



Power Integration Technology of Korea

POINT TEK

AC LED driver IC special company in KOREA

www.point-tek.com


Power Integration Technology of Korea

- AC LED driver IC special company in KOREA
- Power IC design specialist (Fabless Company)
- Free voltage operation capable solution for AC driver (Universal Voltage)
- Adaptor or converter less lighting solution (IC on Board or separated)
- Flicker-free solution (Percent Flicker < 1%)
- Providing the optimal customized lighting solutions (Optimization)
- Many technology patents related to AC LED driving (US, KR, CN, etc.)

About us

- **Company** Fabless company specializing in LED lighting
- **Specialty** Core competence in power IC and power electronics
- **History** Established July 2009
(Located in Yongin-City, Gyeonggi-Do, Korea)
- **Business Model** LED driver IC & LED lighting module sales

History

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- | | | | | | |
|-------------|----|-------------------------------------------------------------------------------------------------|-------------|----|-----------------------------------------------------------------------------------|
| 2022 | 12 | Selected as 'Promising Small and Medium-Sized Enterprise' by the Gyeonggi Provincial Government | 2016 | 05 | Mass production of linear type dual driver IC and simultaneous driver IC |
| | 06 | Awarded "Excellent company in new technology development" for LED part | 2015 | 11 | Developed Linear type dual voltage driving IC (World's first, Patent application) |
| 2021 | 07 | Mass production of Linear type flicker-free LED driver IC (< 1%) | | 08 | LED light source simultaneous driving type LED driver IC developed |
| 2020 | 07 | ISO 9001 quality management certification | 2014 | 09 | Mass production of linear type flicker reduced LED driver IC (< 30%) |
| | 05 | Developed Advanced AC direct LED driver IC (Uniformity & Heat optimized, High efficiency) | 2013 | 02 | Mass production of linear type LED driver IC |
| | 01 | Mass production of linear type flicker reduced LED driver IC (< 3%) | 2012 | 06 | Exclusive supply contract for linear type LED driver IC (Global LED Company) |
| 2019 | 07 | Awarded "2019 Korea Patent Excellence Award in Electric and Electronic" | 2011 | 12 | Mass production and sales of switching type LED driver IC |
| 2018 | 12 | Mass production of linear type flicker reduced LED driver IC (< 10%) | 2009 | 12 | Venture company registered |
| | 05 | Established R&D Center | | 07 | Point Tek founded |
| 2017 | 11 | Mass production of linear type universal voltage AC direct LED driver IC | | | |

- **Product** AC direct LED driver IC & AC direct driver IC integrated lighting module
 - ❶ Linear type flicker-free AC direct LED driver IC
 - ❷ Linear type simultaneous driving AC direct LED driver IC
 - ❸ Linear type dual voltage driving AC direct LED driver IC
 - ❹ Linear type universal voltage driving AC direct LED driver IC
- **Production Capacity** 100KK (EA/Month) IC Based
100K (EA/Month) Down light module based

Synchronous AC LED Driver IC

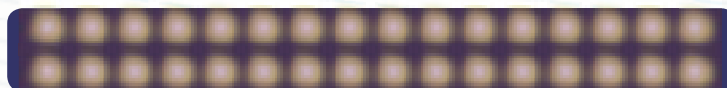
Parameters	M Company	R Company	Point Tek
Efficiency (%)	> 80	> 80	> 80
Power Factor	> 0.99	> 0.99	0.998
THD (%)	< 9	< 9	8.06
Maximum Output Power under 120V/AC (W)	20	12 <	35
Number of Turn-on LED strings at period (1) (EA)	1	1	4
Number of Turn-on LED strings at period (2) (EA)	2	2	4
Number of Turn-on LED strings at period (3) (EA)	3	3	4
Number of Turn-on LED strings at period (4) (EA)	4	4	4
LED Utilization in four-string LED (%)	62.5	62.5	100

PT's driver turns on LEDs synchronously for all voltage ranges but others turn on sequentially
No other company provide 100% LED utilization in AC LED driver

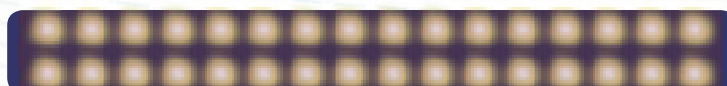
► World First Synchronous AC LED Driving Technology (PT's Patented)

POINTTEK

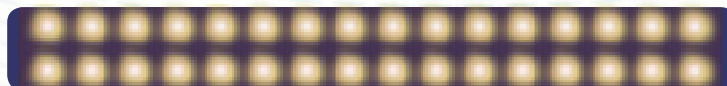
AC 50V



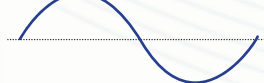
AC 100V



AC 150V



AC 200V



OTHER COMPANIES

AC 50V



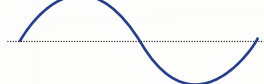
AC 100V



AC 150V



AC 200V

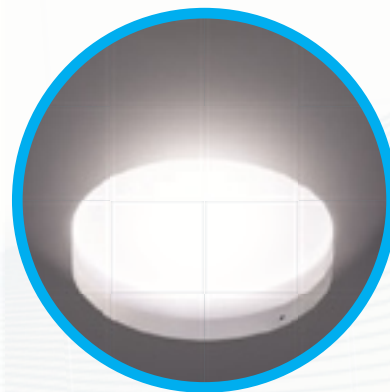


Flicker-Free AC LED Driver IC

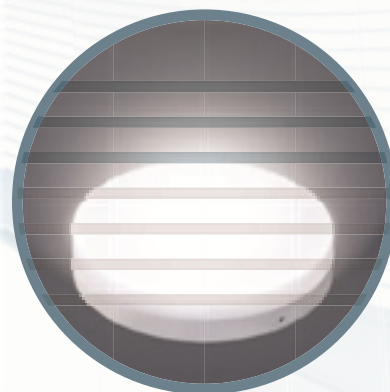
- ▶ No LED Blinking
- ▶ Percent Flicker : less than 1 %
- ▶ Dimmable Solutions (Triac, 0 to 10, etc.)
- ▶ Meet all new Flicker standards (PST, SVM, CA-Title 24, etc.)
- ▶ Smaller capacitance than before
- ▶ World best solution for Flicker-free AC LED Driver IC (PT's Patent)



※ REAL TESTING DATA



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OTHER
COMPANIES

Universal AC LED Driver IC

Automatically adjusted Series-Parallel connections depending on the input voltage

Automatically adjusted the LED current according to the input voltage

PT's patented universal solution provides the same power over wide voltage ranges.



120V / 10.7W



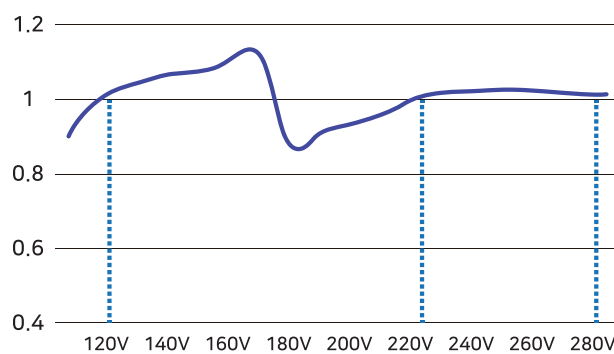
220V / 9.8W



277V / 10.2W

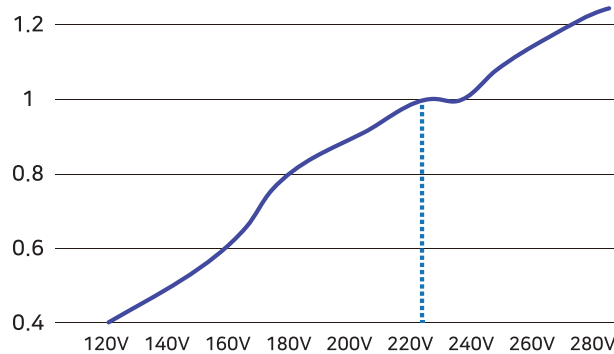
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Vin VS Power



OTHER COMPANIES

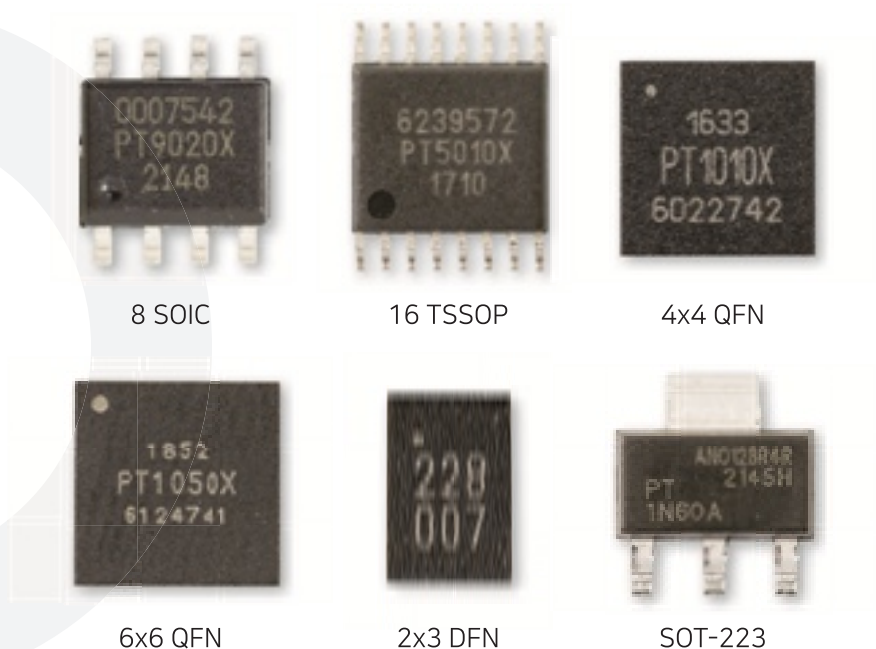
Vin VS Power



Product List

Device ID	LED Channel & Characteristics	Recommended Applications
PT5010X	- 4 Channel - Low Voltage (for dispersion of heat)	- Lamps - Down Light * Middle - High power
PT7120X	- 2-4 Channel - Low Voltage - Universal Voltage	- High Bay, Flood Light - Explosion Proof Light * Middle - High power
PT1011X	- 2 Channel - High Voltage (for dispersion of heat)	- Low Cost Lamps & Bulb - Down Light - Tube * Low power
PT1010X (A)	- 3 Channel - High Voltage (for dispersion of heat)	- Low Cost Lamps - Down Light - Tube * Low power
PT1050X	- 5 Channel - Universal Voltage - Middle or High Power	- Troffer - High Bay, Flood Light - Explosion Proof Light * Middle - High power
PT7111X	- Flicker-free - Only 1 Capacitor	- Indoor Lighting - Special Lighting * Low power
PT8410X	- Sub IC for dimming - Flicker-free	- Indoor Lighting - Special Lighting * Low power
PT1020X	- Mirror IC (Sub IC) - For Synchronous driving	- LED Fluorescent Lamp - Troffer

Driver IC PKG Type List



Downlight Series



6 inch model

(PT1010X / PT1520X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ Switching dimmable
- ▶ Dimming (0 to 10, triac)
- ▶ Satisfy CA Title 24
- ▶ %Flicker < 30%

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
120	15	1000 ↑	3000	90	20	0.96



4 inch model

(PT7111X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ Analog dimmable (0 to 10)
- ▶ Satisfy CA Title 24
- ▶ %Flicker < 1%
- ▶ Small Capacitor

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
120	7	490 ↑	3000	90	0.2	0.98

Parking lot Series



1ft model

(PT7120X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ Dimming (0 to 10, triac)
- ▶ Satisfy CA Title 24
- ▶ %Flicker < 30%
- ▶ Wide voltage range (AC 120V,220V~240V,277V)

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
120	10.7	1000 ↑	3000	90	26	0.92
220	10.4	1000 ↑	3000	90	18	0.99
277	10.8	1000 ↑	3000	90	14	0.99

2ft model

(PT7111X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ Analog dimmable (0 to 10)
- ▶ Satisfy CA Title 24
- ▶ %Flicker < 1%
- ▶ Small Capacitor

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
120	20	1600 ↑	3000	90	0.2	0.98

High-bay Series



150W model

(PT1050X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ High efficiency

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
220	150	17,250	5700	80	100	0.99



200W model

(PT1050X Adopted)

- ▶ LED Driver integrated(by IC)
- ▶ High efficiency

Volt	Watt	Lm	CCT	CRI	%Flicker	PF
220	200	23,000	5700	80	100	0.99

Certificate

Patents

Many patents for AC Direct driving technologies such as flicker-free driving technology, universal driving technology, and EMI-reduced driving technology.



USA

KOREA

CHINA

Awards & Certificates

ISO 9001:2015

Certificate of Industrial R&D Center

Certificate of Promising Small And Medium-Sized Enterprise

Awarded "Excellent company in new technology development" for LED part

Awarded "2019 Korea Patent Excellence Award in Electric and Electronic"



ISO 9001:2015

Certificate of Industrial R&D Center

Certificate of Promising Small And Medium-Sized Enterprise

Award for Excellent company in new technology development for LED part

2019 Korea Patent Excellence Award in Electric and Electronic



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