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

GW INSTEK
Simply Reliable

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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- 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 600 V (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。

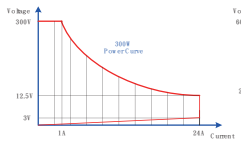
應　用

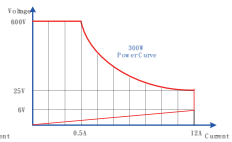
- LED Driver
- 電壓/電流源測試
- 交換式電源供應器暫態響應
- 定電壓模式供限流測試及模擬電池
- 電池放電
- 電池充電
- 研發、品管
- ATE系統
- 生產測試

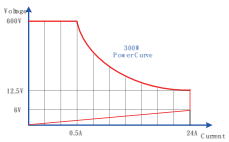
SPECIFICATIONS

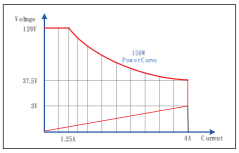
MODEL	3341G		3342G		3343G		3345G		3346G	
Power	300 W		300 W		300 W		150 W		300 W	
Current	0 A to 6 A	0 A to 24 A	0 A to 3 A	0 A to 12 A	0 A to 6 A	0 A to 24 A	0 A to 1.2 A	0 A to 4 A	0 A to 3 A	0 A to 12 A
Voltage	0 V to 300 V		0 V to 500 V		0 V to 500 V		0 V to 120 V		0 V to 120 V	
Min. Operating Voltage	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)									
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									

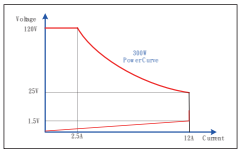
Note *1 : The range is automatically or forcing to range II only in CC mode
Note *2 : Power F.S. = Vrange F.S. x Irange F.S.
Note *3 : Operating temperature range is 0 °C to 40 °C, All specifications apply for 25 °C±5 °C, Except as noted
Note *4 : μS (microsiemens) is the unit of conductance(G), one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









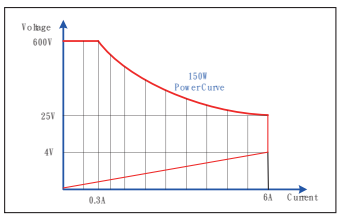


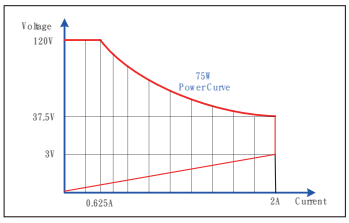
All specifications are subject to change without notice.

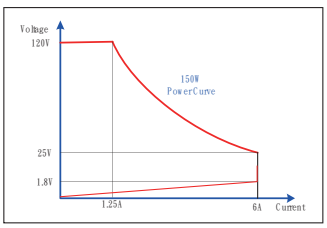
SPECIFICATIONS

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 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

規格若有局部變更，恕不另行通知！ 3340G_BH1_C_202511

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