

# Outdoor LED Driver Series

## F2 65W-85W LED Driver Series

### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor: > 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP
- Operating Temperature: -40°C ~ 60°C at rated power
- Operating Humidity: 10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)
- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor (Please contact Billion for more details)

Model No.	BLL0065F2-186	BLL0065F2-123	BLL0065F2-093	BLL0075F2-215	BLL0075F2-142
DC Voltage Range	111 ~ 186V	73 ~ 123V	55 ~ 93V	129 ~ 215V	85 ~ 142V
Rated Current	0.35A	0.53A	0.7A	0.35A	0.53A
Efficiency (Max.)	92%				
Rated power	65.1W	65.2W	65.1W	75.25W	75.26W
Ripple and Noise (Max.)	700mV				
Current Tolerance	±5%				
Voltage Tolerance	±10%				
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power				
Dimension (L*W*H)	176mm × 68mm × 39mm				
Weight	≒ 750g				

Model No.	BLL0075F2-108	BLL0075F2-072	BLL0085F2-161	BLL0085F2-122	BLL0085F2-081
DC Voltage Range	54 ~ 108V	43 ~ 72V	96 ~ 161V	60 ~ 122V	48 ~ 81V
Rated Current	0.7A	1.05A	0.53A	0.7A	1.05A
Efficiency	92%				
Rated power	75.6W	75.6W	85.33W	85.4W	85.05W
Ripple and Noise (Max.)	700mV				
Current Tolerance	±5%				
Voltage Tolerance	±10%				
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power				
Dimension (L*W*H)	176mm × 68mm × 39mm				
Weight	≒ 750g				

## F2 100W LED Driver Series

### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor: > 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP
- Operating Temperature: -40°C ~ 60°C at rated power
- Operating Humidity: 10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)
- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor (Please contact Billion for more details)

Model No.	BLL0100F2-190	BLL0100F2-139	BLL0100F2-143	BLL0100F2-096	BLL0100F2-072
DC Voltage Range	114 ~ 190V	86 ~ 139V	85 ~ 143V	57 ~ 96V	45 ~ 72V
Rated Current	0.53A	0.7A	0.7A	1.05A	1.4A
Efficiency (Max.)	93%				
Rated power	100.7W	98W	100.1W	100.8W	100.8W
Ripple and Noise (Max.)	1V				
Current Tolerance	±5%				
Voltage Tolerance	±10%				
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power				
Dimension (L*W*H)	207mm × 68mm × 39mm				
Weight	≒ 1000g				

## F2 120W LED Driver Series

### Electrical Specifications

CE CB IP67 F 110 M M

- Input: 90 ~ 295 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor  
(Please contact Billion for more details)

Model No.	BLLQ120F2-343	BLLQ120F2-227	BLLQ120F2-172	BLLQ120F2-133	BLLQ120F2-115	BLLQ120F2-100	BLLQ120F2-086
DC Voltage Range	205 ~ 343V	136 ~ 227V	103 ~ 172V	80 ~ 133V	69 ~ 115V	60 ~ 100V	51 ~ 86V
Rated Current	0.35A	0.53A	0.7A	0.9A	1.05A	1.2A	1.4A
Efficiency (Max.)	92%						
Rated power	120.05W	120.31W	120.4W	119.7W	120.75W	120W	120.4W
Ripple and Noise (Max.)	1V						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power						
Dimension (L*W*H)	211mm × 68mm × 39mm						
Weight	≒1000g						

## F2 150W LED Driver Series

### Electrical Specifications

UL E341495 CE CB IP67 F 110 M M

- Input: 90 ~ 295 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.75mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor  
(Please contact Billion for more details)

Model No.	BLL0150F2-428	BLL0150F2-284	BLL0150F2-210	BLL0150F2-143	BLL0150F2-113	BLL0150F2-107	BLL0150F2-099
DC Voltage Range	120 ~ 428V	115 ~ 284V	60 ~ 210V	60 ~ 143V	50 ~ 113V	30 ~ 107V	80 ~ 99V
Rated Current	0.35A	0.53A	0.7A	1.05A	1.3A	1.4A	1.5A
Efficiency (Max.)	93%						
Rated power	149.8W	150.52W	147W	150.15W	146.9W	149.8W	148.5W
Ripple and Noise (Max.)	1V						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power						
Dimension (L*W*H)	226mm × 68mm × 39mm						
Weight	≒1000g						

## F2 200W / 250W LED Driver Series

### Electrical Specifications

CE IP67 F 110 M M

- Input: 110 ~ 295 Vac
- Power Factor:  
> 0.95 at 230 Vac at rated power
- Leakage Current: < 0.75mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-20°C ~ 50°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

- One dimming control (1~10V)
- Meet 4kV surge-protection standard IEC61000-4-5

Model No.	BLL0200F2-143	BLL0250F2-179
DC Voltage Range	100 ~ 143V	100 ~ 179V
Rated Current	1.4A	1.4A
Efficiency (Max.)	93.5%	
Rated power	200.2W	250.6W
Ripple and Noise (Max.)	±10%	
Current Tolerance	±5%	
Voltage Tolerance	±10%	
Start Up Time (Max.)	2000ms/230Vac at rated power	
Dimension (L*W*H)	244mm × 68mm × 44mm	
Weight	≒1400g	

## FMA 40W / 75W / 120W for the COB Light Source



### Electrical Specifications



### Class 2

- Universal AC input 108~305 Vac
- Suitable for LED lighting applications
- Built-in ACTIVE PFC Function
- Protections: OVP / SCP / OTP / OCP
- Cooling by free air convection
- Tc 90 degree C
- Metal casing design
- Suitable for industrial/commercial/indoor/outdoor lighting application

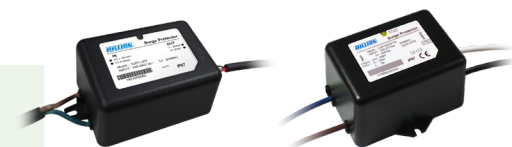
Model No.	BLL040FMA-042-0700C	BLL040FMA-042-0850C	BLL040FMA-042-1100C	BLL040FMA-042-1200C
DC Voltage Range	32V ~ 42V	32V ~ 42V	32V ~ 42V	32V ~ 42V
Rated Current	700mA ± 5%	850mA ± 5%	1100mA ± 5%	1200mA ± 5%
Efficiency (Max.)	90%			
Rated power	29.4W	35.7W	46.0W	50.4W
Ripple and Noise (Max.)	4.2V			
Current Tolerance	± 5%			
Voltage Tolerance	± 10%			
Dimension (L*W*H)	110 × 69.5 × 33mm			
Weight	≈ 400g			

Model No.	BLL075FMA-042-1450C	BLL075FMA-042-1600C	BLL075FMA-042-1800C	BLL075FMA-042-1950C	BLL120FMA-042-2700C
DC Voltage Range	32V ~ 42V	32V ~ 42V	32V ~ 42V	32V ~ 42V	30V ~ 42V
Rated Current	1450mA ± 5%	1600mA ± 5%	1800mA ± 5%	1950mA ± 5%	2700mA ± 5%
Efficiency (Max.)	89%				88%
Rated power	60.9W	67.2W	75.6W	81.9W	113.4W
Ripple and Noise (Max.)	4.2V				4.2V
Current Tolerance	± 5%				± 5%
Voltage Tolerance	± 10%				± 10%
Dimension (L*W*H)	110 × 90.5 × 43.2mm				193.8 × 65 × 36.5mm
Weight	≈ 700g				≈ 900g

## High Performance Lightning and Surge Protection Products

### Key Features of Surge Protective Devices (SPD)

- High performance surge protection for LED drivers
- Line to Ground & Line to Line protected
- Serial (2 wires) connection style
- Rugged IP67 design for indoor or outdoor installations
- LED status indicator to show the status of device



Model No.	102PL-027-240V	102PL-027-277V	LSP10GI277S
Operating Voltage	240Vac 50/60Hz	277Vac 50/60Hz	100~277Vac 50/60Hz
MCOV (Maximum Continuous Operating Voltage)	300 VAC	320VAC	320VAC
Maximum Surge Current (8/20us)	5KA	5KA	10KA
Maximum Surge Voltage	10KV	10KV	20KV
Dimension (L*W*H)	89.5mm x 49mm x 33mm	89.5mm x 49mm x 33mm	70.1mm x 62.6mm x 38mm
Weight	≈ 200g		VOLTAGE PROTECTION LEVEL : 1570 V

## High Performance Lightning and Surge Protection Products

### Key Features of Surge Protective Devices (SPD)

- High performance surge protection for LED drivers
- Line to Ground & Line to Line protected
- Serial (3 wires) connection style
- Rugged IP67 design for indoor or outdoor installations
- LED status indicator to show the status of device



Model No.	105PL-054-3W277V
Operating Voltage	100 ~ 277Vac 50/60Hz
MCOV (Maximum Continuous Operating Voltage)	300 VAC
Maximum Surge Current (8/20us)	5KA
Maximum Surge Voltage	10KV
Dimension (L*W*H)	70.1mm x 62.6mm x 38mm
Weight	≈ 200g

## H2 150W LED Driver Series

### Electrical Specifications



- Input: 180 ~ 295 Vac
- Power Factor:  
> 0.95 at 230 Vac at rated power
- Leakage Current: < 0.75mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

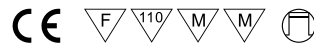
- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor
- Timer dimming control (Please contact Billion for more details)

Model No.	BLLQ150H2-214	BLLQ150H2-143	BLLQ150H2-107
DC Voltage Range	136 ~ 214V	93 ~ 143V	70 ~ 107V
Rated Current	0.7A	1.05A	1.4A
Efficiency (Max.)	93%		
Rated power	147W	150.15W	149.8W
Ripple and Noise (Max.)	1V		
Current Tolerance	±10%		
Voltage Tolerance	±10%		
Start Up Time (Max.)	1000ms/230Vac at rated power		
Dimension (L*W*H)	226mm × 68mm × 39mm		
Weight	≐ 1000g		



## FM2 60W LED Driver Series

### Electrical Specifications



- Input: 100 ~ 305 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)

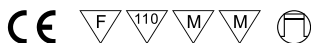
- Dimming control (PWM, 0~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- No load power < 0.5W

Model No.	BLLP060FM2-030	BLLP060FM2-036	BLLP060FM2-042	BLLP060FM2-048	BLLP060FM2-057	BLLP060FM2-072	BLLP060FM2-086
DC Voltage Range	20 ~ 30V	24 ~ 36V	28 ~ 42V	32 ~ 48V	37 ~ 57V	47 ~ 72V	56 ~ 86V
Rated Current	2.1A	1.7A	1.4A	1.3A	1.15A	0.85A	0.7A
Efficiency	89%						
Rated power	63W	61.2W	58.8W	62.4W	65.55W	61.2W	60.2W
Ripple and Noise (Max.)	±7%						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	< 500ms, 115 / 230 Vac at rated power						
Dimension (L*W*H)	184mm × 54.2mm × 37.8mm						
Weight	≐ 500g						



## FM2 80W LED Driver Series

### Electrical Specifications



- Input: 100 ~ 305 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)

- Three-in-One dimming control (PWM, 0~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- No load power < 0.5W

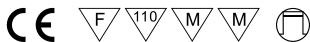
Model No.	BLLP080FM2-030	BLLP080FM2-036	BLLP080FM2-042	BLLP080FM2-048	BLLP080FM2-057	BLLP080FM2-081	BLLP080FM2-123
DC Voltage Range	20 ~ 30V	24 ~ 36V	28 ~ 42V	32 ~ 48V	38 ~ 57V	53 ~ 81V	84 ~ 123V
Rated Current	2.7A	2.3A	2.0A	1.7A	1.5A	1.05A	0.7A
Efficiency	88%						
Rated power	81W	82.8W	84W	81.6W	85.5W	85.05W	86.1W
Ripple and Noise (Max.)	±7%						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	< 500ms, 115 / 230 Vac at rated power						
Dimension (L*W*H)	198mm × 62mm × 38.7mm						
Weight	≐ 850g						



## FMH 75W LED Driver Series



### Electrical Specifications



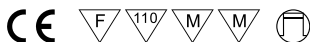
- Input: 180 ~ 305 Vac
- Power Factor: >0.95 at 230 Vac at rated power
- Leakage Current: <0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP
- Operating Temperature: -40°C ~ 60°C at rated power
- Operating Humidity: 10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)
- Dimming control (PWM, 0~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- No load power <0.5W

Model No.	BLLP075FMH-030	BLLP075FMH-036	BLLP075FMH-042	BLLP075FMH-048	BLLP075FMH-057	BLLP075FMH-072	BLLP075FMH-086
DC Voltage Range	20 ~ 30V	24 ~ 36V	28 ~ 42V	32 ~ 48V	37 ~ 57V	47 ~ 72V	56 ~ 86V
Rated Current	2.5A	2.08A	1.78A	1.56A	1.31A	1.04A	0.87A
Efficiency	89%						
Rated power	75W	74.88W	74.76W	74.88W	74.67W	74.88W	74.82W
Ripple and Noise (Max.)	±7%						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	<500ms , 230 Vac at rated power						
Dimension (L*W*H)	184mm × 54.2mm × 37.8mm						
Weight	≒ 500g						

## FMH 100W LED Driver Series



### Electrical Specifications



- Input: 180 ~ 305 Vac
- Power Factor: >0.95 at 230 Vac at rated power
- Leakage Current: <0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP
- Operating Temperature: -40°C ~ 60°C at rated power
- Operating Humidity: 10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)
- Three-in-One dimming control (PWM, 0~10V, or resistance)
- Meet 4kV surge-protection standard IEC61000-4-5
- No load power <0.5W

Model No.	BLLP100FMH-030	BLLP100FMH-036	BLLP100FMH-042	BLLP100FMH-048	BLLP100FMH-057	BLLP100FMH-081	BLLP100FMH-123
DC Voltage Range	20 ~ 30V	24 ~ 36V	28 ~ 42V	32 ~ 48V	38 ~ 57V	53 ~ 81V	84 ~ 123V
Rated Current	3.3A	2.75A	2.35A	2.05A	1.73A	1.22A	0.8A
Efficiency	88%						
Rated power	99W	99W	98.7W	98.4W	98.61W	98.82W	98.4W
Ripple and Noise (Max.)	±7%						
Current Tolerance	±5%						
Voltage Tolerance	±10%						
Start Up Time (Max.)	<500ms , 230 Vac at rated power						
Dimension (L*W*H)	198mm × 62mm × 38.7mm						
Weight	≒ 850g						

## F 50W LED Driver Series



### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor: >0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: <0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP
- Operating Temperature: -40°C ~ 50°C at rated power
- Operating Humidity: 10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)
- Timer dimming control (Please contact Billion for more details)
- Meet 4kV surge-protection standard IEC61000-4-5

Model No.	BLL0050F-12	BLL0050F-24	BLL0050F-36	BLL0050F-48
DC Voltage Range	8.5 ~ 12V	19 ~ 24V	26 ~ 36V	35 ~ 48V
Rated Current	4.2A	2.1A	1.4A	1.05A
Efficiency (Max.)	89%			
Rated power	50.4W	50.4W	50.4W	50.4W
Ripple and Noise (Max.)	2.5V	3V	4V	4.5V
Current Tolerance	±5%			
Voltage Tolerance	±10%			
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power			
Dimension (L*W*H)	176mm × 68mm × 39mm			
Weight	≒ 800g			

## F 70W LED Driver Series

### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.5mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 50°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 200K hour min. MIL-HDBK-217F (25°C)

- Timer dimming control (Please contact Billion for more details)
- Meet 4kV surge-protection standard IEC61000-4-5

Model No.	BLL0070F-12	BLL0070F-24	BLL0070F-30	BLL0070F-36	BLL0070F-48	BLL0070F-54
DC Voltage Range	8.5 ~ 12V	18 ~ 24V	22 ~ 30V	26 ~ 36V	35 ~ 48V	37 ~ 54V
Rated Current	4.9A	3.15A	2.45A	2.1A	1.4A	1.4A
Efficiency (Max.)	89%					
Rated power	58.8W	75.6W	73.5W	75.6W	67.2W	75.6W
Ripple and Noise (Max.)	2.5V	3V	3.2V	4V	4.5V	5V
Current Tolerance	±5%					
Voltage Tolerance	±10%					
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power					
Dimension (L*W*H)	176mm × 68mm × 39mm					
Weight	≐ 800g					

## F1 100W LED Driver Series

### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.75mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Timer dimming control (Please contact Billion for more details)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor (Please contact Billion for more details)

Model No.	BLL0100F1-30-C	BLL0100F1-36-C	BLL0100F1-48-C	BLL0100F1-54-C
DC Voltage Range	21 ~ 30V	26 ~ 36V	33 ~ 48V	38 ~ 54V
Rated Current	3.5A	2.8A	2.1A	1.75A
Efficiency (Max.)	93%			
Rated power	105W	100.8W	100.8W	94.5W
Ripple and Noise (Max.)	500mV			
Current Tolerance	±5%			
Voltage Tolerance	±10%			
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power			
Dimension (L*W*H)	211mm x 68mm x 39mm			
Weight	≐ 1000g			

## F1 150W LED Driver Series

### Electrical Specifications



- Input: 90 ~ 295 Vac
- Power Factor:  
> 0.98 at 115 Vac / ≥ 0.95 at 230 Vac at rated power
- Leakage Current: < 0.75mA at 230 Vac/50Hz
- Protection: OTP / OCP / OVP / SCP

- Operating Temperature:  
-40°C ~ 60°C at rated power
- Operating Humidity:  
10% ~ 95% RH non-condensing
- MTBF: 300K hour min. MIL-HDBK-217F (25°C)

- Three-in-One dimming control (PWM, 1~10V, or resistance)
- Timer dimming control (Please contact Billion for more details)
- Meet 4kV surge-protection standard IEC61000-4-5
- Output current can be adjusted via built in variable resistor (Please contact Billion for more details)

Model No.	BLL0150F1-30-C	BLL0150F1-36-C	BLL0150F1-48-C	BLL0150F1-54-C
DC Voltage Range	21 ~ 30V	26 ~ 36V	33 ~ 48V	38 ~ 54V
Rated Current	5.25A	4.2A	3.15A	2.8A
Efficiency (Max.)	94%			
Rated power	157.5W	151.2W	151.2W	151.2W
Ripple and Noise (Max.)	500mV			
Current Tolerance	±5%			
Voltage Tolerance	±10%			
Start Up Time (Max.)	2000ms/115 Vac and 1000ms/230 Vac at rated power			
Dimension (L*W*H)	211mm x 68mm x 39mm			
Weight	≐ 1000g			