



3340G 系列

LED 直流電子模擬負載

特 點

- 專供LED Driver測試的LED模式負載
- 定電流、定電阻、定電壓、定功率、LED及動態操作模式
- 模擬LED順向偏壓(Vd)及導通電阻(Rd)
- 不只CC、CR、CP mode具備並聯操作功能，CV mode亦具備並聯操作功能。
- 響應快速，可供PWM調光測試
- 內建調光控制所需之控制訊號
- 以外接Relay的方式做短路測試（內建控制Relay短路之驅動電路）
- 5位之數位電壓、電流以及功率錶
- 過電壓、電流、功率及溫度保護
- 電壓可提高至 600 V（選購）
- 3345G & 33402G的功率輸入調光頻率可達25 KHz，是市場上速度最快、頻寬最寬的電子負載

3340G 系列 LED 直流電子模擬負載

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

電壓可提高至600V (選購)



特 性

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- 模擬LED順向偏壓(Vd)及導通電阻(Rd)
- 不只CC、CR、CP mode具備並聯操作功能，CV mode亦具備並聯操作功能。
- 響應快速，可供PWM調光測試
- 內建調光控制所需之控制訊號
- 以外接Relay的方式做短路測試（內建控制Relay短路之驅動電路）
- 5位之數位電壓，電流以及功率錶
- 過電壓、電流、功率及溫度保護
- 須安裝於機框3302G〔單個插槽機框〕、3305G〔二個插槽機框〕或3300G〔四個插槽機框〕上，且機框上具有150組儲存/呼叫記憶
- 電壓可提高至600V(選購)
- 可選用介面：GPIB、RS232、USB、LAN
- 9923負載電流波形產生器提供電池實際放電電流波形之模擬（選購）
- 3345G & 33402G的功率輸入調光頻率可達25 KHz，是市場上速度最快、頻寬最寬的電子負載
- 3345G & 33402G的調光控制輸出為DC-10 KHz

說 明

- 每個3340G系列模組均有獨立的控制及顯示面板、LED/定電流/定電阻/定電壓/定功率/動態模式，配合3300G機框上的150組儲存/呼叫記憶，能有效地控制所有負載的設定，更可透過RS232、Ethernet、USB和GPIB等介面進行遠端控制。
- 以外接Relay的方式做短路測試（備有短路專用治具板可供選購），並可設定短路時間及量測短路電壓。
- 內建的調光控制訊號輸出，方便於LED driver的PWM調光（Dimming）測試。
- 透過LED模式，設定順向偏壓（Vd）及導通電阻（Rd），即可模擬LED的拉載特性。
- 可設定的吃載/停止吃載（LOAD ON/OFF）電壓點及良/不良（GO/NG）的比較判斷功能、電壓極性顯示可正可負及150組儲存/呼叫記憶，使得負載更適用於各種不同的應用。
- 多達150組測試參數及狀態的儲存功能，讓其可根據自動測試(auto sequence)需求，隨時將儲存記憶調出來任意使用。

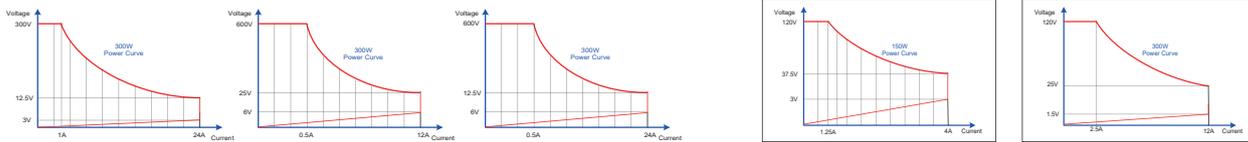
應 用

- LED Driver
- 電壓/電流源測試
- 交換式電源供應器暫態響應
- 定電壓模式供限流測試及模擬電池
- 電池放電
- 電池充電
- 研發、品管
- ATE系統
- 生產測試

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)										
Measurement											
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)										
General											
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										
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										
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										

Note¹: The range is automatically or forcing to range II only in CC mode
 Note²: Power F.S. = Vrange F.S. x Irange F.S.
 Note³: Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C±5 °C, Except as noted
 Note⁴: μS (microsiemens) is the unit of conductance(G), one siemens equal to 1/Ω



All specifications are subject to change without notice.

SPECIFICATIONS

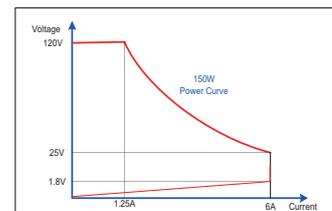
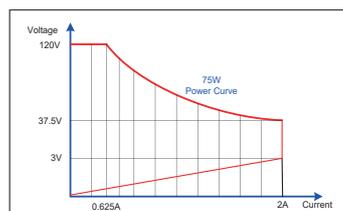
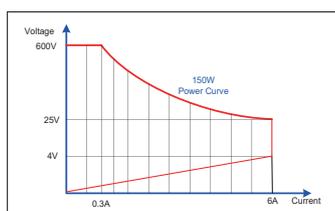
MODEL	33401G		33402G		33403G	
Power	150 W × 2		75 W × 2		150 W × 2	
Current	0 A to 1.5 A	0 A to 6 A	0 A to 0.6 A	0 A to 2 A	0 A to 1.5 A	0 A to 6 A
Voltage	0 V to 600 V		0 V to 120 V		0 V to 120 V	
Min. Operating Voltage	4 V @ 6 A		3 V @ 2 A		1.8 V @ 6 A	
Constant Current Mode						
Range ^{*1}	0 A to 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 K Ω @ Vo-Vd = 0 V to 30 V LEDM: 50 Ω to 10 K Ω @ Vo-Vd = 30 V to 300 V LEDH: 10 Ω to 2 K Ω @ Vo-Vd = 0 V to 60 V LEDH:100 Ω to 20 K Ω @ Vo-Vd = 60 V to 600 V		LEDL: 1.25 Ω to 1.5 K Ω @ Vo-Vd = 0 V to 3 V LEDL: 12.5 Ω to 15 K Ω @ Vo-Vd = 3 V to 30 V LEDM: 2.5 Ω to 3 K Ω @ Vo-Vd = 0 V to 6 V LEDM: 25 Ω to 30 K Ω @ Vo-Vd = 6 V to 60 V LEDH: 5 Ω to 6 K Ω @ Vo-Vd = 0 V to 12 V LEDH:50 Ω to 60 K Ω @ 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 K Ω @ Vo-Vd = 1.2 V to 12 V LEDM: 1 Ω to 1.2 K Ω @ Vo-Vd = 0 V to 6 V LEDM: 10 Ω to 12 K Ω @ Vo-Vd = 6 V to 60 V LEDH: 2 Ω to 2.4 K Ω @ Vo-Vd = 0 V to 12 V LEDH:20 Ω to 24 K Ω @ 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)					
Measurement						
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)					
General						
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 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°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	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		
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 Controller Yes		
Weight	9.3 Kg	7.5 Kg	5.5 Kg
Dimension (WxHxD)	440 mm x 177 mm x 445 mm	269 mm x 177 mm x 452 mm	160 mm x 177 mm x 452 mm

購買資訊

3341G	LED直流電子模擬負載	300 V / 24 A / 300 W
3342G	LED直流電子模擬負載	500 V / 12 A / 300 W
3343G	LED直流電子模擬負載	500 V / 24 A / 300 W
3345G	LED直流電子模擬負載	120 V / 4 A / 150 W
3346G	LED直流電子模擬負載	120 V / 12 A / 300 W
33401G	LED直流電子模擬負載	500 V / 6 A / 150 W x 2
33402G	LED直流電子模擬負載	120 V / 2 A / 75 W x 2
33403G	LED直流電子模擬負載	120 V / 6 A / 150 W x 2



3.7kg
 W=108mm
 H=143mm
 D=412mm

3302G (單個插槽機框)



5.5kg
 W=160mm
 H=177mm
 D=452mm

3305G (二個插槽機框)



7.5kg
 W=269mm
 H=177mm
 D=452mm

3300G (四個插槽機框)



9.3kg
 W=440mm
 H=177mm
 D=445mm

GPIB+RS232 介面



RS232 介面



GPIB 介面



USB 介面



LAN 介面



OPTIONAL ACCESSORIES

GPIB+RS232 介面

RS232 介面

GPIB 介面

USB 介面

LAN 介面

NTC 選購功能：10 KΩ 模擬電阻 (100 Ω to 500 KΩ)

NTC 選購功能：100 KΩ 模擬電阻 (1 KΩ to 5 MΩ)

GPIB 纜線長度 1 米

GPIB 纜線長度 2 米

USB TYPE A to TYPE B 連接電纜線長度 1.8 米

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

規格若有局部變更，恕不另行通知！ 3340G_BH1_C_202602

固緯電子實業股份有限公司

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