# **SEG** Series

Specifications					
Product name			SEG60N2-12.0	SEG60N2-24.0	
Input condition	Nominal input voltage		AC100V—AC240V		
	Input voltage variation range		AC90~265V (Input voltage distortion is 5% or less.)		
	Nominal frequency		50∕60Hz		
	Input current		1.5A or less. (VIN = 100V)		
	Input power (No load)		0.15W or less.(VIN = 115V / 230V)		
	Inrush current		100Ao-p or less.(VIN = 230V , Nominal output , Cold start)		
	Average efficiency		88% or less / 89% or less (VIN = 115V/230V)		
	Leakage current (max)		$120 \mu\text{A}(\text{VIN} = 240\text{V}, 50\text{Hz})$		
<b>2</b>	Nominal output voltage		12V	24V	
	Npminal output current		4.17A	2.5A	
Output	Nominal output power		50W	60W	
requirements *1	Output current range *2		0~5.0A	0~2.7A	
	Overall regulation		11.0~13.0V	22.0~26.0V	
	Ripple noise		350mVp-p (Rated input and output condition)		
Protection	Over current protection		5.0A or more	2.7A or more	
function	Over voltage pro	otection	25V or less	36V or less	
Environment requirements	Storage temperature		-20~+80°C		
	Operation temperature		0~+60°C (cf. *4 Derating curve)		
	Storage humidity		10%~90% (No condensing)		
	Operation humidity		20%~80% (No condensing)		
	Vibration	Frequency	10∼55Hz		
		Acceleration	19.6m/s <sup>2</sup>		
		Sweep time	2min		
		Direction	X,Y,Z		
		Vibration time	30min		
	Shock	Storage	Lift this unit a height of 70cm from an oak board and drop it.		
			One time on each side. (total 6 times) There should be no damage.		
			, , , , , , , , , , , , , , , , , , ,		
Noise	Lightning surge IEC61000-4-5		L-L: 1.0kV / L-FG: 2kV (No damage)		
immunity	ESD	IEC61000-4-2	8kV (No damege, No error)		
miniamey	EFT/B	IEC61000-4-4	L-L / L-FG: 1kV (No damege)		
	EMI regulations		J55032 complied, Design to meet VCCI Class-B, FCC Class-B, CISPR Class B(EN55032)		
	Safety standards		J62368-1, UL62368-1, CSA62368-1(c-UL) complied		
	Withstand Voltage		P-S: 3kV 1min. (cut-off = 5mA)		
Others	Insulation Resistance		P-S: DC500V 50MΩ or more		
	MTBF		200,000H or more		
	Life time		10,000H or more (Ta = 25°C) (cf. *5 Life time curve)		
	Externals size [mm]		114.5 x 50.5 x 28 typ.		
	Weight		230g typ.		
	Environment standard	Power save *3  Hazardous substance	Design to meet Level VI, ErPTire2(draft)  Applies to the RoHS standard.		
		Nominal condition	11		
	Temp. of case	Inominal condition	$\Delta T = 45^{\circ}C$ or less, The case installation side is excluded		

### Note \*1

- •The measuring point is 10 mm from connector at the end of output cable. (cf. Fig 1)
- Voltage regulation includes voltage fluctuation composed of static input variation, static load variation, warm-up drift and temperature change.
- $\mbox{-}\mbox{The measurement point is the point determined in Fig 1.}$

Use the following for measurement.

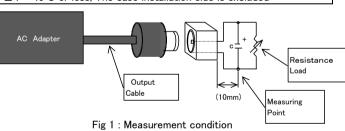
- · Probe having impedance ratio of 1:1
- · Oscilloscope having frequency characteristics of 100MHz.
- Measured from the measurement point with 47  $\mu$  F electolytic capacitor.
- •The AC cable is not included. Use a cable with double insulation (for Japan only). Use a power code set (plug, connector, cable) that has been certified for the country of sale.

#### Note \*2

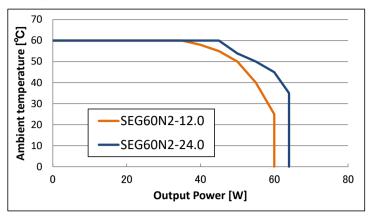
•Peak mode (from nominal output current to output current max) can use within 5 sec only. (Ta=25°C) And average output power need use within nominal output power.

#### Note #3

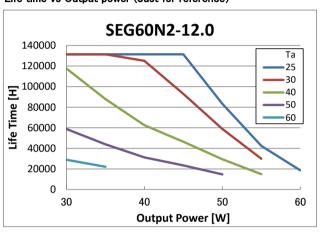
NRCan (Canadian Energy Efficiency Regulation) can be applied from our company. (The level can be displayed on label). DoE can't be applied from our company because we have no local corporation.

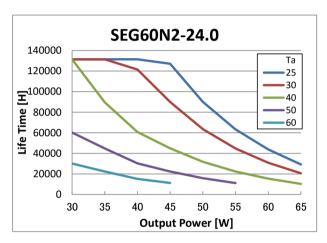


Note \*4
Derating curve (Ambient temperature vs Output power)



Note \*5 Life time vs Output power (Just for reference)





Ta: Ambient temperature [°C]

DC plug, Input inlet form					
The form of the DC plug is determined by the output voltage. Please inquire about it.					
Model	SEG50N2-12.0	SEG60N2-24.0			
DC plug	EIAJ RC-5320A Voltage category IV	Diameter: Outer $\phi$ 5.5 Inner $\phi$ 2.1			
Input inlet form	Class II (2-pole) (IFC60320-1 C8)				

## Dimensions [mm]

SEG Series

