

Product Brief

XDPL8220

The simple and innovative entry point to smart lighting

Modern LED technology offers many advanced possibilities for lighting applications. The digital and configurable LED driver IC XDPL8220 enables the lighting industry to realize essential features for smart lighting and increases the benefits to the end user and the manufacturers.

Flexibility saves efforts and cost

The digital core of the XDPL8220 enables a variety of systems based on the same device. Its advanced control algorithms provide the possibility to realize lighting Electronic Control Gear (ECG) for constant current or constant voltage mode in the same circuit. The power limitation mode keeps the light on while it optimally utilizes the components capabilities. The device is adaptable to the target application, by providing a comprehensive parameter set for adjustment of operating constraints.

Essentially no low frequency flicker

The modern two stage architecture offered by the XDPL8220 significantly eases the implementation of up and coming flicker standards by eliminating the low frequency variation from the mains supply and guaranteeing a stable output.

Low stand-by power facilitates permanent operation of the ECG

Supporting a standby power of less than 70 mW, the XDPL8220 significantly reduces the non-active power consumption while still reacting to external events or user requests.

Intelligent temperature management protects longevity of luminaries

Any over temperature of external components, measured via an external NTC resistor, managed intelligently by gradually reducing the output current. Until the over temperature situation is resolved. As last resort when the temperature still exceeds the limit the device will shut down.

Small BoM due to integration and primary side control

The primary side control saves extra components especially an optocoupler, thus reducing cost and effort and increasing reliability. The digital control loop saves the parts and efforts for external loop compensation. With its integrated functionality the XDPL8220 enables an increase of the feature set without external parts.

Key features

Power conversion with solid performance and more

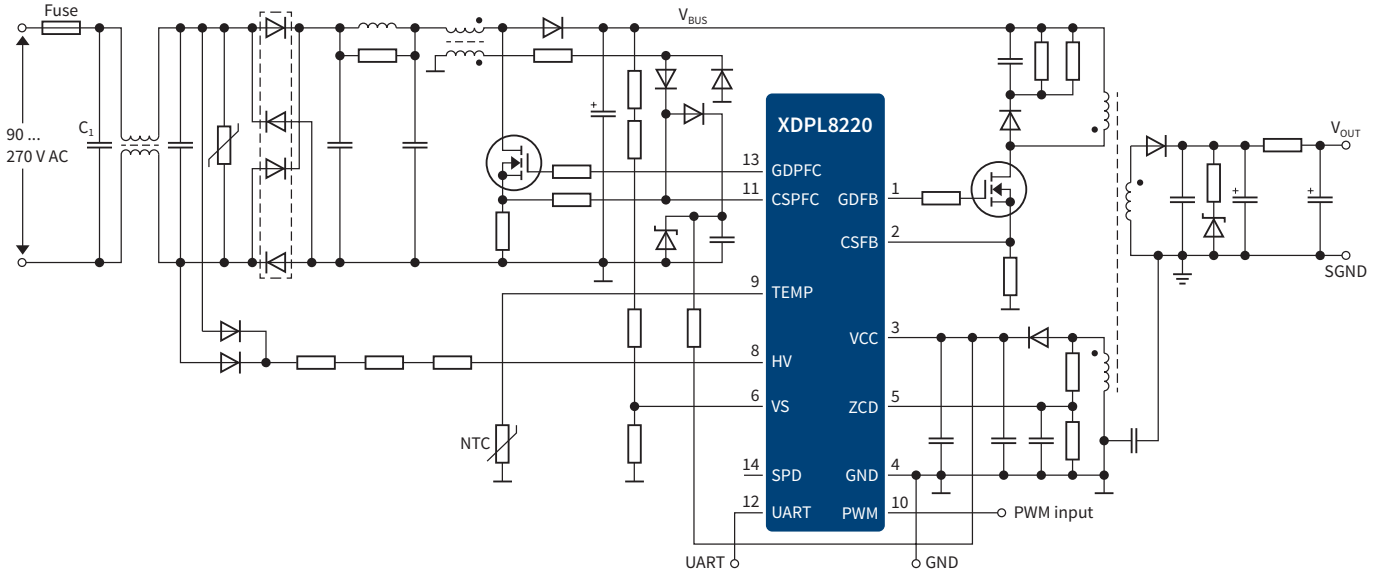
- > Input voltage range 90–305 V_{AC}
- > Efficiency > 90 percent
- > Power factor > 0.9
- > THD < 15 percent compliant with IEC 61000-3-2 class C
- > Device selects optimum between quasi-resonant or discontinuous conduction mode
- > Dimming via current amplitude reduction
- > Digital parameter setting
- > Constant current, constant voltage and limited power modes simultaneously available
- > Flicker free dual stage topology
- > External temperature sensor
- > Stand-by power < 70 mW
- > Smooth temperature management
- > All relevant error conditions are monitored and protected
 - Undervoltage
 - Overvoltage
 - Open-load
 - Output shorted



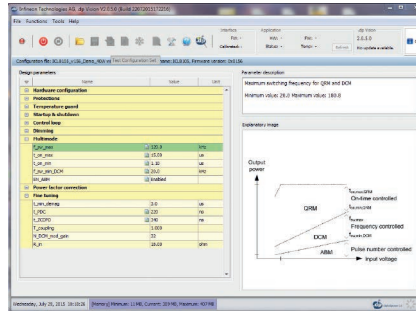
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Typical application schematic



.dp interface board to PC
SP001260696 or www.hitex.com/dp



.dp Vision parameter tool
Download for free:
<http://download.hitex.de/dpVisionCustomerDistribution>



XDPL8220 230 V, 50 W board

Product summary

Type	Description ¹⁾	Ordering code	Package
XDPL8220	PFC and flyback lighting controller	SP001398160	DSO-16

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