

## FEATURES

- Wide input mains range: 115(100)Vac – 264Vac, frequency 45Hz – 63Hz
- Output voltage: 55V
- Safety: meets EN60950
- EMI: precompliant to EN55022 (B) limits
- Dimensions: 235x25 h19mm
- PCB: double-side, 35um, FR4, mixed PTH/SMD

## DESCRIPTION

High brightness LED driver, power factor corrected slim dual stage demonstrative board. This board is equipped with L6564H and L6599AT by ST Microelectronics, thus implementing PFC-fed LLC resonant power supply. Slim form factor is achieved with an overall height of 19mm and width of 25mm to be fitted in tubular luminaries. Coil former design is a proprietary Magnetica patent. Protection feature set includes short-circuit, overvoltage, brownout and feedback disconnection.

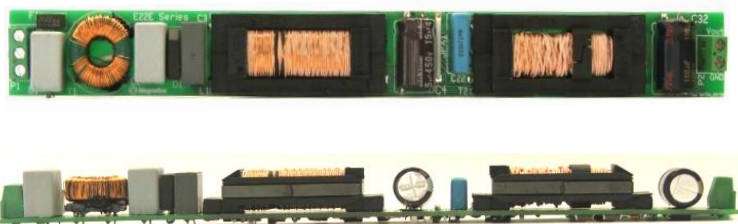
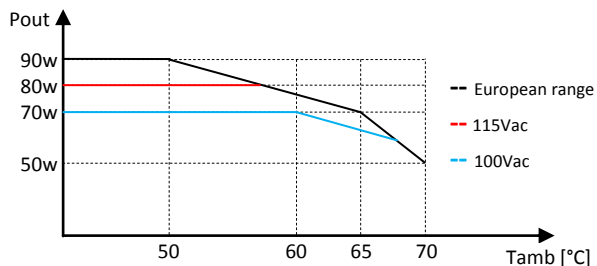
Main applications for this converter is bus power supply for an LED string driver providing 4kV isolation.

Support will be offered to customers willing to develop their own version of this converter, as long as technical documentation including functional and thermal measurements. PCB layout (gerber or source version) could be supplied upon request.

Magnetic component used:

- 7798 – Common mode inductor
- 7712 – Switchmode PFC inductor
- 7772 – Switchmode LLC transformer

## DERATING CHART



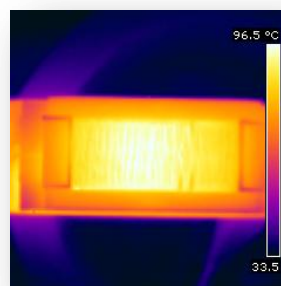
## TECHNICAL DATA(@230Vac)

<b>Vout max</b>	55V ± 1V
<b>No load voltage</b>	59.60Vmax
<b>Pout,max</b>	90W (@EU range)
<b>Efficiency</b>	90% (EU), 88% (USA)
<b>Power factor</b>	0.90 min (load≥50%)
<b>Output voltage ripple</b>	2.6Vpp/0.89Vrms (full load@230Vac)

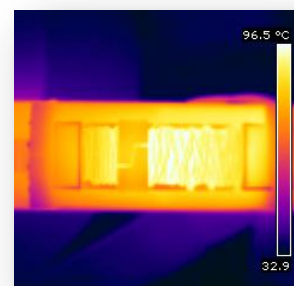
## THERMAL MAP (@115Vac, Pout 80W)

Max LLC transformer  $\Delta T=70^{\circ}\text{C}$

Max PFC inductor  $\Delta T=64^{\circ}\text{C}$



PFC inductor



LLC transformer

## CONDUCTED EMISSION (Pout 100% @230Vac, QuasiPeak EmiAVG)

