

Constant voltage independent driver PGV Series(Ultra-thin)



Features

- Ultra-thin shell design
- Flicker-free output, which meets the requirement of ErP standard
- Two-stage isolation design, safe and reliable
- High PF, high efficiency, low THD
- SELV and Class II design, suitable for use outside of the light
- Compliance with CE, ENEC, UKCA, RCM, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Functions

- Support central emergency application (100% output in DC input)
- Support self-contained emergency application
- Protective features (short-circuit, overload protection)

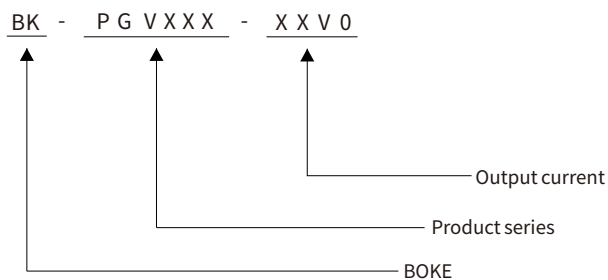
Suitable for lights

- Suitable for CV strip lights etc

Typical applications

- LED indoor lighting
- LED office lighting
- LED commercial lighting

Model coding rules of PGV series



Technical data

Product model	BK-PGV060-12V0	BK-PGV060-24V0	
Output parameters			
Regulation method	Constant voltage	Constant voltage	
Rated output current	5A	2.5A	
Rated output voltage	12VDC	24VDC	
Rated output power	60W Max	60W Max	
Output voltage adjustment	Fixed output	Fixed output	
Output current ripple LF	±2%	±2%	
Voltage accuracy	±5%	±5%	
Linear regulation	±5%	±5%	
Load regulation	±5%	±5%	
Flicker-free	Pst LM = 0.003, SVM = 0.001 ,(The above parameters are obtained by testing with constant voltage light strip)		
Input parameters			
Rated input voltage range	200-240VAC 200-240VAC		
Input voltage range	180-264VAC 200-264VAC		
Input votage shock	<380 V AC		
Input current	<0.5A (Rated input voltage)		
Input frequency	0/50/60Hz		
Input PF/Input DF	PF: 0.99,DF: 0.99,see the electrical values below for details		
Input THD	5.5%,see the electrical values below for details		
Efficiency(Max)	87% ,see the electrical values below for details		
In-rush current	19.2A peak ,360us duration(50 % Ipeak), see the description below for details		
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)		
Switching cycles	> 50,000 switching cycles		
Power consumption	Full load(Pin):69W, No load(Pno): <0.5W, On stand-by(Psb) : N/A, Network stand-by(Pnet) : N/A		
Safety			
Withstand voltage	I/P-O/P(LED):3750VAC		
Mains surge capability	L-N:2KV(Performance criterion:A)		
Leakage current	0.18mA (230V AC & Full load)		
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH		
Control interface			
DALI dimming port	N/A		
pushDIM dimming port	N/A		
1-10V 3in1 dimming port	N/A		
Auxiliary power supply	N/A		
Dimming range	N/A		
Dimming drive mode	N/A		
Emergency support			
Central emergency system	Supported		
Self-contained emergency	Supported		
Environment & Life time			
Operating temperature	Ta=-25-45°C		
Case temperature	Tc=85°C		
Operating humidity	5-85% RH, not condensing		
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing		
IP grade	IP20		
MTBF	500,000H,MIL-HDBK-217F(25°C)		
Life-time	Nominal life-time up to 100,000 h, see the description below for details		
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes		
Acoustic Noise	<25dB(30cm, Normal operation)		
Environmental protection	RoHS		
Certifications and standards			
Certification	CE, ENEC, UKCA, RCM, CCC, EL		
Safety	EN61347-1, EN61347-2-13, EN62384		
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547		
DALI-2	N/A		
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172		
RF	N/A		

Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.

Technical data

Product model	BK-PGV100-12V0	BK-PGV100-24V0	
Output parameters			
Regulation method	Constant voltage	Constant voltage	
Rated output current	8.4A	4.2A	
Rated output voltage	12VDC	24VDC	
Rated output power	100W Max	100W Max	
Output voltage adjustment	Fixed output	Fixed output	
Output current ripple LF	±2%	±2%	
Voltage accuracy	±5%	±5%	
Linear regulation	±5%	±5%	
Load regulation	±5%	±5%	
Flicker-free	Pst LM = 0.011, SVM = 0.009 ,(The above parameters are obtained by testing with constant voltage light strip)		
Input parameters			
Rated input voltage range	200-240VAC 200-240VAC		
Input voltage range	180-264VAC 200-264VAC		
Input votage shock	<380 V AC		
Input current	<0.78A (Rated input voltage)		
Input frequency	0/50/60Hz		
Input PF/Input DF	PF: 0.99,DF: 0.99,see the electrical values below for details		
Input THD	6%,see the electrical values below for details		
Efficiency(Max)	92.5%,see the electrical values below for details		
In-rush current	34.6A peak ,334us duration(50 % Ipeak), see the description below for details		
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)		
Switching cycles	> 50,000 switching cycles		
Power consumption	Full load(Pin):108.1W, No load(Pno): <0.5W, On stand-by(Psb) : N/A, Network stand-by(Pnet) : N/A		
Safety			
Withstand voltage	I/P-O/P(LED):3750VAC		
Mains surge capability	L-N:2KV(Performance criterion:A)		
Leakage current	0.2mA (230V AC & Full load)		
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH		
Control interface			
DALI dimming port	N/A		
pushDIM dimming port	N/A		
1-10V 3in1 dimming port	N/A		
Auxiliary power supply	N/A		
Dimming range	N/A		
Dimming drive mode	N/A		
Emergency support			
Central emergency system	Supported		
Self-contained emergency	Supported		
Environment & Life time			
Operating temperature	Ta=-25-45°C		
Case temperature	Tc=90°C		
Operating humidity	5-85% RH, not condensing		
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing		
IP grade	IP20		
MTBF	500,000H,MIL-HDBK-217F(25°C)		
Life-time	Nominal life-time up to 100,000 h, see the description below for details		
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes		
Acoustic Noise	<25dB(30cm, Normal operation)		
Environmental protection	RoHS		
Certifications and standards			
Certification	CE, ENEC, UKCA, RCM, CCC, EL		
Safety	EN61347-1, EN61347-2-13, EN62384		
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547		
DALI-2	N/A		
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172		
RF	N/A		

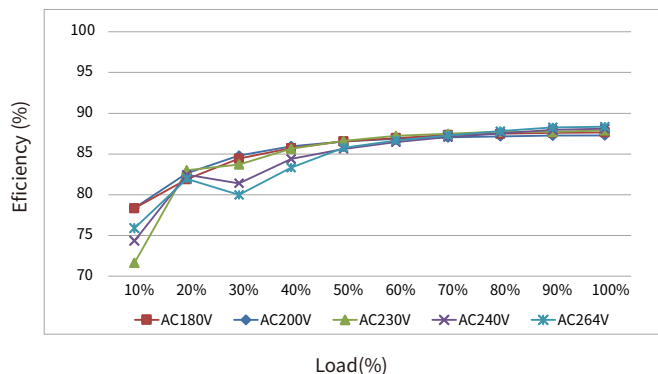
Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.

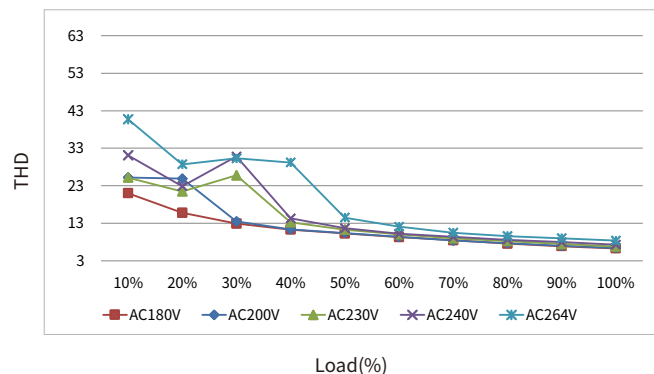
Electrical values

BK-PGV048

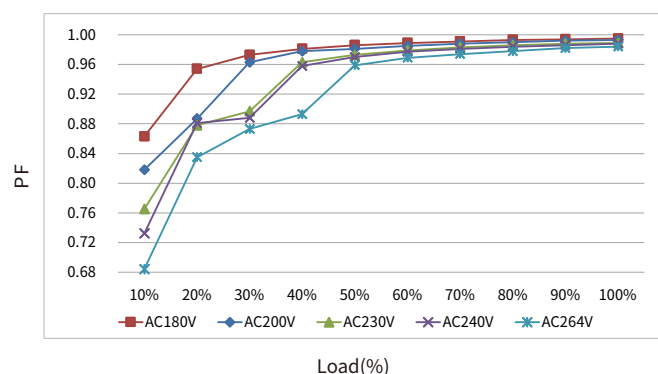
Efficiency vs load



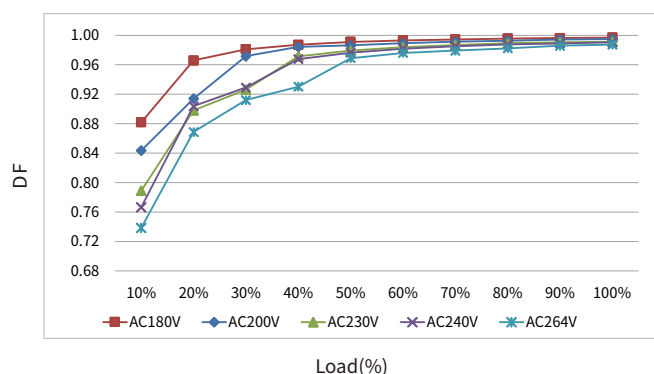
THD vs. Load



Power factor vs. Load

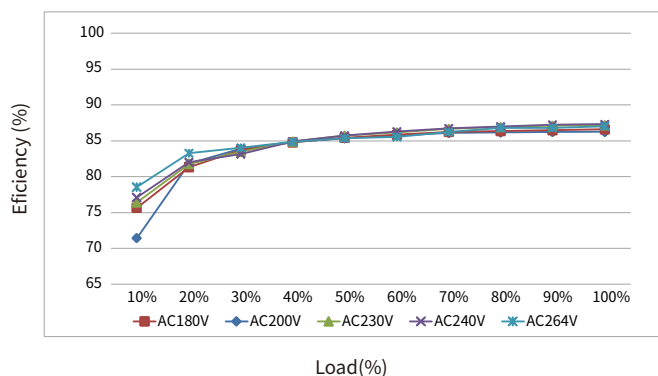


Displacement power vs. Load

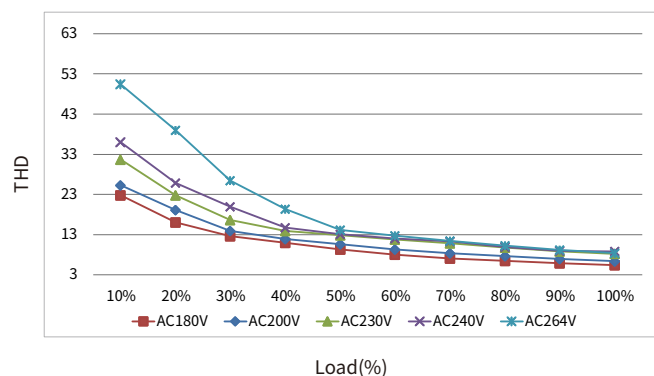


BK-PGV060

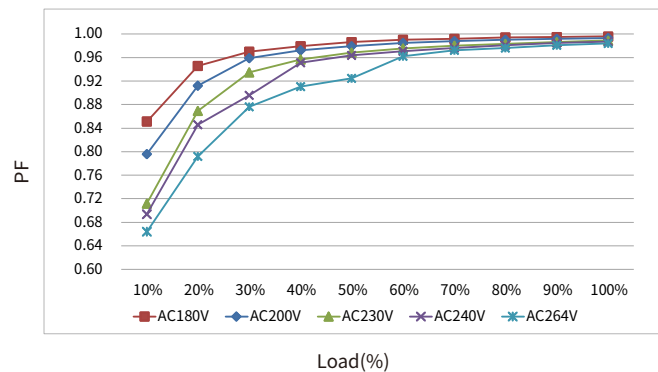
Efficiency vs load



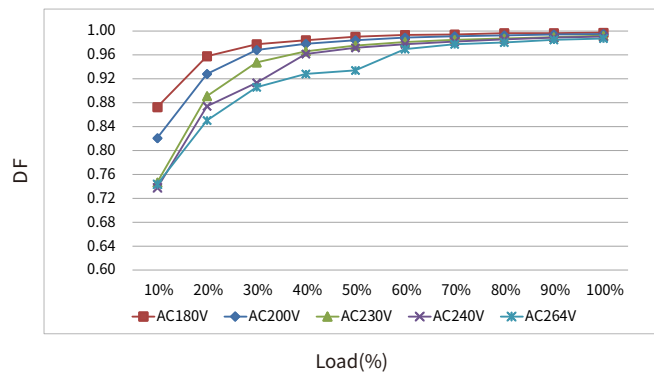
THD vs. Load



Power factor vs. Load



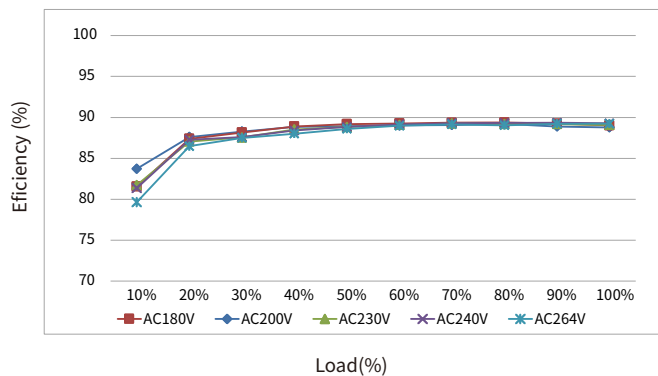
Displacement power vs. Load



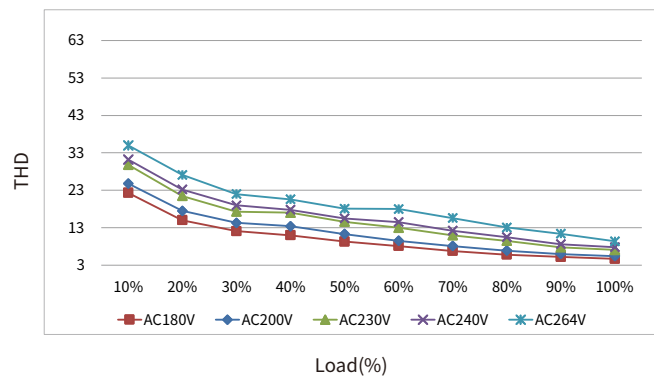
Electrical values

BK-PGV072

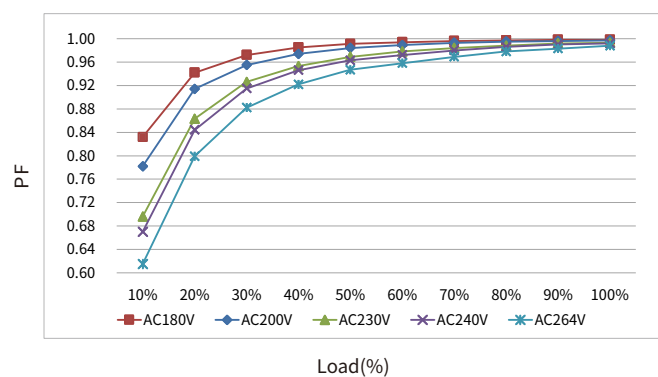
Efficiency vs load



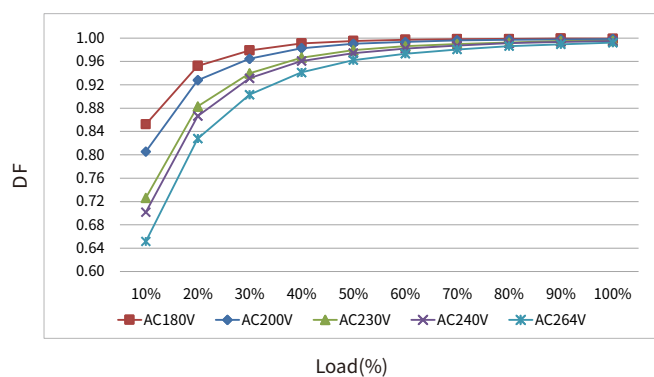
THD vs. Load



Power factor vs. Load

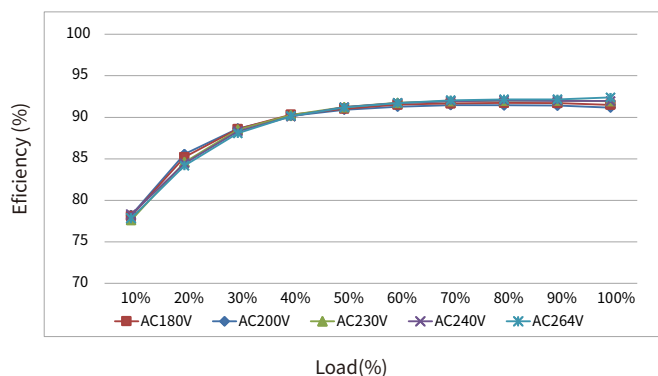


Displacement power vs. Load

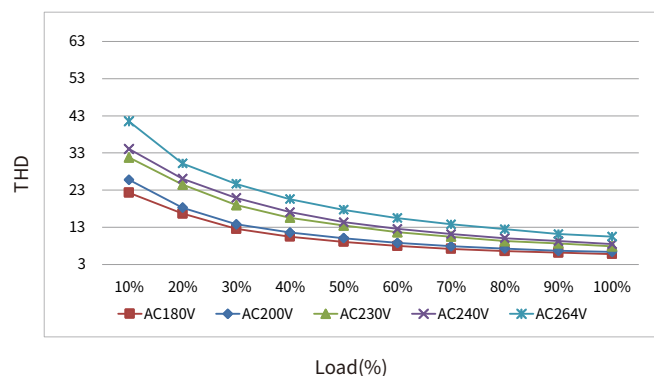


BK-PGV100

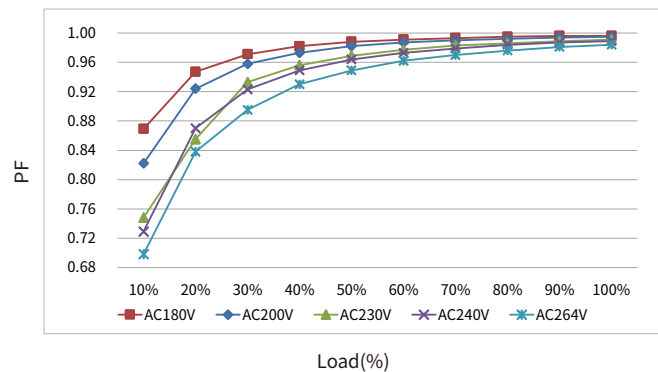
Efficiency vs load



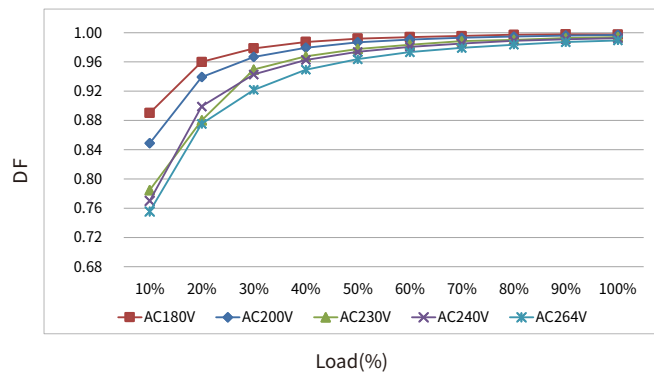
THD vs. Load



Power factor vs. Load



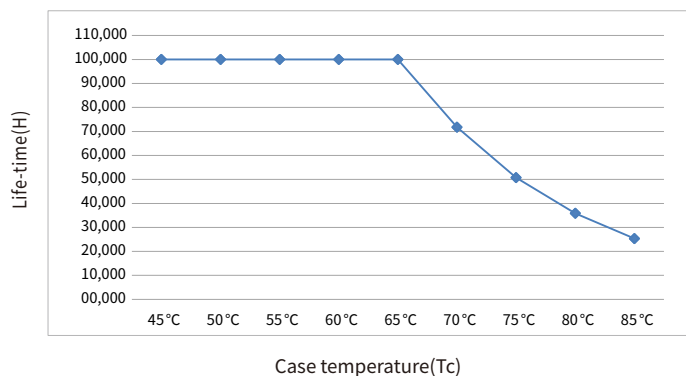
Displacement power vs. Load



Expected life-time

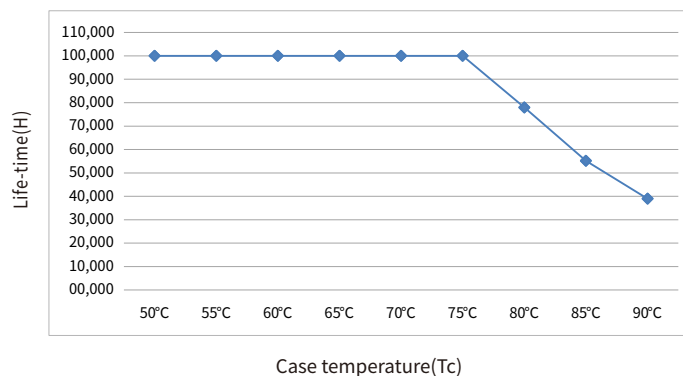
BK-PGV020

Life-time vs. case temperature



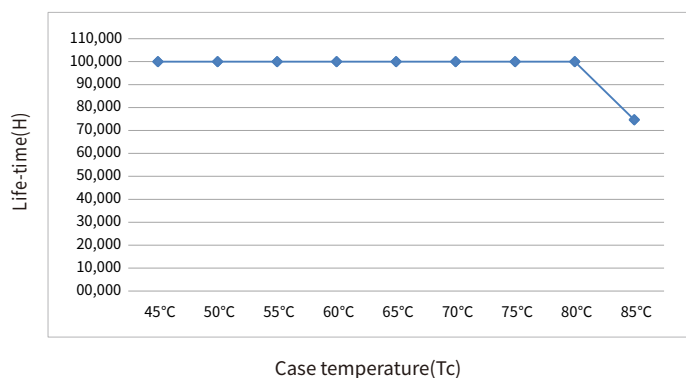
BK-PGV024

Life-time vs. case temperature



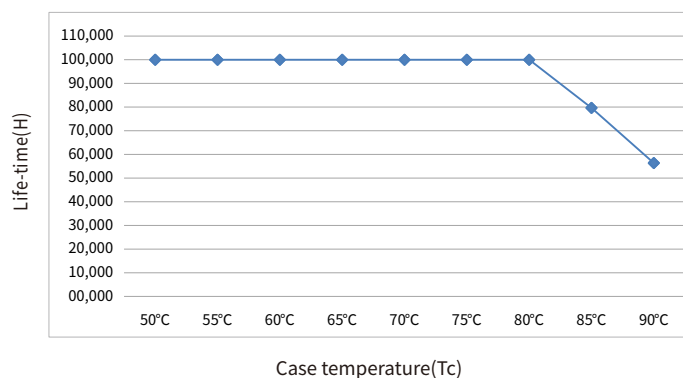
BK-PGV030

Life-time vs. case temperature



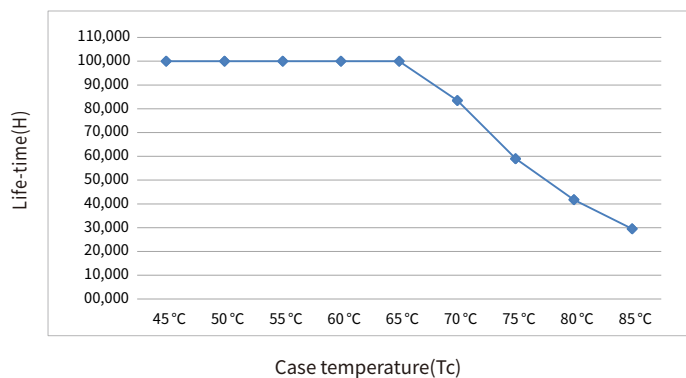
BK-PGV036

Life-time vs. case temperature



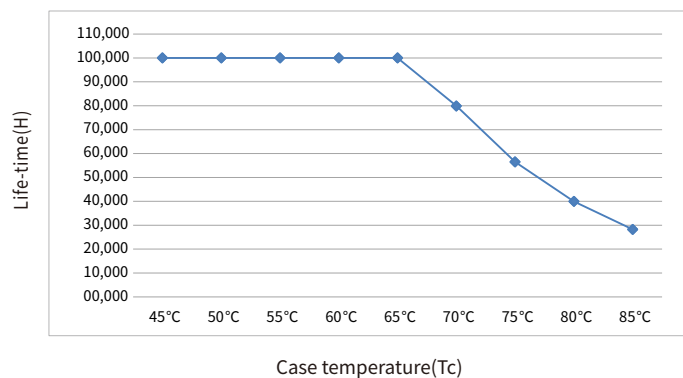
BK-PGV048

Life-time vs. case temperature



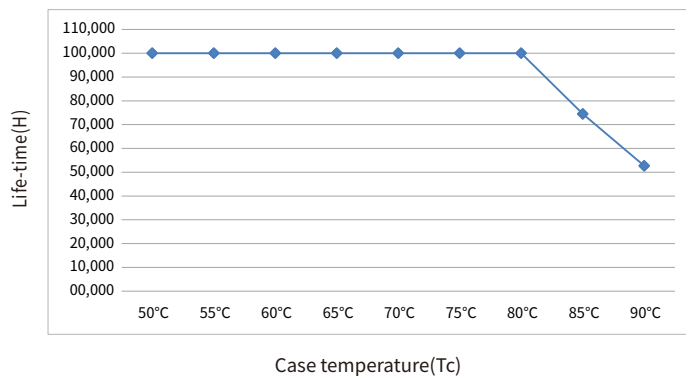
BK-PGV060

Life-time vs. case temperature



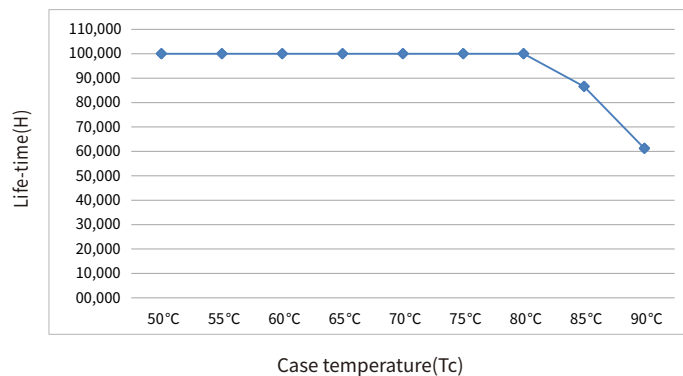
BK-PGV072

Life-time vs. case temperature



BK-PGV100

Life-time vs. case temperature



-The life-time of the LED driver is shown in the figure above
(calculated based on the 90% survival rate).

- The relation of tc to ta temperature depends also on the luminaire design.