vo-Vd = 0 V to 6 V LEDL: 10 Ω to 2 K Ω @ Vo-Vd = 6 V to 60 V LEDM: 5 Ω to 1 KΩ @ Vo-Vd = 0 V to 30 V LEDM: 50 Ω to 10 KΩ @ Vo-Vd = 30 V to 300 V LEDH: 10 Ω to 2 KΩ @ Vo-Vd = 0 V to 60 V LEDH:100 Ω to 20 KΩ @ Vo-Vd = 60 V to 600 V		LEDL: 1.25 Ω to 1.5 KΩ @ Vo-Vd = 0 V to 3 V LEDL: 12.5 Ω to 15 KΩ @ Vo-Vd = 3 V to 30 V LEDM: 2.5 Ω to 3 KΩ @ Vo-Vd = 0 V to 6 V LEDM: 25 Ω to 30 KΩ @ Vo-Vd = 6 V to 60 V LEDH: 5 Ω to 6 KΩ @ Vo-Vd = 0 V to 12 V LEDH:50 Ω to 60 KΩ @ Vo-Vd = 12 V to 120 V		LEDL : 0.2 Ω to 240 Ω @ Vo-Vd = 0 V to 1.2 V LEDL : 2 Ω to 2.4 KΩ @ Vo-Vd = 1.2 V to 12 V LEDM: 1 Ω to 1.2 KΩ @ Vo-Vd = 0 V to 6 V LEDM: 10 Ω to 12 KΩ @ Vo-Vd = 6 V to 60V LEDH: 2 Ω to 2.4 KΩ @ Vo-Vd = 0 V to 12 V LEDH:20 Ω to 24 KΩ @ Vo-Vd = 12 V to 120 V	
Resolution	16 Bits					
Accuracy	Vd : ± (0.05 % OF SETTING + 0.1 % OF RANGE), Rd : ± (0.05 % OF SETTING + 0.1 % OF RANGE)					
Measturement						
Voltage Read Back						
Range	60 V/300 V/600 V		30 V/60 V/120 V		12 V/60 V/120 V	
Resolution	0.001 V/0.005 V/0.01 V		0.0005 V/0.001 V/0.002 V		0.0002 V / 0.001 V / 0.002 V	
Accuracy	± 0.025 % OF (READING + RANGE)					
Current Read Back						
Range	1.5 A	6 A	0.6 A	2 A	1.5 A	6 A
Resolution	0.025 mA	0.1 mA	0.01 mA	0.04 mA	0.025 mA	0.1 mA
Accuracy	± 0.1 % OF (READING + RANGE)					
Power Read Back						
Range	150 W		75 W		150 W	
Accuracy *2	± 0.1 % OF (READING + RANGE)					
Gernaral						
Short Signal Output	12 V/100 mAmax		12 V/100 mAmax		12 V/100 mAmax	
Dimming Control						
Level Range	0 V to 12 V					
Resolution	0.048 V					
Accuracy	1 % of (SETTING + RANGE)					
Frequency Range	DC to 1 KHz		DC to 10 KHz		DC to 1 KHz	
Resolution	10 Hz		100 Hz		10 Hz	
Duty Range	0.01 to 0.99(1 % to 99 %)					
Resolution	0.01		0.1		0.01	
Temperature Coefficient	100 ppm/°C(typical)					
Power	Supply from mainframe					
Operating Temperature *3	0 °C to 40 °C					
Dimension(HxWxD)	143 mm x 108 mm x 405 mm					
Weight	3.5 Kg		3.5 Kg		3.5 Kg	
Safety & EMC	CE					

Note *1 : The range is automatically or forcing to range II only in CC mode
Note *2 : Power F.S. = Vrange F.S. x Irange F.S.
Note *3 : Operating temperature range is 0–40℃, All specifications apply for 25℃±5℃, Except as noted
Note *4 : µS (microsiemens) is the unit of conductance(G), one siemens equal to 1/Ω







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SPECIFICATIONS

MODEL	3300G	3305G	3302G
Load Module Configure	4 CH	2 CH	1 CH
Accept Load Module			
3340G,3341G,3342G, 3343G, 3345G,3346G, 33401G, 33402G 3310G,3311G,3312G,3314G,3315G 3330G,3332G,3336G	Yes		
Interface Function			
Opt-01 GPIB	Yes		
Opt-02 RS-232	Yes		
Opt-03 USB	Yes		
Opt-04 LAN	Yes		
Opt-10 Remote Control I/O	Yes		
Opt-13 GPIB+RS-232	Yes		
Store/Recall memory	150		
9933 Remote Controler	Yes		
Weight	8.8 Kg	7.5 Kg	5.5 Kg
Dimension (WxHxD)	483 mm x 187 mm x 474 mm	269 mm x 187 mm x 474 mm	160 mm x 187 mm x 474 mm

Specifications subject to change without notice. 3340G_BH1_E_202512

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