

Flash Lamp Power System

Electrical Characteristics		
AC Input	Voltage	3Ph 380Vac, 440Vac $\pm 10\%$, 50/60Hz
	Power Factor	Over 90%
DC Output	Wattage	186kW, 312kW Total: 498kW
	Voltage	18kVdc
	Current	28Adc
	Efficiency	Over 90%
Control	Mode	CC : Constant Current Control CV : Constant Voltage Control
Topology	Converter	3Phase Full Bridge Rectifier
	Inverter	IGBT Full Bridge, LC Series resonance
Ignition	Voltage	Peak 30kV
	Width	Over 1 μ s
External Interface		Analog In/Out : Output adjustment. Digital In/Out : Remote Operation. Communication : Modbus RTU
Protection		Over voltage, Over current, Over load, Over Temperature, Input Fuse, Output short circuit, Open circuit, Water flow



Xenon Lamp



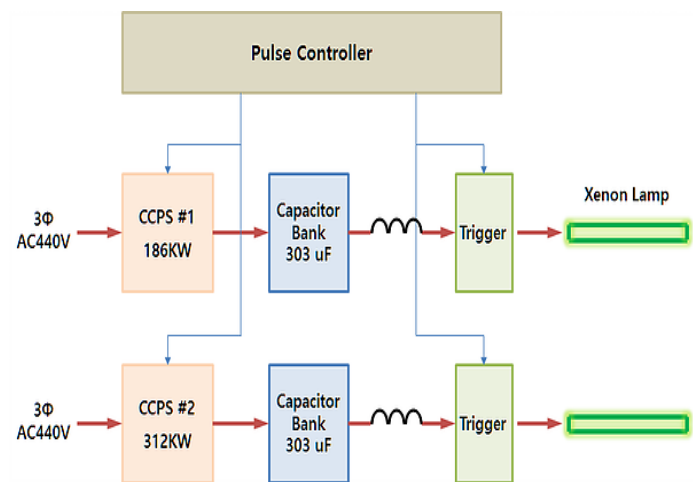
CCPS Module

Capacitor Bank	
Capacitance	303 μ F $\pm 5\%$
Charging Voltage	18 kV
Discharging Current	Peak 7,400A
Charge / Discharge Rate	3 Hz
Cooling	Convection

Trigger Ignition	
Series Inductance	366 μ H $\pm 5\%$
Discharge Current	Peak 7,400A
Trig Voltage	Peak 30kV
Topology	LC Resonance
Cooling	Convection

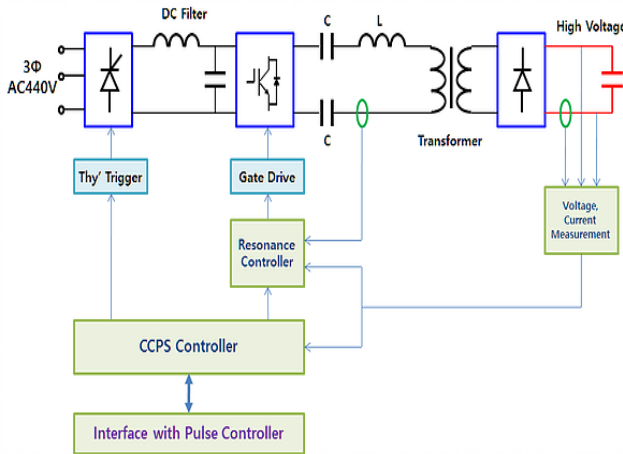
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- AMOLED의 Poly Si 결정화에 적용되는 Flash Lamp 구동에는 고전압, 대전류 Pulse Power 는 대용량 Capacitor 에 수 KV의 고전압을 충전하여 짧은 시간에 저장된 에너지를 방출하여 발생시킨다.
- Flash Lamp 구동에는 대용량 Capacitor Bank, 고전압 Charging Power Supply, 그리고 Lamp Trigger 등의 장치가 필요하다.
- Flash Lamp Power System 은 Flash Lamp 점등에 필요한 모든 장치를 포함하여 설정 시간 주기에 맞추어 Lamp를 점등하는 통합 시스템이다.

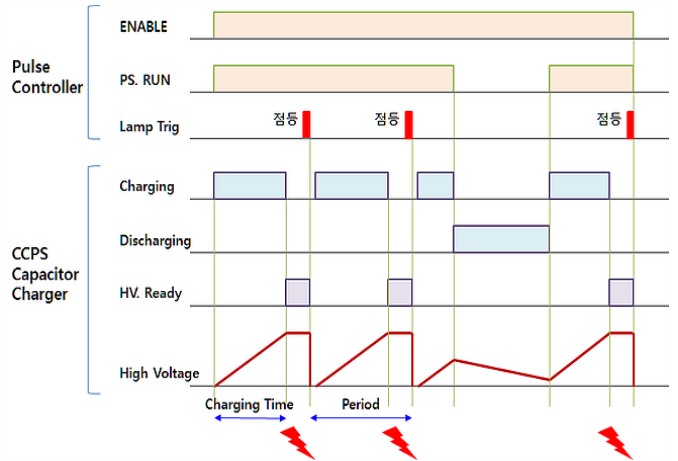


Flash Lamp System Configuration

Power Supply Topology & Operation Sequence

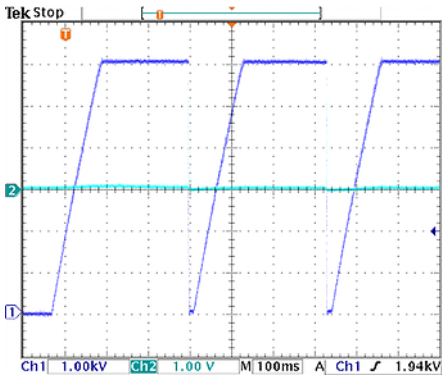


Power Topology

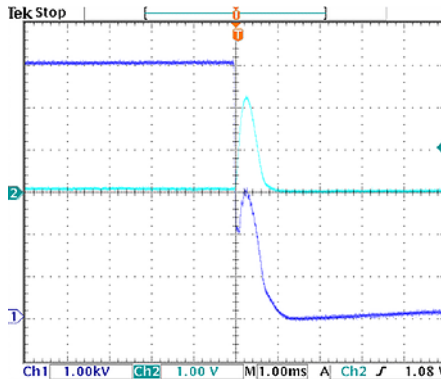


Operation Sequence

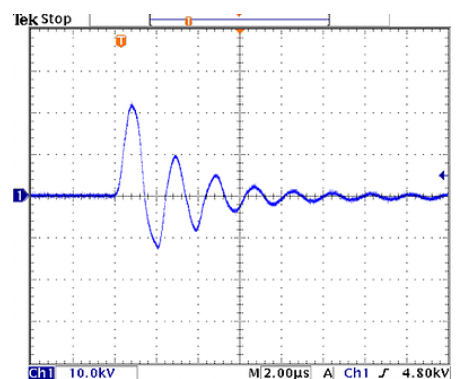
출력특성 Output Characteristics



Charging Capacitor



Discharging Capacitor



Trig Voltage

Power Supply Panel Configuration

