

Small Isolated LED driver with current regulated output.

DDS1241

Small isolated LED driver with current regulated output.
CE certificated.
The very small dimensions allows it to be used in multiple applications



Typical application



Specifications

Insulation class	Class 2, SELV
Rated Supply Voltage:	100-250V AC 120-300V DC
Frequency:	47 - 63Hz
Nominal current:	0.030A (input: 230V - led: 3V - 700mA) 0.05A (input: 110V - led: 3V - 700mA)
Nominal Power:	3W (input: 230V - led: 3V - 700mA)
Power Factor (PF):	0,45 (input: 230V - led: 3V - 700mA)
In Rush Current:	6A, 400us
Led voltage:	3,2V
Maximum output power:	2,5W
Average electrical efficiency	78%
LED current that can be supplied continuously:	700mA - cod.: DDS1241-700 350mA - cod.: DDS1241-350 <i>(Note: alternative configurations selectable when ordering)</i>
Current regulation accuracy:	+/- 5%
Dimmable in phase cut:	NO
Electrical short circuit Protection	Yes
Open circuit protection	Yes (Maximum output voltage with open terminals: 7.5V)
Operating temperature:	-20ÆC ... +55ÆC
Thermal protection:	Yes
<i>(Note: Built-in thermal protection on board primary circuit controller U1 - thermal protection is relating to the LED driver and does not constitute thermal protection for the LED)</i>	
Life Time:	> 50.000 hours
Weight:	10 gr. more or less

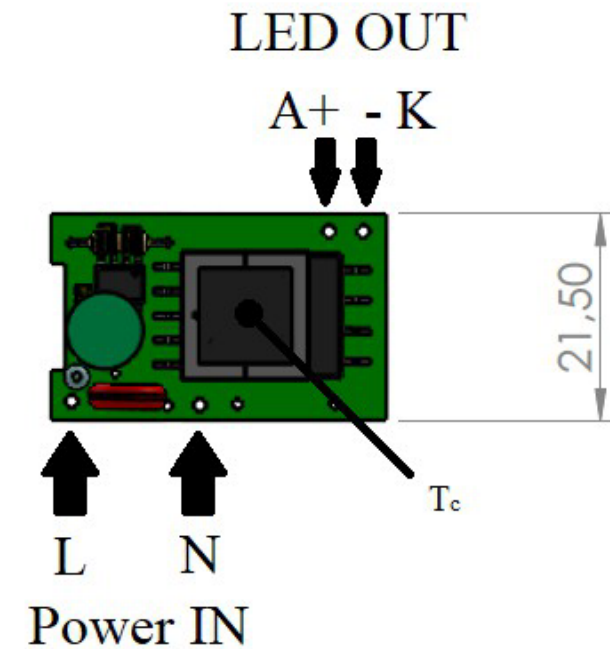
Electrical Connections

INPUT

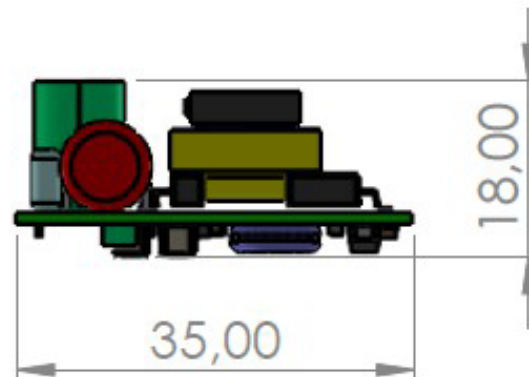
n.2 metallized holes – connection to be welded.
section max. conductor: 1mm² – AWG 17
Silk-screen marking:
L (phase)
N (neutral)

OUTPUT

n.2 metallized holes – connection to be welded.
section max. conductor: 1mm² – AWG 17
Silk-screen marking:
A (anode, led +)
K (katodo, led -)



Dimensions



Note: all sizes are in millimeters.

Thermal overview

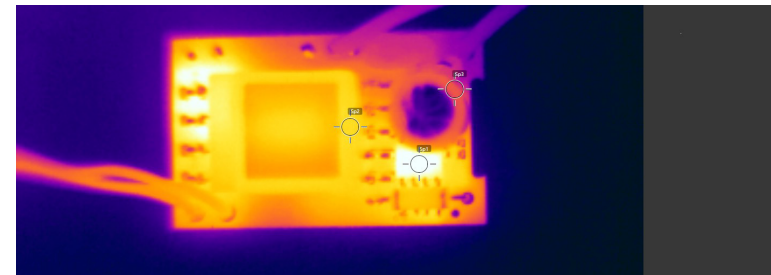
Equipment used for the test:

Thermo-camera manufacturer FLIR mod. E60

Test condition: DDS1241-350 - Input:230V. Outputs: 3V - 350mA

Ambient T.: 21°C

ID	Components	Temp. Detected (C°)	Limit Temp (C°)
Sp1	U1 integrated circuit	43,8	135
Sp2	TF1 Transformer	39	125
Sp3	C7 - Electrolytic capacitor	32,1	105



ID	Components	Temp. Detected (C°)	Limit Temp (C°)
Sp1	D3 - Rectifier Diode	63,8	145



Conducted emission

Reference standard EN55015

Instrumentation:

AFJ EMI receiver mod. FFT3030

LISN AFJ mod. LS16

6dB attenuator - DC to 1GHz cod. J01006A0835

Power Port - Limits:

Range Frequency (MHz)	Riv. Quasi Picco (dBuV)	Riv. V medio (dBuV)
0,009 to 0,05	110	-
0,05 to 0,15	90 to 80	-
0,15 to 0,5	66 to 56	56 to 46
0,5 to 5	56	46
5 to 30	60	50



DDS1241-350 (versione 350mA):

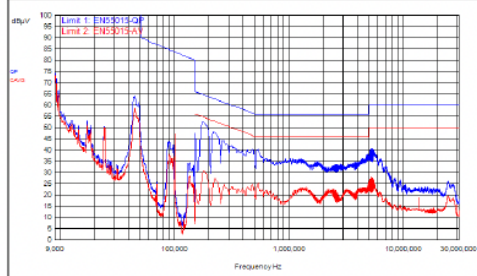


Illustrazione 1: E. CONDOTTE_230Vac_350mA_L1

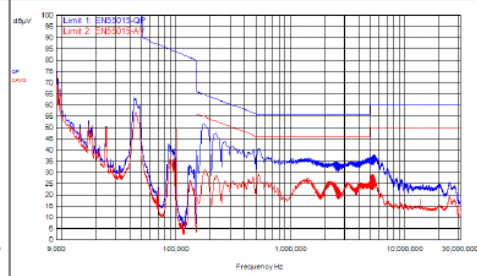


Illustrazione 2: E. CONDOTTE_230Vac_350mA_L2

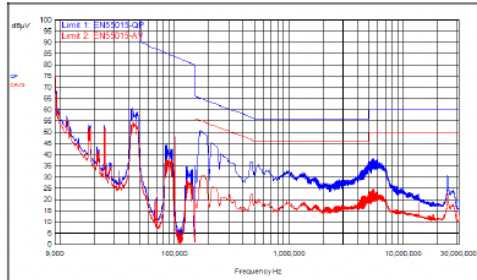


Illustrazione 3: E. CONDOTTE_100Vac_350mA_L1

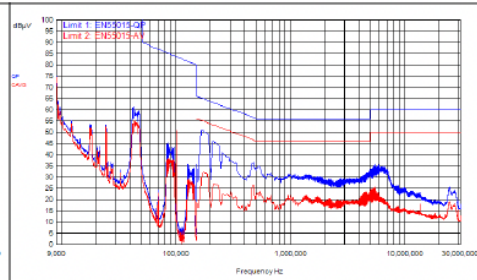


Illustrazione 4: E. CONDOTTE_100Vac_350mA_L2

DDS1241-700 (versione 700mA):

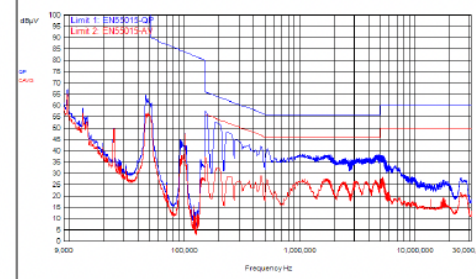


Illustrazione 5: E. CONDOTTE_230Vac_700mA_L1

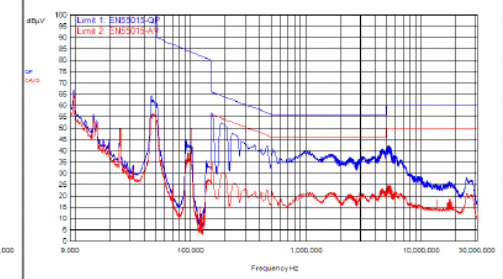


Illustrazione 6: E. CONDOTTE_230Vac_700mA_L2

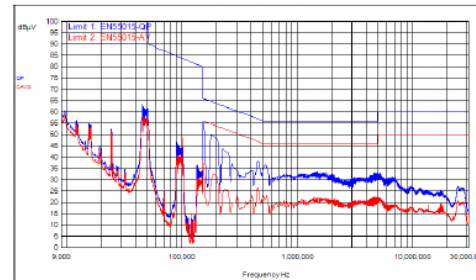


Illustrazione 7: E. CONDOTTE_100Vac_700mA_L1

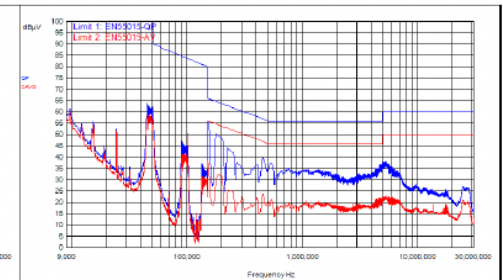


Illustrazione 8: E. CONDOTTE_100Vac_700mA_L2

Radiated emission

Reference standard EN55015 (CISPR15 CDN method)

Instrumentation:

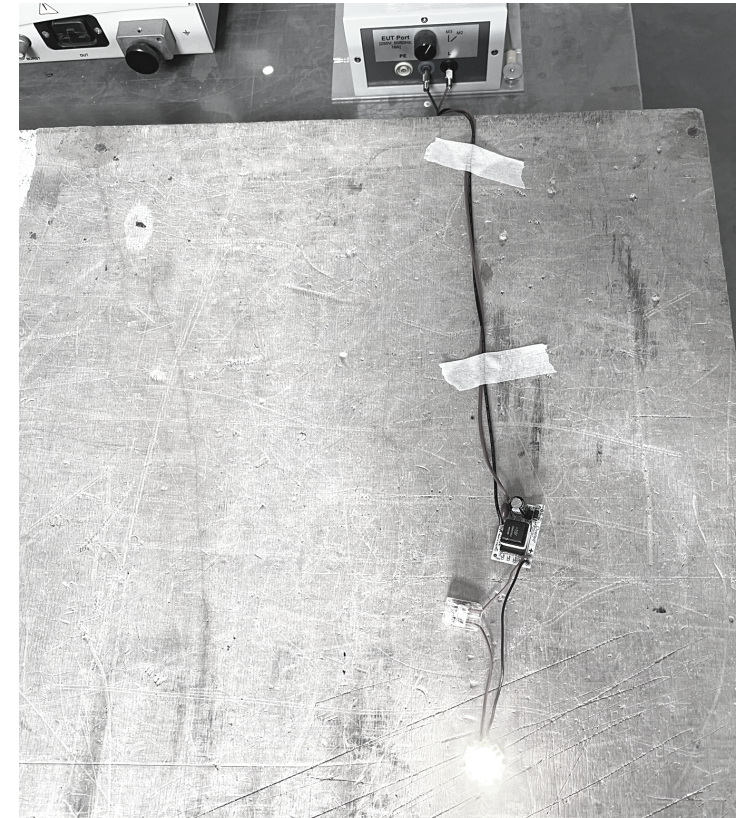
AFJ EMI receiver mod. FFT3030

CDN AFJ mod. M2

6dB attenuator - DC to 1GHz cod. J01006A0835

Power Port - Limits:

Range Frequency (MHz)	Riv. Quasi Picco (dBuV)
30 to 100	64 to 54
100 to 230	54
230 to 300	54 to 51



DDS1241-350 (versione 350mA):

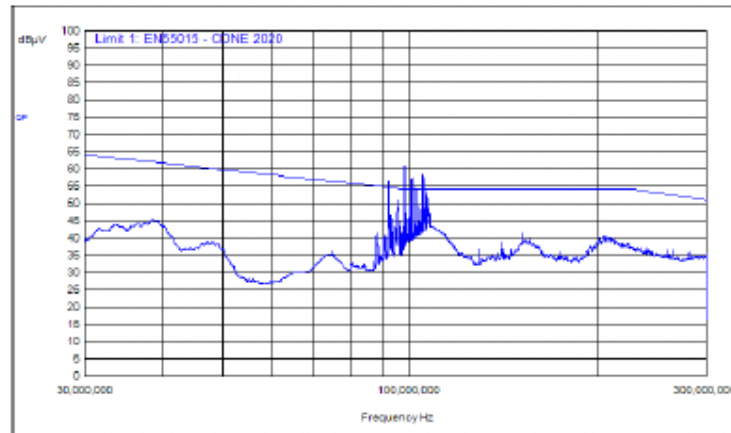


Illustrazione 9: E. RADIATE_ 230Vac_ 350mA

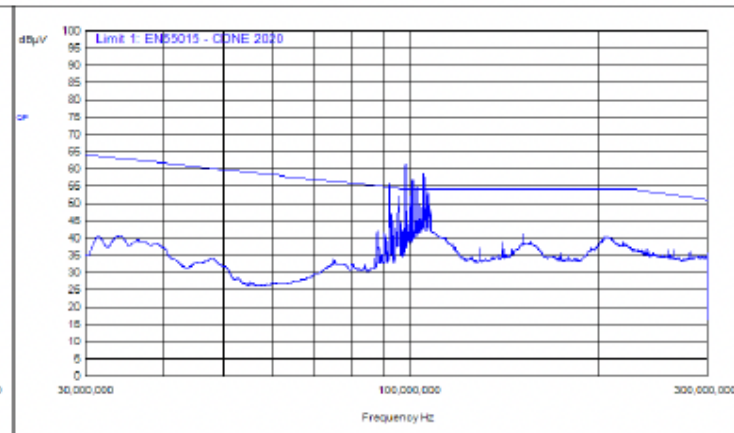


Illustrazione 10: E. RADIATE_ 100Vac_ 350mA

DDS1241-700 (versione 700mA):

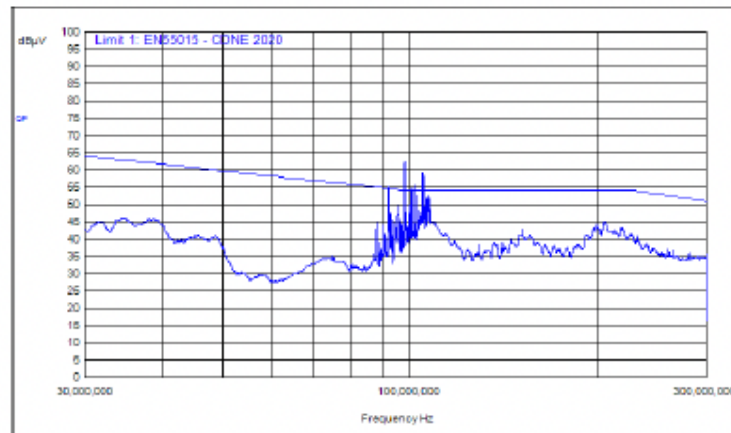


Illustrazione 11: E. RADIATE_ 230Vac_ 700mA

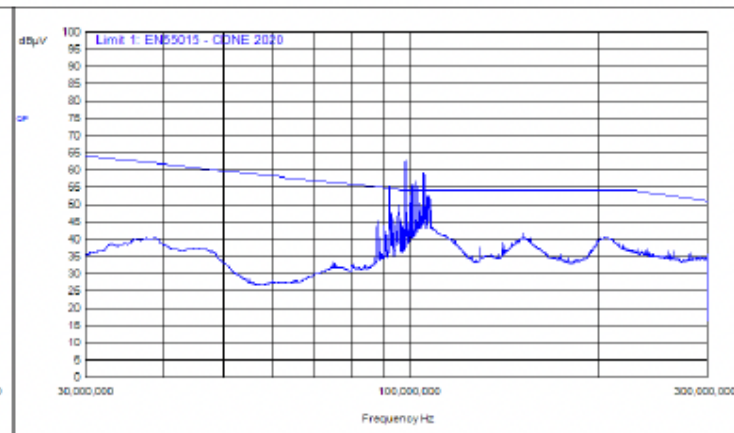


Illustrazione 12: E. RADIATE_ 100Vac_ 700mA