



### ■ Features

- Charger for lithium batteries (Li-ion, LiFePO4 and lithium manganese), Lead-Acid batteries and NIMH
- Built-in 4 stage charging curve (For Lithium batteries) and 3 stage charging curve (For Lead-Acid batteries)
- Universal AC input, wide range cover 90-264V
- Small size, only 75\*43\*28mm
- High efficiency, >91% at AC 90V input
- Protection: Short circuit, OCP, OVP & reverse polarity
- 1 years warranty

### ■ Applications

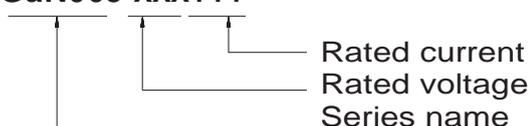
- Power tools & Drones
- Electric scooter
- Surveillance system
- Consumer electronic devices

### ■ Description

GaN065 is a single output 65W AC/DC desktop type charger with 4 and 3 stage charging curve. The different curves are suitable for different batteries, such as Lead-acid batteries (gel, flooded and AGM) and Lithium batteries (Li-ion, LiFePO4 and Lithium manganese).

### ■ Mode Encoding

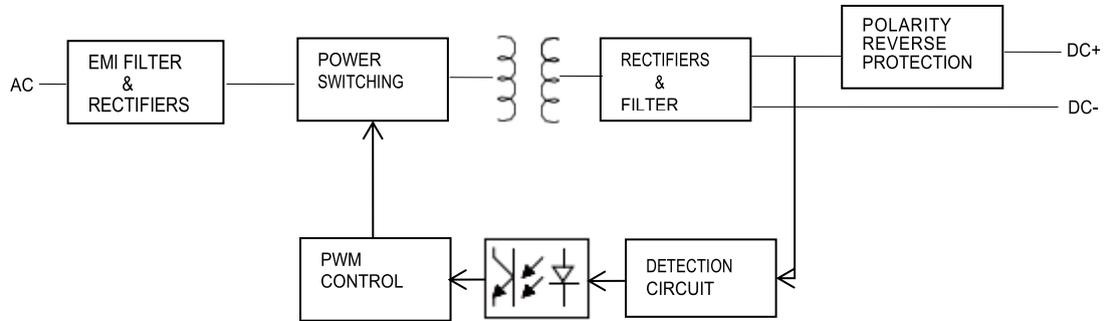
GaN065-XXXYYY



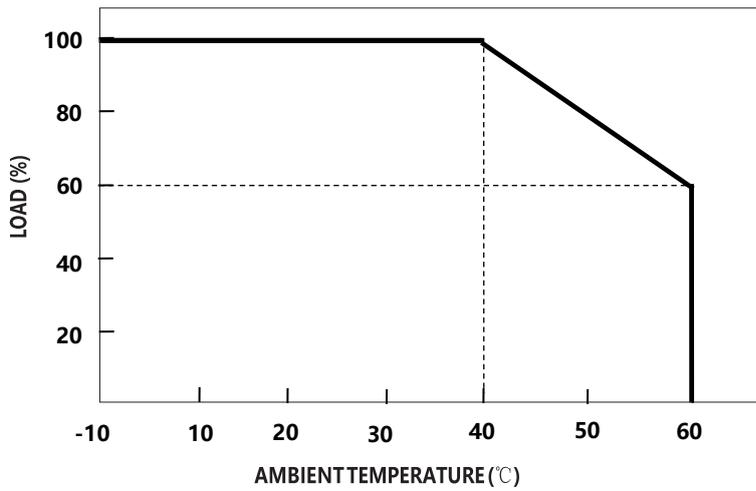
## SPECIFICATION(Li-ion battery charger)

MODEL		GaN065-084050	GaN065-126040	GaN065-168035	GaN065-210030	GaN065-294020	
OUTPUT	Charge voltage	8.4V±1%	12.6V±1%	16.8V±1%	21.0V±1%	29.4V±1%	
	Charge voltage range	5-8.4V	7.5-12.6V	10-16.8V	12.5-21.0V	17.5-29.4V	
	Charge current	5A±10%	4A±10%	3.5A±10%	3A±10%	2A±10%	
	Pre-charge current	1A±10%	0.8A±10%	0.7A±10%	3A±10%	0.4A±10%	
	Charge-end current	≤0.5A ±20%	≤0.4A ±20%	≤0.35A ±20%	≤0.3A ±20%	≤0.2A ±20%	
	Rated power	42W	50.4W	58.8W	63W	58.8W	
	Recommended battery capacity Note.3	5 - 40Ah	4 - 30Ah	3.5 - 30Ah	3 - 30Ah	2 -20Ah	
	Leakage current from battery (Typ.)	≤1mA					
CHARGE INDICATOR	LED indication	LED1 on: 25% Capacity; LED1 - LED2 on: 50% Capacity; LED1 – LED3 on: 75% Capacity; LED1 – LED4 on: 100% Capacity; LED1 – LED4 flashing : error					
INPUT	Rated input voltage	100 - 240VAC 50 / 60Hz					
	Input voltage range Note.4	90 - 264VAC					
	Power factor (Typ.)	PF>0.55 @AC100V, full load					
	Input current (Typ.)	1.1A@115VAC		0.55A@230VAC			
	Inrush current (Typ.)	Cold start 75A @230VAC					
	Standby input power	< 0.5W					
	Efficiency (Typ.)	91%	92.5%	92.5%	92.5%	92.5%	
PROTECTION	Short circuit	Yes					
	Over voltage	Yes					
	Reverse polarity	Yes					
	Over temperature	-					
ENVIRONMENT	Working temperature	-10 - +40°C (Refer to " Derating Curve")					
	Working humidity	0 - 90% RH					
	Storage temperature, humidity	-40 - +70°C, 0 - 95% RH					
	Cooling	Natural convection					
	Vibration resistance	10 - 50Hz, 2G 10min. 1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC(NOTE 6)	Max. temperature rise	< 40°C on casing					
	Hi-Pot Insulation	i/p to o/p: 3000V (1 min)					
	Safety standards	IEC62368-1					
	EMC Emission	Parameter	standard			Test Level   Note	
		Conducted	EN55032 FCCPART15			Class B	
		Radiated	EN55032 FCCPART15			Class B	
		Harmonic Current	EN61000-3-2			.....	
Voltage Flicker	EN61000-3-3			.....			
EMC IMMUNITY	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11						
OTHERS	MTBF	30000H					
	Dimension	75*43*28.5mm (L*W*H)					
	Weight	250g					
NOTE	<p>1. Modification for charger specification may be required for different battery specification. Please contact battery vendor and Green digital power for details.</p> <p>2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>3. This is Green suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. This protection mechanism is specified for the case the short circuit occurs after the charger is turned on.</p> <p>6. The battery charger is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives.</p> <p>7. AC Inlet is ICE320-C8, DC cord is 1.5m 2*AWG18 wires, DC terminal is defined when order</p>						

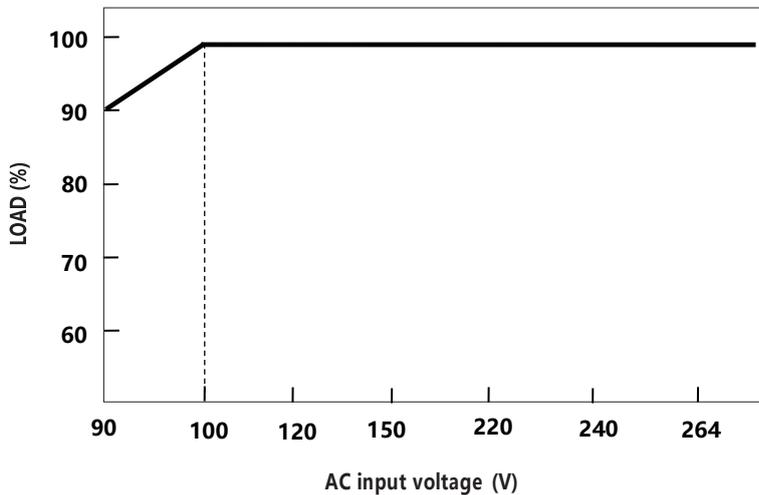
■ Block Diagram



■ Derating Curve

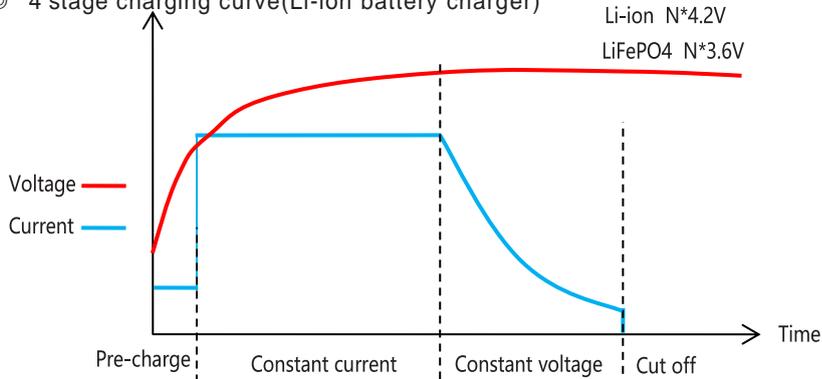


■ static Characteristics

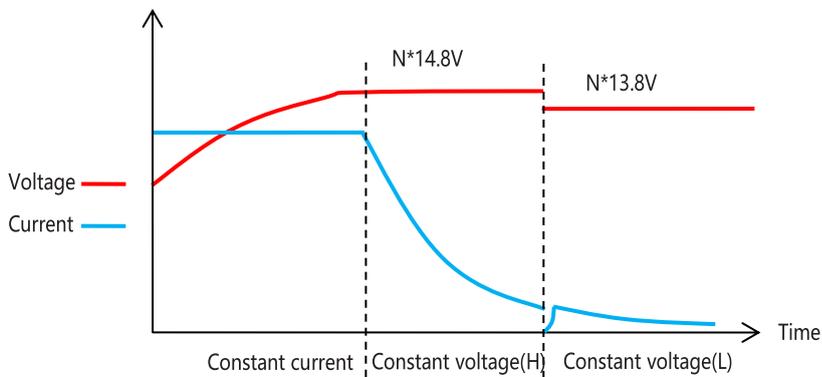


■ **Charging Curve**

◎ 4 stage charging curve(Li-ion battery charger)



◎ 3 stage charging curve(Lead-Acid battery charger)



■ **Mechanical specification**

1		2		3		4		5		6		7		8		9		10	
TOLERANCE FOR METAL		DIVISION		DIMENSION		TOLERANCE		CUSTOMER REV		REV		ZONE		DESCRIPTION		CHA BY/DATE		APP BY/DATE	
		-10				±0.08													
		10-30				±0.11													
		30-50				±0.13													
		50-80				±0.15													
		80-120				±0.18													
		120-180				±0.20													
		180-250				±0.25													
		250-400				±0.30													

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TITLE:		MATERIAL:	
MODEL:		WEIGHT:	
DES: Jann	CAD FILE:	UNIT: mm	TEXTURE NO:
BY: CHECK	COLOR:	FINISH/TREATMENT:	SCALE: Fit
BY: APP	DATE:		

PART NO.:	CUSTOMER:	P/N:
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